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**Urban dimensions in rural livelihoods: Implications for grassroots
development and sustainability in the Brazilian Amazon**

by

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Thesis submitted to fulfil the requirements for the PhD degree

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ABSTRACT

Analyses of development in the Brazilian Amazon have concentrated largely on two frameworks. Modernisation approaches interpret the issue in terms of an urban sector irradiating progress into the rural, and have informed most official intervention policy in the region, as was the case with development poles and infrastructure building. Marxist-based frameworks, which have filled most of the literature and inspired the action of social movements and non-governmental organisations, focus on the perverse impacts of capitalist penetration of the countryside. These organisations tend to influence the process of agricultural transition by providing a variable combination of both poverty alleviation welfare-type assistance as well as the means for improving social and political participation through empowerment.

In both modernisation and Marxist frameworks, however, "rural" and "urban" appear as totally separate sectors, and therefore the relationships established by rural people in urban areas, and vice-versa, are not scrutinised. From the end of the 1980s, actor-oriented research gained momentum and helped to reveal diversity in local development circumstances. This thesis aims at contributing to the analysis of diversity by highlighting the importance of urban dimensions in the livelihoods of rural producers.

This study shows that some 61 per cent of the Legal Amazonian population is now urban, and argues that in today's Amazonia one can not address rural development properly if rural-urban linkages are not taken into account. It is also argued that the interactions maintained by peasants with urban areas allow for the strengthening and diversification of their sources of livelihood. This phenomenon challenges the view of peasants as exclusively subsumed to capital, but also questions the modernisation view of conflict-free, rural-urban relations. Such improvements in rural livelihoods are possible due to the dynamics of local institutions and capitalism. Having expanded their sources of livelihood into urban areas, rural producers

become a target for agencies that support sustainable rural development projects, which seek to finance grassroots movements that can implement income-generating activities in a participatory fashion, free from political coercion.

The *Frutos do Cerrado*, a project supported by the PP-G7 Pilot Programme to Conserve the Brazilian Rain Forest, has been selected as a case study. It is argued that programmes such as the PP-G7 should consider the beneficiaries' capacity to commit themselves and their households to the project's aims, and to examine the compatibility of the project with the urban dimensions present in their livelihoods. Theoretical implications of this analysis concern the weakness of grand theories in adequately explaining the dynamics of livelihood strategies, and the developmental roles played by capital and urban areas in contemporary Amazonia.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	vii
INTRODUCTION	ix
LIST OF ILLUSTRATIONS	xiv
GLOSSARY	xvi

CHAPTER 1 - MARXIST APPROACHES TO DEVELOPMENT AND THE RURAL-URBAN DIVIDE	1
The subordination of labour by capital	2
Dependency theory and the development of underdevelopment	6
Dependency, world-systems and the Brazilian Amazon	8
Neo-Marxism and the articulation of the modes of production	12
Extraction of surplus labour	15
Political economy of development in the Amazon	18
Peasant production and subordination under merchant relations	21
Subordination under merchant capitalism	24
Amazonian peasantry and merchant capital	27
Urban Amazonia and forms of production	33
Rural-urban linkages in the Amazon	37
Conclusion	40

CHAPTER 2 - LIBERAL APPROACHES AND THE SUSTAINABILITY OF DEVELOPMENT	42
The roots of sociological thinking and modernisation approaches	43
Critique of modernisation strategies	50
Mainstream development thought: the growth-with-equity plan	52
The informal sector debate	54
The structural adjustment process	58
The social dimensions of development and the environment	61
Promotion of enterprises and entrepreneurship	67
Lipton's urban-bias approach	71
Rondinelli and the benefits of rural-urban interactions	73
The heterogeneity of socio-economic relations in modern Amazonia	76
Political dimensions of development	81
Conclusion	84

CHAPTER 3 - DEVELOPMENT, URBAN BIAS AND URBANISATION IN THE BRAZILIAN LEGAL AMAZON REGION	89
Colonisation Period: <i>drogas do sertão</i> and the rubber boom	90
The decline of the rubber trade and incipient urbanisation	93
World War II and Brazilian developmentalism	96
Development approaches after the military coup of 1964	100
Conservative modernisation, national integration and failed settlement	103
Brazilian agricultural and environmental policies for the 1980s	110
Amazonian development and environmental change in the 1990s	115
Populational growth and urbanisation in the Amazon	121
Conclusion	129
CHAPTER 4 - URBAN DIMENSIONS IN THE PILOT PROGRAMME'S PD/A PROJECTS	131
The origins of the Pilot Programme	132
Demonstration Projects' objectives and bureaucratic structure	138
Project criteria and geographical distribution	143
Small-scale sustainable use of forest resources	146
The sustainable dimension of livelihoods	150
The PD/A and the sustainable development discussion	158
Rates of urbanisation in PD/A project municipalities	164
Conclusion	166
CHAPTER 5 - DEVELOPMENT AND RURAL-URBAN LINKAGES IN CAROLINA	168
Development and urbanisation in Maranhão	169
The economic and political foundations of Carolina	171
People from Carolina	174
The rise and fall of Carolina's economy	178
Economic performance of the local rural sector	181
Urbanisation and urban biased development	186
Political struggle in Carolina	199
Local development in theoretical perspective	202
Conclusion	209
CHAPTER 6 - THE <i>FRUTOS DO CERRADO</i> PROJECT	212
Intermediary NGOs and the origins of the project	213
Religion, trade unionism, politics and the rural producers of Carolina	217
AAPPC background and local politics	223
The <i>Frutos do Cerrado</i> project proposal	229
Monitoring and evaluating the <i>Frutos do Cerrado</i>	239
The <i>Frutos do Cerrado</i> in theoretical perspective	255
Conclusion	261

CHAPTER 7 - RURAL PRODUCERS' LIVELIHOOD STRATEGIES	266
Rural producers, religion and organisation membership	267
Land ownership and rural production	272
Income levels and sources of income	275
Livelihood strategies for income generation	281
Involvement in the project and future plans	288
Conclusion	297
CHAPTER 8 - URBAN DIMENSIONS IN RURAL LIVELIHOODS	302
Marxist paradigms and rural production in Carolina	303
Modernisation in Amazonia and Carolina	309
Amazonian urbanisation and urban dimension in rural livelihoods	315
Urban dimensions in rural livelihoods	320
Implications for grassroots development and sustainability	324
CHAPTER 9 - CONCLUSION, POLICY RECOMMENDATIONS, AND SUGGESTIONS FOR FURTHER RESEARCH	329
Policy Recommendations	336
Further research	355
BIBLIOGRAPHY	358
ANNEX A - METHODOLOGY AND QUESTIONNAIRES	388
ANNEX B - SOURCES OF DATA-TABLES	437
ANNEX C - LIST OF INTERVIEWEES	438

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INTRODUCTION

The process of Amazonian urbanisation has been relatively well documented and analysed in the academic literature. However, these studies have by and large approached the issue from the macro perspective, analysing the urbanisation phenomenon mostly from the point of view of demography or political economy. Just a handful of studies, the large majority produced in the 1990s, make reference to the way in which specific urban areas influence the process of development. One of them is David Cleary's illuminating 1993 article "After the Frontier: Problems with political economy in modern Brazilian Amazon". Cleary's study helped to clarify a number of questions that this researcher had raised for himself during five years of practical work with Amazonian issues, as well as theoretical questions raised during his Master's Degree, completed in that same year. The approach of this thesis, however, was only finalised when the Pilot Programme to Conserve the Brazilian Rain Forest (PP-G7) was selected as the case study against which the theoretical debates could be considered.

The Pilot Programme is the first comprehensive plan to create the basis for sustainable development in the Amazon. It is today made up of 10 sub-programmes, covering from basic research to direct, grassroots development projects. This study focuses on the latter type, the Demonstration Projects of the PP-G7, which are called PD/A (in Portuguese "*projetos demonstrativos categoria "A"*"). These are initiatives aimed at changing the pattern of natural resource use, increasing the sustainability of small farmer activities. The PP-G7's conceptual background, and the type of PD/A projects, based largely on income-generating activities together with environmental conservation, made the programme an ideal test of theory. This is the first thesis known to analyse some key aspects related to the design and implementation of the PD/A as a whole, and one project in particular. This study reconciles quantitative and qualitative methods to help minimise problems of accuracy and reliability that are common to research in rural areas of developing countries. Quantitative data

involves the application of questionnaires with both open and closed questions. Qualitative data involves taped interviews and direct observation.

The approach adopted in this thesis is to analyse theoretical and policy implications of local-level rural-urban linkages in relation to local-level development and sustainability. Therefore, the concept of sustainability is approached at the household level, and the theoretical framework selected is that of "sustainable livelihoods". The discussion is conducted through an analysis of how paradigms of different pedigrees interpret the genesis and the outcomes of rural-urban relations established by small-scale rural producers. The aim of this discussion is to prove the general point that rural development projects in the Amazon need to consider the influence exercised by urban areas in the livelihood sources of small-scale rural producers. This is necessary for improving project design and implementation. One related, and more specific aim is to search, using a particular project as a case study, for the most relevant urban dimensions in rural livelihoods, and how they impact upon sustainability and grassroots development. These questions are tackled in the nine chapters that comprise this thesis.

Chapter 1 discusses how classical Marxism, Neo-Marxism, and Marxist-based theories have dealt with rural-urban relations, and how these grand theories have been applied to the Amazon region. Dependency, world-systems, and political economy approaches have been particularly influential amongst those scholars writing on the development of capitalist relations in the Brazilian Amazon. This chapter provides an overview of the main arguments, and discusses their adequacy in explaining the outcomes of local development patterns. In this sense, special attention is paid to the nature of capital operating at the local level, showing that, despite the country's overall capitalist development, in the Amazon one should still consider mercantile relations when approaching local level, small-scale rural production.

This first chapter does not arrive at a conclusion, rather its analyses are contrasted with those based on theories of the liberal mould, presented in chapter 2. Here, the thesis investigates how the development of Weberian-based liberal accounts has retained the postulates of cultural change and economic modernisation, which

consider the agricultural sector as a resource-transfer segment. It also discusses how policy prescriptions have oscillated between recommendations of welfare-type assistance to support the rural poor in the process of capitalist development, and other approaches that advocate the promotion of entrepreneurship. This chapter also discusses new approaches to local development that derive from theories of a Weberian mould which, while considering the importance of structural factors, try to reveal the capacity of agents to act to influence their own destinies. In this same line of argument, the political dimensions of development are also brought into debate through the analysis of a modified rational-choice approach. This chapter's conclusion brings together discussions raised in chapter 1, and compares both Marxist and liberal accounts. In practice, it provides a conclusion to both chapters.

Because liberal accounts of development have been so influential in Brasil, and perhaps particularly in official policies directed at the Amazon, chapter 3 is entirely dedicated to discussing, in historical perspective, how the region has been affected by national development policies. This chapter also shows how government policies have led to growing destruction of the environment and to rural-urban migration. In this sense, the chapter shows how policies at national level have been biased towards urban areas. Urbanisation in the Amazon is discussed based on recent data from the Brazilian national mid-term census of 1996, made available in this year, which shows that, today, 61.06 per cent of all Legal Amazonia's population is now urban.

The accelerating clearance of the Amazon forest during the 1970s and 1980s drew international attention due to the possible related global environmental impacts. Chapter 4 provides an analysis of how concerns over environment conservation have blended with an agenda for social development. This agenda for development is based on a new theoretical framework, which considers the notion of sustainability at the household level. This is the sustainable livelihood concept, which this thesis has adopted and applied to rural-urban relations established by rural producers. These relations include an urban dimension, which has been defined in this work as the material and non-material linkages established by rural people in urban areas as a means of maintaining or expanding their sources of livelihood. The chapter also discusses the extent to which the PP-G7 has incorporated these theoretical concepts

in its design, as well as the extent to which high rates of urbanisation are relevant in the municipalities in which demonstration projects have been implemented.

The project selected as the case study for this thesis, called *Frutos do Cerrado*, is located in the municipality of Carolina, in Maranhão state (eastern corner of the Legal Amazon). Chapter 5 introduces the history of development in this municipality, showing how it was impacted by Brazilian modernisation-based policies, and the role of the local élite in determining development patterns. The political dimensions of local development proved to have a major influence, both in theoretical and practical terms. Carolina's development is also analysed in relation to national modernisation policies and their impacts in the region, and in relation to the performance of key indicators of local production. This, together with the comparison of quantitative data on urban inhabitants and rural producers allows for suggestions to be made of the extent to which local development is urban-biased.

Chapter 6 deepens the analysis of political dimensions by looking at the political commitments of project beneficiaries and intermediary NGOs involved in the conception and implementation of *Frutos do Cerrado*. This chapter discusses the extent to which such political dimensions influence both the capacity of small-scale producers to establish claims, and how these circumstances affect their strategies to maintain or expand their sources of livelihood. This chapter closes with a discussion of the way in which the *Frutos do Cerrado* project relates to the theoretical framework of sustainable livelihoods. An inspection of livelihood strategies of both project beneficiaries and other rural producers from the municipality is provided in chapter 7. The aim here is to discuss how Carolina's small producers break down their livelihood strategies in relation to its material and non-material components. A specific aim of this chapter is to discuss the extent to which urban dimensions are relevant to the livelihoods of both groups of rural producers.

Research findings and related theoretical considerations are discussed in chapter 8. Here, the importance of human agency as opposed to structural factors is considered in the light of fieldwork data, and the relevance of the urban dimension in rural livelihoods for the implementation of rural development projects is examined. This chapter also discusses the implications of urban dimensions in rural livelihoods

for the development of grassroots groups, and for the promotion of small-scale sustainable activities based on the use of natural resources. A summary of the main conclusions, together with an extensive list of policy recommendations is introduced in chapter 9. This last chapter also provides some ideas for further research in key areas analysed in this thesis.

LIST OF ILLUSTRATIONS

The table below includes all the illustrations (boxes, graphs, tables, and data-tables) used in this thesis. They are organised by chapter, in a continuous numeration. The first digit indicates the chapter's number, while the second shows the illustration position within the chapter. Page numbers where illustrations can be found are shown in the right column of the table.

Illustration	Title	Page
Map 3.1	Amazon region of Brazil	99
Table 3.2	Selected crop production, Brazil; 1970-89 (3 years' averages)	111
Table 3.3	Total population, percentage over country's total and percentage of growth, Brazil and regions; 1960-96	122
Table 3.4	Total, urban and rural populations in Brazil and regions; 1996	124
Table 3.5	Total, capital city, urban, and rural populations in the Legal Amazon region and Legal Amazon states; 1996	125
Table 4.1	Pilot Programme funding; 1998	134
Box 4.2	Pilot Programme components; 1998	136
Table 4.3	Pilot Programme projects; 1998	137
Box 4.4	Poverty and development: a statement of principles	154
Figure 4.5	Components and Flows in a Livelihood	156
Table 4.6	Rural and urban populations in PD/A municipalities, 1996; and number of municipalities with PD/A projects, 1997	165
Data-table 5.1	Urbanisation Trends in Maranhão State, 1950-96	169
Data-table 5.2	Populational Growth and Urbanisation Trends in Carolina, 1950-96	180
Data-table 5.3	Harvested area (in hectares) for selected annual crops in Carolina, various years (1950 = 100)	182
Data-table 5.4	Production of selected perennial crops in Carolina (in 1,000 units), various years (1950 = 100)	183
Data-table 5.5	Animal raising (number of animals) in Carolina, various years (1950 = 100)	184
Table 5.6	Prices in Brazilian Reais of local and manufactured goods of annual production, in kg, Carolina, 1997	189
Table 5.7	Nature of current most important urban occupation of non-retired heads of the household, according to past rural experience, Carolina, 1997	190
Table 5.8	Carolina educational system, primary, secondary, and tertiary levels, 1995	195
Table 5.9	Last year of education, if any, of the head of household, according to place of residence (rural or urban), Carolina, 1997	196
Table 5.10	Wall material of the head of household residence, according to rural and urban areas, Carolina, 1997	198
Graph 5.11	Schoolchildren's opinion about changes needed to improve life conditions in Carolina, 1997 (multiple answers)	200
Map 6.1	Location of municipalities with Frutos do Cerrado projects	231
Map 6.2	Carolina municipality	232
Table 6.3	Beneficiaries of the Frutos do Cerrado project annual calendar of activities, Carolina, 1997	246

Illustration	Title	Page
Table 7.1	Members of the household frequency of attendance to religious services, Carolina, 1997	268
Table 7.2	Head of household CEB membership, Carolina, 1997	269
Table 7.3	Head of household STR membership, Carolina, 1997	270
Table 7.4	Head of household participation in mutirões, Carolina, 1997	271
Table 7.5	Size of rural land under control (in hectares), beneficiaries and rural others, Carolina, 1997	273
Table 7.6	Household monthly expenses in relation to the Brazilian minimum wage, Carolina, 1997	275
Table 7.7	Comparison of income mean ranks (by expenditure proxy) between rural others, urban residents, and beneficiaries, Carolina, 1997	276
Table 7.8	Household sources of income relative to selling of agricultural products and manioc flour, Carolina, 1997	277
Graph 7.9	Beneficiaries and rural others largest source of income (in percentage), Carolina, 1997	278
Table 7.10	Age of beneficiaries' and rural others' children according to place of residence, Carolina, 1997	283
Table 7.11	Former rural residence of rural producers' schoolchildren living today in the urban area, Carolina, 1997	284
Table 7.12	Heads of household number of journeys to town per month, Carolina, 1997	287
Table 7.13	Property inheritance, Carolina, 1997	295
Table 7.14	Beneficiaries' children opinion on possible future life in rural area, Carolina, 1997	295
Map A-1	Location of PD/A projects in the Legal Amazon	390
Map A-2	Carolina town centre and neighbourhoods	411

GLOSSARY

AAPPC	Agroextractivist Association of Small Producers of Carolina <i>Associação Agroextrativista dos Pequenos Produtores de Carolina</i>
BASA	Bank of Amazonia <i>Banco da Amazônia</i>
CAP	Projects Approval Committee <i>Comitê de Aprovação de Projetos</i>
CEBs	Christian Base Communities <i>Comunidades Eclesiais de Base</i>
CEC	Comission of the European Communities <i>Comissão da Comunidade Européia</i>
CEDI	Ecumenic Centre for Information and Documentation <i>Centro Ecumênico de Informação e Documentação</i>
CENTRU	Cultural and Educational Centre for Rural Labour <i>Centro de Educação e Cultura para o Trabalhador Rural</i>
CMA	Atlantic Rain Forest Commission <i>Comissão Mata Atlântica</i>
CNA	National Confederation of Agriculture <i>Confederação Nacional da Agricultura</i>
CNPq	Nationapo Council for Scientific and Technological Development <i>Conselho Nacional de Desenvolvimento Científico e Tecnológico</i>
CNS	National Council of Rubber Tappers <i>Conselho Nacional dos seringueiros</i>
CONTAG	National Confederation of Agricultural Workers <i>Confederação Nacional dos Trabalhadores na Agricultura</i>
CTI	Indigenous Working Centre <i>Centro de Trabalho Indigenista</i>
CUT	Central Trade Union Organisation <i>Central Única dos Trabalhadores</i>
EDF	Environmental Defence Fund <i>Fundo de Defesa Ambiental</i>
EMATER	Technical Assistance and Rural Extension Company <i>Empresa de Assistência Técnica e Extensão Rural</i>
EU	European Union <i>União Européia</i>
FAB	Brazilian Air Force <i>Força Aérea Brasileira</i>
FAO	Food and Agriculture Organisation <i>Fundo das Nações Unidas para a Alimentação</i>
FASE	Socio-economic Assistance Foundation <i>Fundação de Assistência Socioeconômica</i>
FdC	Fruits of the Savannahs <i>Frutos do Cerrado</i>

FNMA	National Fund for the Environment <i>Fundo Nacional para o Meio Ambiente</i>
FPM	Municipalities' Shared Financial Fund <i>Fundo de Participação dos Municípios</i>
G7	Group of Seven <i>Grupo dos Sete</i>
GEF/SGP	Global Environment Facility/Small Grants Programme <i>Fundo para o Meio Ambiente Mundial/Programa de Pequenos Projetos</i>
GoB	Government of Brazil <i>Governo do Brasil</i>
GTA	Amazonian Working Group <i>Grupo de Trabalho Amazônico</i>
IAG	International Advisory Group <i>Grupo Assessor Internacional</i>
IBAMA	Brazilian Institute for the Environment <i>Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis</i>
IBDF	Brazilian Institute for Forestry Development <i>Instituto Brasileiro para o Desenvolvimento Florestal</i>
IBGE	Brazilian Institute of Geography and Statistic <i>Instituto Brasileiro de Geografia e Estatística</i>
ILO	International Labour Office <i>Organização Mundial do Trabalho</i>
IMF	International Monetary Fund <i>Fundo Monetário Internacional</i>
INCRA	Brazilian Institute of Colonisation and Agrarian Reform <i>Instituto Brasileiro de Colonização e Reforma Agrária</i>
IPTU	Council Tax <i>Imposto Predial e Territorial Urbano</i>
IRD	Integrated Rural Development <i>Desenvolvimento Rural Integrado</i>
ISA	Socioambiental Institute <i>Instituto Socioambiental</i>
ISI	Import Substitution Industrialisation <i>Modelo de Substituição de Importações</i>
ISPN	Institute for the Society and Nature <i>Instituto Sociedade, População e Natureza</i>
KfW	German Development Bank <i>Banco de Desenvolvimento Alemão</i>
LDCs	Less Developed Countries <i>Países Menos Desenvolvidos</i>
MMA	Ministry of the Environment, Water Resources, and the Legal Amazon <i>Ministério do Meio Ambiente, dos Recursos Hídricos e da Amazônia Legal</i>
MNCs	Multinational Corporations <i>Corporações Multinacionais</i>
NGO	Non-Governmental Organisations <i>Organizações Não Governamentais</i>

NTFPs	Non-Timber Forest Products <i>Produtos Florestais Não Madeireiros</i>
ODA	Overseas Development Administration
PCN	Calha Norte Project <i>Projeto Calha Norte</i>
PD/A	Demonstration Project/Category "A" <i>Projetos Demonstrativos Categoria "A"</i>
PIN	National Integration Programme <i>Programa de Integração Nacional</i>
PND 1	First National Development Plan <i>Primeiro Programa Nacional de Desenvolvimento</i>
PND 2	Second National Development Plan <i>Second Programa Nacional de Desenvolvimento</i>
POLAMAZÔNIA	Programme of Agricultural, Livestock, and Mineral Poles in Amazonia <i>Programa de Polos Agropecuários e Agrominerais da Amazônia</i>
PP-G7	Pilot Programme to Conserve the Brazilian Rain Forest <i>Programa Piloto para a Proteção das Florestas Tropicais do Brasil</i>
PROGER	National Programme for Income Generation <i>Programa Nacional de Geração de Emprego e Renda</i>
PRONAF	National Programme for Improvement of Rural Families' Production <i>Programa Nacional de Agricultura Familiar</i>
PROTERRA	Land Redistribution Programme <i>Programa de Redistribuição de Terras</i>
PT	Workers' Party <i>Partido dos Trabalhadores</i>
RADAM	Radar for Amazonia Project <i>Projeto Radares da Amazônia</i>
RTF	Rain Forest Trust Fund
SADEN	National Defence Advisory Secretariat <i>Secretaria de Defesa Nacional</i>
SEBRAE	Brazilian Service for the Development of Small-Scale and Micro Enterprises <i>Serviço Brasileiro de Promoção de Micro e Pequenas Empresas</i>
SEMA	Secretariat of the Environment <i>Secretaria do Meio Ambiente</i>
SMA	Secretary of the Environment and Legal Amazonia <i>Secretaria do Meio Ambiente e da Amazônia Legal</i>
SPVEA	Superintendency for the Economic Valorisation of Amazonia <i>Superintendência para a Valorização Econômica da Amazônia</i>
STRs	Rural Workers' Trade Unions <i>Sindicatos de Trabalhadores Rurais</i>
SUDAM	Superintendency for the Development of Amazonia <i>Superintendência para o Desenvolvimento da Amazônia</i>
SUDEPE	Superintendency of Fishing Development <i>Superintendência para o Desenvolvimento da Pesca</i>

SUDHEVEA	Superintendency of Rubber Development <i>Superintendência para o Desenvolvimento da Borracha</i>
SUFRAMA	Superintendency of the Manaus Free Trade Zone <i>Superintendência da Zona Franca de Manaus</i>
TNCs	Trans National Corporations <i>Corporações Transnacionais</i>
UDR	Rural Democratic Union <i>União Democrática Ruralista</i>
UNCED	United Nation's Conference on the Environment and Development <i>Conferência das Nações Unidas sobre Meio Ambiente e Desenvolvimento</i>
UNDP	United Nations Development Programme <i>Programa das Nações Unidas para o Desenvolvimento</i>
UNICEF	United Nations Children's Fund <i>Fundo das Nações Unidas para a Infância</i>
VAR-Palmares	Armed Revolutionary Vanguard -- Palmares <i>Vanguarda Armada Revolucionária - Palmares</i>
WCED	World Commission on Environment and Development <i>Comissão Mundial de Meio Ambiente e Desenvolvimento</i>
WWF	World Wildlife for Nature <i>Fundo para o Meio Ambiente Mundial</i>
ZFM	Manaus Free Trade Zone <i>Zone Franca de Manaus</i>

CHAPTER 1 - MARXIST APPROACHES TO DEVELOPMENT AND THE RURAL-URBAN DIVIDE

Exploitation, conflict, transformation. These three dimensions make up the core of Marx's and Marxist-based theories of what capitalist development is all about. Different views of how these elements manifest themselves, how they combine, and which outcomes they produce have built a rich literature, one that has been applied both to rural and urban areas. Two central ideas permeate all readings dealt with in this chapter: capital exploits producers, and the logic of capital reproduction is to cluster itself in urban areas. Hence, there is by default urban exploitation over rural areas. This chapter examines nuances in this basic formulation, and tries to contrast views that discern some possibility of autonomy for those subsumed by capital. The discussion mixes theoretical generalisations to the application of these theories to the case of Brazilian Amazon. Classical Marxism is the starting point, followed by dependency theory, and the articulation of modes of production approach. A large section on the analysis of merchant capital finishes off the theoretical discussion of modes/forms of production, and bridges to the theme of urbanisation.

This is a non-conclusive chapter. The aim here is not to close a discussion, but to link the perspectives settled by Marxist approaches to the liberal mainstream development thought. Classical liberal theories and policies are examined in chapter 2. All through the text, the reader will find signposts of those central arguments that, after the analysis of mainstream development, will be intertwined into the broader framework that orients this research. The aim of the theoretical discussion placed here is to set up an analytical scaffold based on the various contributions left by each of the approaches reviewed below.

The subordination of labour by capital

In the same fashion of the classical liberal economists, the work of Marx starts from the presumption that the analytical division of economic activities between rural and urban sectors is fundamental for the understanding of development processes. Capital, in its urban industrial form, was meant to destroy and replace pre- or non-forms of capital, and it was in rural areas where these “pre-deluvian” forms of production were to be mostly found. This process rendered Marx the stigma of “anti-rural” and “anti-peasant”. To use a concept that would be introduced later, Marx could be then classified as urban-biased.

The interpretation of European's industrialisation provided by Marx radically diverges from the assumptions of Max Weber (see next chapter). For Marx “the spirit of capitalism” was not a rational type of life-style, but rather a struggle between social classes in the process of controlling the means of production and the product of work. This is a conflict between those who controls the means of production and can appropriate the product of work, and those who depend on their own labour alone. Marx himself recognised that in real circumstances class configuration would be more complicated, but maintained that relations of production (simply understood as the relations between owners and non-owners of the means of production) necessarily involve conflict. This occurs because owners of the means of production, that is the capitalists, effectively exploit workers by appropriating the product of their work. For Marx, the very nature of capital as a mode of production is progressive in the sense that it necessarily incorporates other modes in the process of accumulation (Marx and Engels, 1888). Therefore, central to Marxist analysis is the notion that the working class is subordinated by the owners of the means of production.

Marx witnessed the expansion of nineteenth century industrialisation, with consequent absorption of land and labour by capitalised ventures. He was convinced that small-scale farming, whether associated or not with rural

manufacture, would disappear, and peasants would become proletarians in the process labelled as "agricultural transition". Proletarians are faced with a circumstance of real subsumption of labour by capital. That is, one in which capital buys labour-power in exchange for a wage. The transfer of surplus is relative to the work carried out by labourers in addition to the worked hours necessary to pay for their reproduction costs. In the process of agricultural transition, capital would replace not only existing non-capitalist forms of production, but also other non-industrial forms of capitalism, in other words, merchant capital. Agricultural production would be brought to the same standards of industry. It would therefore would acquire a more sophisticated division of labour. The subordinated character of agriculture in relation to industrial activities, and especially the subsumption of peasants facing capitalist development, makes up a central theme in the work of Marx, to be developed later by Lenin.

The way that capital extracts value from the non-owners of the means of production is referred to as the labour theory of value. The concept of surplus labour-time derives from the Marxist account of exploitation, which is understood as a relationship between social classes. In other words, exploitation is a relation between non-producers who extract surplus labour from direct producers in the process of production. Marx's proposition is that when petty commodity production, especially agricultural production, is comprised by non-capitalist family-labour units, the surplus and the form of its appropriation can be conceptualised in terms of devalued labour time (Marx, 1967). The concept is based on the idea that the bulk of production is directed to self-consumption, a use-value that secures part of the peasants' costs of reproduction. Having part of their reproduction guaranteed by commodities produced without been charged at their real market price or opportunity, petty commodity producers' marketed output has its price squeezed by capitalist market forces.

This squeeze occurs because capital will take advantage of the capacity of rural producers of earning a living, even if it is at the edge of survival. As stated by Goodman and Redclift (1981: 92), "the 'subsidy' of use-value provided by

household labour permits the survival of petty commodity producers at lower levels of market prices than would otherwise be the case". The greater the deterioration in the prices of products directed to the market in relation to those products necessary for productive or individual consumption, the higher will be the cost of their reproduction. Therefore, the larger the number of hours that family members will have to work in order to meet their costs of reproduction. Therefore, there will be an increase in the production and in the transfer of absolute surplus labour.

Following Marx's analysis of capitalist expansion, Lenin interpreted the process of transition as one of peasant differentiation. During the transition, rural producers are set apart into distinct classes. The first and larger is the class of agricultural labourers, that could or could not have some small allotments of land for their own use. This class, the rural proletariat, survives from selling their labour power, and will be absorbed as wage labour by capitalists units of production. The second category is the middle-peasantry, and is formed by a class of more or less self-sufficient household farms, in which peasants use mainly their own family labour for production under conditions sufficient enough to provide for their own livelihoods. This class, that was supposed to be little involved in selling labour power, would be gradually squeezed by capitalist penetration, and reduced to wage labourers. The final category was that of capitalist farmers, that compose a small agrarian bourgeoisie, which was the main force responsible for the creation of a home market for capitalism.

For Lenin the result of the transition would be a bi-polar rural society. That is, one in which the middle peasantry would be squeezed out by the development of capitalist relations. This category would turn into a rural proletariat, as capitalist farmers accumulate and concentrate land ownership. However, this path towards agrarian differentiation was not seen by Lenin to be unequivocal. There were two main factors that would block the transition.

One comprised merchant and usurer capital, the other the survival of labour-service. Petty commodity production merchants and usurers retain capital within their sphere of circulation, impeding investments in agriculture. "The capital of well-to-do peasants, forced out of petty commodity production trade and usury, will flow more abundantly into production" (Lenin, 1982: 137). Labour-service, in Lenin's view, was carried out by the middle-peasantry, because the one contracted for this purpose "must have one's own implements ... (and) ... must be at least in some measure a 'sound' peasant" (Lenin, 1982: 137). Its characteristic of blocking the transition would rest on the fact that this sort of labour was paid in kind, not in money, therefore restricting the expansion of capitalist, monetised relations.

However, the process of capitalist development envisaged by Marx occurred only partially. Industrialisation took many paths in different countries, including European nations. Contrary to Marx's expectation, in many developing countries a large proportion of family-labour farms did not become capitalised, and agricultural small-scale producers were not totally reduced to the ranks of the proletariat. In Brazil and elsewhere it became clear that the transition of agrarian societies was only partial. Additionally, rural and urban petty forms of production, that were expected to be transitional or residual, could no longer be interpreted in such a way.

Even though, the advance of capitalism was interpreted by classical Marxists such as Warren (1979) as an unmistakable path towards socialism. Warren recognises that developing countries had experienced under capitalism industrialisation, economic growth, technological change, and, to some extent, autarchic development. However, he kept with Marx's historical predictions and concluded that the expansion of capitalism in developing countries is in fact a pre-requisite for their transformation into socialism. This is, of course, a thesis that still has to be confirmed.

Two sets of theory derived from classical Marxism. One of them is dependency theory, which has been particularly influential in Latin America. Although this theory derives from Marxism, dependency has not been accepted as a Marxist body of theory, due to its analytical focus on relations of production rather than on modes of production. The second theory, that is the articulation of modes of production, sets a Marxist-based framework that helps explaining subordinate forms of production that do not presuppose transition, evolution or passivity in relation to encroaching capitalism in Third World countries.

Dependency theory and the development of underdevelopment

These Marxist-based schools have exerted a strong influence on Latin American academics and politics. Formulated mainly in Latin America, dependency theory was highly influenced by events in Argentina, Chile, and Brazil. In these countries, among others, military-ruled right-wing governments were largely applying economic policies of a modernisation-pedigree (see chapter 2 for a review of modernisation theory). Latin American intellectuals saw the lack of development, or underdevelopment, as a direct function of the expansion of capitalism, and not as a mere stage of development. The dependency thesis' main proposition is that underdevelopment is the result of a process of impoverishment caused by the unequal exchange of international trade combined with the repatriation of profits from foreign owned business. Dependency theorists borrowed from Marxism the concept of unequal exchange, which they widely applied to nation-State level and international trade arrangements.

The mechanism underlying the circumstances of underdevelopment was formulated by André Gunder Frank (1967), probably the name most closely associated with dependency theory. He argues that merchant capitalism and colonialism forced Third World countries to specialise in the production of a few commodities required by the metropolis. For Frank, economic surplus is extracted from satellite countries in a "chain of dependency", which is replicated within Third World countries. The principal mechanism of extraction being the decline in the

terms of trade against Third World's primary products, which are exchanged unequally by manufactured products from industrialised countries.

This situation implies a blockage of development possibilities. Dos Santos states: "by dependency we mean a situation in which the economy of certain countries is conditioned by the development and expansion of another economy to which the former is subjected" (1970: 231). A central point in this theory, therefore, is that economic relations established within the world economy "determine the whole of 'domestic' structural properties, and not vice-versa" (Booth, 1985: 761). This economic blockage is further tied by an alliance established between the landed élite of the satellite and its bourgeoisie, and multinational firms. All of them getting privileges from the situation of dependency.

Within this scenario, agrarian transition is seen to be subject to broader capitalist functioning. The incorporation of satellite social formations into the world economy is understood by Frank (1967) as a thorough process. Capitalist class relations permeate commodity production and exchange relations in an undifferentiated process that reaches even in the most backward regions. "Frank denies that pre-capitalist relations of production persisted in Latin America for any considerable period following the conquest" (Goodman and Redclift, 1981, 32), therefore he places his theory on non-Marxist ground. As derived from the quotation above, Frank removes the Marxist argument of articulation of modes of production, and replaces it by the analysis of relations of production and trade between metropolis and satellite countries. This, in the Frankian argument, was the form of exploitation that would take to dependency. A consequence of placing the analysis in relations, rather than in modes of production is the understanding that capitalist relations permeate the whole economy, and that all structures and/or institutions are capitalist by default, even if in a degenerated form. In such circumstances, there is no real need to investigate specific circumstances of local economic relations.

A similar core-periphery thesis (i.e. metropolis-satellite) was developed by Immanuel Wallerstein (1979), which introduced the concept of world-economy. For Wallerstein, capitalism and the world-economy are opposite sides of the same coin, and capitalism implies that core-areas appropriate surplus of semi-peripheral and peripheral regions. Unlike Frank, Wallerstein admits the existence of movement within and between the strata of the world economy, which is regulated by market forces. Like Frank, Wallerstein identifies underdeveloped nations as those whose economies depend on agricultural production. Furthermore, capitalism is defined on the basis of exchange relations, entailing a refusal that wage labour is its essential feature. Given that view of capitalism, "all 'modes' of labour control are equally 'capitalist' " (Goodman and Redclift, 1981: 44). This implies that agrarian transition becomes a question of trade relations. The existence of different 'modes' of surplus appropriation is reduced to be a reflection of trade relations and international comparative advantages (i.e. an international division of labour).

What is peculiar in Wallerstein's argument is that for him the State machinery plays a central role in setting the process of unequal exchange in motion. This vision certainly derives from the identification of capitalism with the birth of the merchant system, as military-backed private economic development. For Wallerstein, the military power of industrialised nations still backs the enforcement of unequal terms of trade.

Dependency, world-systems and the Brazilian Amazon

The dependency framework of metropolis-satellite carries a strong geographical perception, one in which urban areas are points of accumulation that move in an upward, one-way route. Frank (1967) saw a chain of dependency stretching down from the world's largest cities to backward areas in developing countries (Potter, 1992). Excess profit, in this framework, moved to the regional primate city, or satellite, and thus to the metropolis. This dual spatial framework (i.e. centre-

periphery), that tends to picture the periphery as a resource frontier was also adopted by world systems theory.

According to the world-systems approach, urban areas in the periphery have a dependent relationship with major regional and world cities, and their development is conditioned by the capacity of centralising the extraction of local surplus. Primary cities are also the focus and invariably the locus of foreign investments in the form of multinational corporations (MNCs). These corporations not only establish the dependency chain connection, but also serve to diffuse the metropolis way of life, Western patterns of consumption, lifestyles and values (Potter, 1992).

There is an apparent parallel here between dependency-world systems and modernisation theories. However, the former in fact diverges from the latter, since the dependency framework argues that Third World cities tend to concentrate production (mainly dominated by MNCs), and that the surplus created is forwarded to the metropolis. Therefore, dependency "sees cities as areas which are holding the rest of the country back, and not as centres of development that will be spread quickly" (Potter, 1992: 19). If so, how can one explain the growth of towns and cities that are not directly linked to a chain of commerce on the Brazilian frontier? For Wallerstein, the answer lies at the door of a nation-State framework, that sees it as the "central organising principle of spatial economics and cultural formation" (Browder and Godfrey, 1997: 43). This line of reasoning has been applied by Brazilian scholars pursuing a world-systems view.

Becker *et al.*, for example, have acknowledged the rapid growth of towns and cities in the Amazon. However, the authors credit this to the role of the State which "controls and gives economic and political privileges, therefore influencing labour markets and ideological co-optation, which act as the operational basis of fast urban growth" (1990: 143). Machado (1990) identifies the main economic sector within Amazonian urban areas as the (official) service sector, in which she stresses the role of banking and health services. The author also argues that the

State is the driving power in the region's fast urbanisation, by providing equipment and infrastructure necessary for the "mobility of capital", which expands the network of services (Machado, 1990).

The role of the State in providing the conditions for urbanisation and growth in the Brazilian Amazon is a recurrent theme in various texts of different theoretical foundations. For some, however, the State appears as an omnipresent force, which acts in a linear way for the whole region. Any empirical observation, however, clearly reveals that this is not the case. The uneven presence of the State is reflected, for example, in the development poles established in some areas of the Amazon. This issue will be analysed in the next chapter.

Dependency and world-systems theories have contributed in many ways to the understanding of development issues. The focus on the integration of Third World economies into global capitalism allowed the understanding that there is a strong relationship between political and economic forces in development. The process of development, *dependentistas* say, must be analysed from the perspective of each country's historical experience. Dependency theory has also objected to the modernisation ideal of "good for all" economic circumstances in the relationship between high- and low-income countries. Finally, the core-periphery proposition helped to understand existing linkages between backward/rural areas and the wider economic system.

Despite benefits, however, dependency presented many of the same shortcomings of modernisation theory. The core-periphery framework got stuck in abstract theorising and neglected an analysis of development at the level of production. As Goodman and Redclift consider, "they (Frank and Wallerstein) fail to demonstrate how insertion in the capitalist world economy transforms pre-capitalist societies and determines the emergence of new class structures" (Goodman and Redclift, 1981: 51). To some extent, Frank's thesis appears to have a built-in vision that Third World economies are static, bearing a position of eternal submission to industrialised countries.

Some other authors in the same tradition of dependency, however, have pictured a less dramatic view of dependency. In Brazil, the sociologist Fernando Henrique Cardoso (who would become President of the country in 1994, and was re-elected for the post in 1998), introduced the view that Third World countries could find a way for autarchic development. It would take place through capital investment and locally-based industrial growth. He proposed to change the perspective of dependency (i.e. underdevelopment) to one of dependent development. Cardoso (1971) added to the dependency formula the influence of country-based institutions and class-relations, as a way of understanding what he called concrete situations of dependency. Unfortunately, Cardoso did not clarify which mechanisms underlie the operation of situations of dependency, nor the historical articulation of local institutions and class struggles:

"[T]he 'concrete expression' that the capitalist mode of production finds in the dependent is not 'automatic': it will depend on local interests, classes, the State, natural resources etc. and *the form in which they have been constituted and articulated historically* . . . the conditioning structures are the result of the balance of forces between social classes which confront each other in a specific way as determined by particular modes of production."
Cardoso (1971: 27; emphasis in the original)

Cardoso's propositions reflected the perception that, during the 1970s, local economic relations and institutional dimensions had growing importance. Concerns were basic related to the clearly negative impacts of development theories and policies among low-income countries, and more specifically among poor populations within them. The theoretical debate of a Marxist-based pedigree that began in the early 1970s was further extended by scholars who searched for a revival of basic Marxist concepts. They recovered the class dimension lost in the dependency and world systems approaches, and placed the extraction of surplus at the level of production. These ideas are further explored in the next section.

Neo-Marxism and the articulation of modes of production

The neo-Marxist analysis departs from the overall perception that the process of full capitalist development, and the disappearance of pre- or non-capitalist forms of production, has not occurred in many peripheral locations. As Goodman and Redclift (1981: 54) state, "in this view, peripheral social formations are constituted by the articulated combination of the dominant capitalist mode of production and subordinate, non-capitalist modes of production". A large and controversial debate was originated to explain the nature of the articulations and transitions between modes of production. Parallel to this has been the discussion about the concept of peasantry in circumstances where the transition to capitalism has not fully occurred. A close examination of all aspects of this debate lies beyond the scope of this thesis, and its length. What will be done is to capture the main lines of arguments that can be useful for the discussion of rural-urban linkages.

Central to neo-Marxism is the idea that the full penetration of capitalist relations in peripheral social formations is somehow blocked by the endurance of non-capitalist modes of production. This position dismisses the liberal/modernisation approach that sees small-scale forms of production as one type of capitalist manifestation that can benefit from capital-intensive ventures. It also rejects the Frank-Wallerstein approach by arguing that contact of non-capitalist forms of production with capitalism does not make all those small-scale forms of production automatically capitalist. On the contrary, neo-Marxism defends the view that capitalist development is blocked or long-delayed by the survival of non-capitalist structures, which could be pre-capitalist modes of forms of production. Within this framework, the unit of analysis is the peasantry, taken as a discrete social category.

Peripheral social formations are interpreted as representing the outcome of an articulated relationship. That is a connection between the mode of production that is dominant (i.e. capitalism), and non-capitalist modes of production that are

subordinated to the former. Within this basic framework, three concepts must be clarified. Firstly, there is a great deal of controversy about what exactly a mode of production represents. A second level of contention refers to the mechanisms of articulation. Thirdly, there is the underlying understanding that non-capitalist forms are subordinated to dominant capital, which benefits from the former by extracting surplus-value, determining its economic configuration, and controlling its labour resources. It is believed that subordination may occur in two ways. There is the interpretation that the subordination is direct, therefore "real", or indirect, thus "formal". Central to the interpretation of this process of transition is therefore the explanation of the modes of production concept.

Modes of production have been interpreted as both an abstract and concrete concept. These apparently contradictory views, however, have the common comprehension that modes of production do determine the way in which social and economic relations of production get organised in peripheral societies. Alavi (1975), Alavi and Shanin (1982), and Banaji (1977) understand modes of production as an abstract concept that acts upon specific social formations in a twofold way. Modes define the "laws of motion", that is, they set a capitalist path that is categorical, and this will influence and restrict social and economic possibilities by "underlying structural regularities" available to a specific social formation. Consequently, concrete social formations, such as peasant production, will be subjected to the dominant mode of production, which will normally be the capitalist.

Another interpretation is given by Wolpe (1980), for whom social formations are made up from a number of articulated modes of production. The dominant, or extended mode (understood as the capitalist one), would set up the "laws of motion" necessary for the reproduction of the economic base of the system. Such laws of motion were thought to include institutional dimensions, such as judicial and political arrangements within the superstructure that is dominant. What these approaches have in common, therefore, is the notion that the dominant mode sets

the laws of motion that regulate the development possibilities available to social formations that are not fully capitalist.

The form by which the dominant and the subordinate modes articulate is another point of contention, and has developed into two main arguments. Bettelheim (1972) states that articulation leads to a concomitant process of conservation and dissolution. Non-capitalist modes are believed to be "restructured", i.e. partly dissolved by the penetration of capitalism. The persistence of these modes is explained by their conservation, i.e. their subordinated existence facing capitalism, to which the former plays a functional role. The functionality of non-capitalist modes of production will be further analysed below.

An highly influential argument has been that called the labour-supply variant, and includes the works of Rey (1973), Wolpe (1972), and Melliassoux (1971, 1975). This approach, despite some differences amongst authors, states that articulation is essentially a process of class conflict. Dominant capital acts to maintain subordinated non-capitalist forms of production in order to extract from them cheap-labour necessary for the reproduction of the capitalist system. In this sense, non-capitalists forms of production are also functional to capitalism in the way they supply labour.

A different view was posed in the middle 1970s by Bradby (1975). The author understands capitalist penetration as a historically contingent process. Articulation, she believes, depends on concrete historical circumstances, and it is not a mechanical, essential need of capital. Rather, when articulation is necessary, it is not to "capital as a whole, but to individual capitals or branches of capital at particular times" (Bradby, 1975: 149). If so, the articulation between pre-capitalist and capitalist modes of production will take place in forms determined by the internal conditions these modes exhibit. The characteristics of structures and processes found in peripheral formations are the outcome of the specific ways in which different modes relate.

What Bradby says is that articulation is a valid tool for understanding social relations, as long as we do not fall into "existential necessity". In other words, it should not be assumed that capitalism could guarantee its own perpetuation by securing its needs through articulated mechanisms. Bradby's position, however, has not answered how modes of production can coexist in the modern world without being articulated.

Finally, there is the underling understanding that there is no need for dominant capital to destroy non-capitalist forms, as it can benefit from non-capitalist production by extracting surplus-value, determining its economic configuration, and controlling its labour resources. Bernstein (1977a), illustrates this with the argument that "in some situations it is more beneficial to capital to dominate agriculture by controlling the conditions of reproduction of the small farmer rather than by expropriating him" (Bernstein 1977a: 58). This control, that is subordination, may take two forms: subordination may be "direct", therefore "real", or "indirect", thus "formal". When capitalism has not fully penetrated agriculture, the form of labour subsumption is formal rather than real. Within formal subsumption, capitalism does not necessarily assume the organisation of production.

Extraction of surplus labour

For both real and formal subordination circumstances, however, there must be a mechanism by which capital can extract the product of workers. Neo-Marxist interpretation of this phenomenon relates to differences in the nature in and extension to which capitalist relations have managed to extract surplus value from rural producers, leading peasants to subordination. Transfer of agricultural surplus takes place in a twofold manner: through flows of food and raw materials (i.e. commodities), and flows of financial resources. The larger the agricultural marketed surplus, combined with the lowest price it gets, will determine the possibilities of industrial capital accumulation and the reproduction of the urban labour force.

Paramount to this process of accumulation is the control of the terms of trade, which is exercised by the dominant mode, that sets interconnected economic and politico-juridical measures to guarantee adequate flows. Economic measures relate to price, credit, and fiscal and trade policies. Politico-juridical measures relate to the institutional control of mechanisms of economic development.

The second way that the transfer of agricultural surplus occurs is in the form of flows of financial resources. Such flows take place when the transfer of commodities is accompanied by a net transfer of investments. This can take the form of voluntary investments, i.e. when savings are used to acquire real and financial assets in the non-farm sector. Another form of transfer is the involuntary, and concerns the extraction of value from agriculture. If the transfer of financial resources is not voluntary, then it is necessary to specify how the extraction takes place.

Two main lines of argument have been presented in relation to the form of extraction. The first, essentially Marxist, has already been stated. It is the labour theory of value, which asserts that extraction occurs in the process of production, and involves the appropriation of surplus labour-time. The second argument sustains that extraction occurs via the process of unequal exchange. This refers to forms of capital linked not to production, but rather to circulation, that is, merchant capital.

Before entering the debate on merchant capital, it is necessary to point out some criticisms that have been left at the door of the articulationists. Criticisms were mostly directed to the necessity of the articulation, and its application as a formula that left petty forms of production little room for manoeuvre. The subordinated functionality of petty rural and urban forms of production is summarised by Williams and Tumusiime-Mutebile as follows:

"... petty producers provide inputs which the capitalist firms are unable to produce profitably. These include cheap food and consumer goods for employees of capitalist firms (and the State which services them), thus reducing wage costs and inflating the salaries of managerial staff. Petty producers . . . maintain the reserve army of labour, which limits the bargaining strength of organised labour, thus, reducing wage costs and ensuring a flexible supply of labour to capitalist employment. They provide opportunities for additional earnings and the possibility to employees of establishing themselves as independent men. They provide the (protected) market for the products of capitalist firms. Far from being displaced by capitalism, petty commodity production (including peasant agriculture) is essential to the neo-colonial form of capitalist production."

Williams and Tumusiime-Mutebile (1978: 1103)

The application of the articulation approach as a formula, valid for all social formations without enough attention to modes or forms of production at play, conceals a rich variety of social relations of production in those countries. Moreover, the positive functions which petty forms of commodity production were stated to perform for capitalism "were asserted without empirical substantiation and indeed were often empirically unverifiable" (Scott, 1994).

A summary of the deficiencies of this approach has been provided by Scott (1986) in the following way: (1) its basic concern relates to the analysis of surplus extraction, which produces elementary models that misrepresent the rich variety of forms/modes of production existent in the Third World; (2) there is an overemphasis on the economic determination of structure, while political and ideological manifestations of forms of production are neglected; (3) this approach is functionalist in the sense that it takes the mechanism of articulation as normative, ignoring possible variations and changes in articulations in specific Third World countries; (4) it standardised classes into homogeneous groups like "peasants" or "informal sector workers", while internal differentiation and change within these groups were only approached on a tangential basis.

Political economy of development in the Amazon

Despite the shortcomings of the articulation approach, it has occupied much of the academic debate on Brazilian development. It was also largely applied to explain Brazilian and Latin American underdevelopment. Authors such as Oliveira (1985) have stressed how rural non-capitalist forms of production play a functional role for the accumulation of urban capital in Brazil. Another approach derived from articulation, and which could be called the capitalist-penetration model, was also applied to explain the penetration of capitalism in the Brazilian Amazon.

Otavio Velho (1972, 1976) used this approach by focusing on the geographical mobility of peasants as a mean of explaining capitalist penetration. For him, under the aegis of modernisation policies (see next chapter for an account of modernisation theory) the Brazilian authoritarian government forced the movement of peasants into geographically remote areas, therefore creating capitalism, and peasantry, by default. Central to the capitalist-penetration model was not the focus on the appropriation of surplus value, but rather the appropriation of the means of production. Souza-Martins (1975) took a similar view to place the movement of capital towards the Amazon as an outcome of the growing private ownership of land. This movement forced the transition from a subsistence to a market economy. Urbanisation of the Amazon frontier is explained in this model by the effects of capitalist penetration into the agrarian sector. This view is summarised by Armstrong and McGee:

“The penetration of capitalism into the countryside through the expansion of cash cropping, new agricultural production technologies, and the growing proletarianisation of the peasantry dislocated rural populations who migrated to the cities or became full- or part-time wage labour for the export-oriented production of agribusiness and local producers.”
Armstrong and McGee (1985: 219)

A more influential thesis was proposed by Foweraker (1981), for whom the Amazonian natural economy moved into capitalism in three stages. The first one was characterised by non-capitalist relations, dominated by subsistence

economies and some petty-commodity production, normally based on extractivism. The second stage envisaged was the pre-capitalist, in which there would be the intensification of in-migration and extractivism, with an emerging land market. There would be some petty-commodity production, but embryonic capitalist labour relations would appear. The final stage was capitalist, with intensive migratory flows into the region, and increasingly capitalised agriculture displacing subsistence economy based on extractive activities. As a result, there would be concentration of land ownership. Petty-commodity production could persist, but only subordinated to capital.

Foweraker's perception of urbanisation trends in Amazonia is particular once he does not argue that capitalist penetration in the countryside would directly result in urban growth. The author has argued that peasants would be expelled from their small-plots, but would stay in the rural area working as rural labour for large capitalist ranches. "Certain small townships had developed, it is true, but the majority of the population worked in the countryside. The only place to look for this population is in the cattle estates themselves" (Foweraker, 1981: 53-4). The predictions made by Foweraker, with the resources and available data at that time, were not justified for either rural or urban sectors.

What in reality happened was in fact an expansion of capitalist investments in the region, but this was not as a result of free market opportunities. Rather it was an effect of generous tax breaks provided by the federal government or even as the result of direct government intervention. The establishment of the Manaus Free Trade Zone in 1967 exemplifies how these enterprises constituted enclaves in the region (Becker and Egler, 1992) with capital, plant, and many workers coming from regions other than the Amazon. "[W]hat at the time seemed the unstoppable onward march of capitalism", notes Cleary, "was in fact an artificial spasm only made possible by enormous and ultimately unsustainable State subsidy" (1993: 335). The strong presence of the State in some areas of the Amazon lead to the creation of State-planned rain forest cities.

These new urban settlements make-up what became known as the “corporatist frontier”. That is, these new urban areas were not born out of a gradual agrarian transition, but of direct State intervention that created settlements for its corporate projects, or expelled peasants from the land through the dynamics of agrarian-industrial accumulation. Examples of such projects are corporate cities like Carajás and Tucuruí, in Pará State, and Jari, in Amapá, which are associated with large mineral or dam projects. In such circumstances, the generation of urban settlements is associated with direct capitalist intervention, and not by a process determined by local forms of capital, in this case, merchant capital.

Marxist approaches to the penetration of capital in the Brazilian Amazon have seen the area as a largely empty human space. It emerges in this literature as a space sparsely occupied by some tribal groups of Amerindians, scattered settlements and towns (Nugent, 1993). More recently, some authors have argued that the nature and the extent of Amazonian urbanisation have been overlooked. Others go further by arguing that the theoretical frameworks used so far do not account for the diversity of circumstances found in the region. A major piece of research on the urbanisation of Amazonia was published at the end of 1997. It is a large, comparative study carried out by two American scholars, John Browder and Brian Godfrey (1997), in relation to the causes and consequences of Amazonian urbanisation.

Before analysing Browder’s and Godfrey’s propositions, the theoretical discussion of this thesis will move back and focus on relations of production in the Amazon. It is argued that capitalist penetration took place in the form of enclaves, and did not permeate the whole Amazonian economy. In the absence of the presence of industrial capital, therefore, it is merchant capitalism that has set the conditions for social reproduction. The next section examines the implication of the prevalence of merchant capital. It draws largely on the work of Stephen Nugent.

Peasant production and subordination under merchant relations

It has been discussed above that capital uses the mechanism of surplus labour to extract the value needed for its reproduction. However, in circumstances in which petty forms of production are not faced with industrial capital, but remain in the sphere of circulation, another approach must be taken. The analysis of merchant (or circulation) capital tries to explain circumstances in which there is permanence, if not expansion of pre-capitalist forms of production without capital entering the sphere of production.

Three main lines of reasoning have been applied. One focuses on the extraction of surplus via exchange relations, and is associated with the work of Banaji (1977). Another argument is developed by Bernstein (1977, 1977a), who defends the position that the appropriation of peasants' surplus labour takes place mainly in terms of production. Bernstein resumes the argument of the labour value theory, but considers that under peasant commodity production surplus-value appropriation would take the form of appropriation of absolute-value. Contrary to this view, Kay (1975) assumes the formula of unequal exchange as the mechanism for the appropriation of relative surplus value, but challenges the view that merchant relations of production will be succeeded by capitalist ones. Before analysing these points, it is necessary to summarise the arguments of Marx regarding circulation capital (Marx, 1959).

For Marx, merchant capital renders to non-capitalist forms of production a transitional character, with will be replaced by the capitalist, industrial mode of production. Marx identifies three "general features" of merchant capital: (1) it depends on the class that controls the labour process, even where the class itself is dominated by another sphere of merchant capital; (2) the surplus product of the society is almost always appropriated through unequal exchange; and (3) as a form of capital, it impinges on all parts of the economy, particularly the sphere of production, the law of value. The process of unequal exchange refers to the

exchange that peasants make of their production in order to buy manufactured products. The inequality of the exchange lies in the fact that the labour content of peasant production will exceed that of the industrial goods acquired in exchange. For Marx, the loss of surplus value, be this under industrial or merchant capital, implies a relationship of exploitation and, therefore, a relationship between social classes.

One interpretation of Marx's reading of unequal exchange was adopted by Banaji (1977), for whom petty commodity forms of production are subordinated to capital, that converts it into "the embryonic basis of specifically capitalist production" (Banaji, 1977: 33). Merchant capital is not a different, autonomous form of production. It is a backward form of capitalist production. Petty producers may be able to maintain their pre-capitalist type of organisation of labour, but in Banaji's view, under merchant capital peasants are increasingly getting into the market via exchange of use-values, therefore monetising their cycle of reproduction. This is regarded as production of surplus value, once peasants are selling their labour-power in form of products. The price they receive for their products is in fact a concealed wage and peasants are in fact a rural proletariat subordinated to capital.

Banaji's arguments have been criticised mainly on the grounds that merchant capital is one aspect of commodity relations in peasant agriculture, and not the central mechanism of incorporation of peasants into capitalism (Goodman and Redclift, 1981). In other words, Banaji's formula resembles that of the world systems theory, which sees all forms of production as capitalist, if the dominant form of production is capitalism.

Another interpretation of expanded commodity production without capitalism fully penetrating relations of production is given by Bernstein (1977). Differently from Banaji, Bernstein does not characterise peasants as concealed wage-labourers, but as "wage-labourer equivalents". For Bernstein, peasants cannot be taken as free wage labourers because they "are not fully expropriated nor dependent for

their reproduction on the sale of labour power through the wage-form" (1977: 73). The peasant enterprise, unlike from the capitalist firm, can count on family-labour for the production of use-values needed for household reproduction. This guarantees the family's subsistence, allowing peasants to market products at prices below the actual cost of production and imputed labour (wage equivalent).

Bernstein therefore adopts a labour-time approach to explain the extraction of (absolute) surplus-value. Additionally, Bernstein does not accept Banaji's underlying assumption that dominant industrial capitalism could directly set the conditions for peasant production and distribution in an economic environment dominated by merchant relations. On the contrary, he advances the view that peasant production is mediated through the activities of different capitals, branches of capital, and the State.

Bernstein's approach enriches the discourse on merchant capital by defending the position that capital-peasant relations should be qualified in reference to different forms of capital. Peasant production can also take diverse configurations, however being subordinated to whichever circumstance in which it is involved. Bernstein refuses the "unequal exchange" formulation of surplus-labour extraction, by considering it restricted to the analysis of merchant capital and commodity producers that are believed to be "independent". This condition is not a real one, argues Bernstein, in so far as small production depends on the subsidy family-labour to get into the market.

What the author is asserting is for a understanding of capital-peasant relation in terms of the struggle over conditions of reproduction. This involves the apparatus of different forms of capital and the (colonial) State. The author therefore adds an institutional dimension to the conditions of social reproduction, and qualifies it as policies of the colonial State (or colonial-type policies), which fostered specialisation of production (i.e. plantation agriculture) to increase surplus extraction. Bernstein understands that capitalist development is not blocked by underdevelopment in the periphery, rather these forms are seen to be articulated.

Subordination under merchant capitalism

A third influential approach on peasant production and capitalist development was presented by Kay (1975). The author developed Frank's argument by stating that capitalism underdeveloped not only via the extraction of surplus labour, but also through failing to exploit the periphery enough. In other words, although merchant capital is the only form of capital present in peripheral situations, it acts as an agent of the core industrial capital. Capitalism, however, failed to transform relations of production in peripheral countries. This is a main argument in Kay's thesis, that is, that further development of capitalism in the periphery is seriously impeded. Kay gets to this conclusion by pondering that merchant capital allowed the "natural" social formation to be incorporated into world capitalism, but with little development of the forces of production at the local level.

Merchant capital then encourages the expansion of petty forms of production to get raw materials needed for processing at the core, and to enlarge surplus extraction via unequal exchange. At the local level, however, merchant capital does not entail transformation of the relations of production, and over time such circumstances preclude the possibility of further capitalist expansion. This occurs because merchant relations undermine the social organisation of direct producers, i.e. merchant capital demands the geographical dispersal of social groups, atomising non-capitalist production units.

The discussion about merchant capital, therefore, mixes elements of world systems theory (as in Banaji), and the articulation of modes of production (as in Bernstein). The two understand merchant capital as unproductive capital, confined to circulation. Merchant capital acts as the mechanism of articulation between non- or pre-capitalist production and "modern" industrial capital. Therefore, as long as the logic of articulation is maintained (even if under the rationale of World Systems) peasants are pictured as subordinated to capital.

Kay's position differs from this by considering that peasant forms of production under merchant capital have a bipolar nature. Peasants are inserted into capitalist relations while producing exchange-values, but the nature of this insertion is contradictory for two reasons. First, merchant capital does not entail the separation of direct producers from the means of production. Secondly, the fact that peasants are involved in commodity exchange, to a lesser or larger degree, does not necessarily configure capitalist production. As the author argues:

"In fact, the irrationality of capitalist production is complete and the production of use-values is nothing more than an inevitable but incidental constraint upon accumulation. Hence the practical definition of productive labour in capitalist society is not that labour which produces use-values, but that which produces surplus value. The usefulness of a product does not count here; or even the fact that it is necessary and indispensable for social reproduction: the preoccupation of capital with its own self-expansion is so complete that everything else is incidental. Only that labour which produces surplus value is productive, the rest is unproductive."

Kay (1975: 132)

Kay follows the argument that, from the point-of-view of capital, a form of production is capitalist as far as it is able to release surplus value. Therefore, other forms of production that are not, at least directly, producing an appropriable surplus are not taken into account (i.e. they are not productive), even though these forms may compose the foundation upon which "productive" labour will develop. Therefore, the logic of capital is that peasant production is only systematically subordinated to capitalist production as long as it can produce an appropriable surplus. The nature of peasant subordination in face of capitalist development is therefore partial, that is, the components of production are not directly appropriable by capital. Kay's position therefore implies that a non-capitalist form of production could exist parallel to capitalist. However, the nature of this "independent" status, and the extent to which it can survive, are not analysed by the author.

Despite variances in theoretical approaches, there is a common theme within traditional Marxism, the articulation of modes of production, and the analysis of merchant capital, namely the subordinated character of peasant production in the

process of capitalist development. The very nature of the subordination of agricultural production to industrial capital rests at the central discussion of this thesis: the linkages of rural and urban areas. Kay's position, which will be developed for the Brazilian Amazonian setting later this chapter, appears as a counter tendency within Marxist approaches. Kay's standpoint is that the non-subordinated nature of part of peasant production can guarantee the permanence of these non-capitalist forms, and block full capitalist penetration.

Other authors argue that or there is no blockage (every form of production is capitalist), or that the nature of partial capitalist development can be understood through the articulation formula. At the very basis of all these perspectives, however, lies Marx's assumption that the process of agrarian transition involves hegemonic control of urban capital over the rural producers. For Marx, this is not only an economic process, but also a process of political control. These non-economic features of the agrarian transition, however, did not receive the same attention dispensed to the sphere of production and circulation. However, for Marx, the urban bourgeoisie must achieve hegemonic control over the interests of the landed class, merchant capitalists, and rich peasants, if the agrarian transition is to be consumed.

Marxist-based theories have prompted insightful questions about the outcomes of development policies. This is particularly valid in relation to the effects accruing to non-capitalised sectors of rural and urban societies. The theoretical division between owners and non-owners of the means of production allows for a better understanding of the economic and political forces at play in development. However, the handle of this issue as being one of necessary struggle between labour and capital, and the highly economic approach of Marxist-based theories, have precluded the understanding of other forms of capital at play in specific circumstances, and the process of economic growth in Third World countries. From the beginning of the 1980s, however, analyses of development started to look more carefully to the diversity of situations found in Third World social formations, and the debate enriched.

Amazonian peasantry and merchant capital

At this point, it is necessary to highlight differences between the concepts of peasants and petty commodity producers. For Friedmann (1980), the distinction between these two categories lies in the contrast between subsistence production and commoditised production. Friedmann considers that different forms of "peasant" production can be negatively defined as resisting commoditisation, while nothing can be deduced about their conditions of reproduction and class relations. Petty commodity production, she argues, is a concept within political economy, and allows for deduction of conditions of reproduction and class relations. This division of concepts was narrowed by Kahn (1980), for whom there is a mutual dependence of subsistence production and petty commodity production. In a less theoretical approach, Harriss (1982) adds that peasants may be described as a "part society", which can be bounded by their subordinate relationships to external markets, the State and the dominant culture.

A highly influential analysis of the peasantry was introduced by Teodor Shanin (1988), who changed the focus of analysis from what peasants "are" as against the pressures of "change", that is, the classical Marxist approach. What Shanin proposes is the understanding of "the ways peasants respond to those forces, potentials, and impacts which form the crucial characteristics of their particularity" (1988: 8). In search for particularities, the author identified a "first approximation" of the concept "peasants", and other "facets" that would make up important characteristics of a peasant system. Therefore, as a "first approximation", Shanin considers that:

[Peasants are] "small agricultural producers, who, with the help of simple equipment and the labour of their families, produce mostly for their own consumption, direct or indirect, and for the fulfilment of obligations to holders of political and economic power."

Shanin (1988: 3)

The author goes further to distinguish "analytical marginal groups" that could be contrasted with the general definition by "the characteristics which they do not

share" (Shanin, 1988: 5). Amongst these groups, Shanin identifies, for example, the "worker-peasants who often adopt a 'man in town, rest of the family on the land' division of labour" (1988: 5). So, while recognising diversity of circumstances, the author places his focus on small-scale family farming as the essential characteristic of the peasantry.

As Bernstein notes, Shanin's view presumes that peasants "*remain* small farmers because they 'produce mostly for their own consumption' " (1992: 31, emphasis in the original). Furthermore, Bernstein adds, Shanin's account implies that the primary concern of peasant households is simple reproduction, that is, "meeting their needs, rather than making profits or accumulating by enlarging the scale of their farming (expanded reproduction)" (1988: 31). In addition, in contemporary world, says Bernstein, small-scale farming is combined with various activities that are not related to household small-scale agricultural production. Bernstein therefore defends the concept of petty commodity producers as a more accurate concept. The author states:

"What is distinctive about petty commodity producers is that they are capitalists and workers at the same time: capitalists because they own or have access to means of production (unlike landless or otherwise propertyless workers), and workers because they use their own labour (unlike capitalists who employ the labour of others). In short, they are capitalists who employ (hence exploit) themselves."
Bernstein (1988: 32)

This definition is more "operational" as it gives more room for the interpretation of modern strategies pursued by small-scale producers, not only in the rural, but also in the urban areas. Problems with this definition, and the way in which it contrasts with the "informal sector" concept, will be analysed in this thesis.

For the purposes of this work, however, the concepts of peasants and petty commodity producers will be used as interchangeable synonyms. This occurs for two reasons. As will emerge from the case-study presented in chapters 6 and 7, the difference between subsistence production and commoditised production suggested by Friedmann does not reflect characteristics of the social formation

that is the object of this analysis. Secondly, as observed by Nugent, if a distinction is maintained between the two categories, then there should be two concomitant sets of economic rationality: "one bearing on the way in which the logic of capital is seen to structure commodity production, and the other bearing on the way in which the logic of non-capitalist or pre-capitalist relations of production (i.e. the peasantry) maintain a degree of autonomy from the strictures of capitalist production" (1993: 203).

So, in the absence of a better terminology, the term "peasant" will be used in this thesis to refer to Amazonian rural people. However, it is necessary to bear in mind that this concept is employed in a critical way, that is, to refer to a social formation that accommodates characteristics of both peasants and commodity producers.

In his analysis of social reproduction among Amazonian peasantry, Nugent (1993) centres his thesis on two arguments. First, that the discourse about the peasantry from the Amazonian region follows European, or Western point-of-view, which misunderstands the very nature of local rural societies. Second, that specific characteristics of capitalist penetration in the Amazon, that is merchant capital, places the local peasantry in a twofold and apparently contradictory situation: it restricts reproduction possibilities, but also allows for the expansion of production forms. Therefore, Nugent asserts, the character of Amazonian social reproduction maintains a significant degree of autonomy, which has been expanded by the application of governmental and international agencies' aid policies.

There are areas of the Amazon region where different paths of capital penetration have been experienced. Examples are various: State and private colonisation schemes, gold mining, large national and international capital-intensive mining and logging projects, and wild-cat mining, amongst many other forms of capital expansion. For the purposes of this thesis, however, the core of Nugent's analysis can be retained, and differences will be qualified when necessary. The first point to be analysed then is the character of the local peasantry.

For Nugent, Amazonian peasant studies have portrayed the local peasantry in the “classical” way, that is, a natural social formation facing the penetration of capital that affects their “natural economy”. Amazonian peasants, however, are not the result of such a process. Local aboriginal social formations were destroyed during the colonial period. They were replaced by a social formation primarily constituted by migrants working under merchant capital relations on the basis of both export demand (rubber and Brazil nuts) and of local demand (foodstuffs). These migrants, according to Nugent, constituted a peasantry “by default”.

Following this argument, Nugent considers that current forms of peasant production represent an accommodation to the failure of full capitalist development which could have been expected if the classical transition to capitalism had taken place. What occurred on the ground was in fact a deviation of tendencies towards centralisation, typical of structures controlled by merchant capital. Whilst monopoly tendencies of merchant capital were undercut, lower reaches of the mercantile network were preserved. This took place because merchant capital failed to explore Amazonian natural resources on a large scale. After the period of major economic development, during the rubber-boom, Amazonian peasant societies remained for about thirty years without the direct supervision of merchant capital. For Nugent, what happened after this period was in reality an expansion of peasant production towards a system that combines characteristics of merchant capital and capitalism.

Even during the second phase of capitalist penetration, (between the middle and the end of the 1960s), industrial capital established itself as an enclave, and the lower reaches of merchant capital were maintained. It is the sheer size of the region, and its richness of resources that allow modern capital to establish itself as an enclave. Local social formations, as in the previous period, kept the necessary conditions to maintain, or even expand, their repertoire of production forms.

The specific conditions of Amazonian peasant production are fundamental, the author sustains, because the “classical” analysis of agrarian transition starts from

the perspective of a natural social formation being transformed by (mainly) modern industrial capital. In the Amazon, however, the early penetration of large-scale merchant capital failed, but at the time of this failure, a large mobilisation of labour had already taken place. These migrants formed new settlements in a depopulated area, and expanded their repertoire of commodity production for both consumption and exchange for industrialised goods. This exchange was, and to a large extent still is, mediated by local forms of merchant capital. According to Nugent, the merchant form of capital was maintained over time because in the Amazon modern capitalism does not compete directly with peasant production. Therefore, the interpretation of Amazonian peasantry cannot follow a traditional reading of social groups adapting to local conditions. On the contrary, the author argues, “they are societies which have been adapted for Amazonian conditions. Another way of putting this is to say that Amazonian peasantries have been created by forces external to Amazonia” (Nugent, 1993: 106).

It should be noted that Nugent focuses his analysis on the region of Santarém (Pará State), where he conducted his fieldwork. However, the conclusions of this research, as the author himself points out, may be generalised to other parts of Amazonia with prudence. “The character of Santarém society is singular”, Nugent asserts, “but the conditions under which that singularity has been realised are not” (1993: 107). These conditions refer to the possibilities opened to petty commodity production, and if the focus is placed on social and economic interactions between rural and urban areas, the analysis would certainly be enriched.

The character of rural production is, within the location of Nugent’s fieldwork, divided among three systems: the local traditional *caboclo*, the migrant *nordestino* (small rural producers who moved to the Amazon region under colonisation initiatives), and the system of Japanese descendants (settlers in the region as agricultural producers specialised in black pepper). The latter category’s system does not apply to the focus of this research. The former two are treated separately for Nugent, as their production systems show different characteristics. The social formation that is the theme of this thesis, however, resembles more the *nordestino*

than the *caboclo* complex. This is because of some caboclo system's characteristics (like access to public land, and sound use of the natural environment as source of both consumption and marketing) do not apply to the small rural producers which are the focus of this research. They are closer to the *nordestino* profile. In general, *nordestino* settlers make more predatory use of land, have smaller production of exchange- or use-values, and therefore their access to the market is more restricted and depends on a fewer number of items. What links these two cases is that their economic relations are mediated through merchant capital.

Nugent makes the point that merchant capital has the contradictory effect of both transforming and conserving the Amazon peasantry. It transforms because merchant capital encourages the production of exchange values, and therefore makes possible access to the market. However, it conserves the peasantry in the sense that merchant capital does not get directly into production. The conservative nature of merchant capital, Nugent argues, lies in the fact that it commits the surplus it has managed to extract to the purchase of more commodities, therefore it does not change the relations of production under which commodities were produced. So, if the form of capital that is prevalent is merchant capital, the real subsumption of labour is not a realistic alternative, since the extraction of surplus value takes the form of absolute, and not relative surplus value. What is at stake therefore is the formal subsumption of labour.

Nordestinos are subsumed in a twofold way. First, they are subsumed under the logic of human occupation of the Amazon region. In other words, colonisation schemes used colonists to add value to the land by occupying and clearing it. Improvements to the land could afterwards be realised by speculators that purchased the land or simply forced peasants out. The second form of subsumption refers to the functionalist account, already discussed, in which peasants are providers of cheap foodstuffs for urban markets.

This takes the discussion to the analysis of the above-mentioned repertoire of petty commodity production and the role of Amazonian urban areas in local economic development. The next section will briefly examine some contributions of Brazilian scholars to the interpretation of Amazonian urbanisation. These scholars have been largely influenced by the Frank-Wallerstein model. Their contributions therefore help to understand the general pattern of economic expansion and urbanisation that has been under way in the region for more than forty years now. However, these contributions have bypassed the investigation of the structure of surplus appropriation as it takes place in local settings. A second deficiency refers to the examination of the possibilities opened up to local people, both rural and urban, by the relative conditions of subordination, as has been shown above.

Urban Amazonia and forms of production

Brazilian authors working with Amazonian issues have portrayed capitalist development and processes of urbanisation in the region largely from a structuralist framework based on core-periphery relations, within a Frank-Wallerstein model. A summary of these Brazilian contributions is provided by Browder and Godfrey (1997), who analyse the work of Torres (1988), Monte-Mor (1980), Becker (1985), Peluso de Oliveira (1987), and Sawyer (1987). The aim of this thesis, however, is less to explain the pattern of urbanisation of the Amazon region, and more to understand the consequences of the way in which urbanisation took place for the functioning of rural development projects. Therefore, an attempt will be made to capture the essence of these accounts of urbanisation, and what they imply for the understanding of rural-urban relations at the local level.

A common perspective among Brazilian authors is that urbanisation should be understood as a natural consequence of surplus labour mobilisation by capital. In other words, urbanisation is a function of the agrarian transition and the transformation of the peasantry into proletarians, or semi-proletarians. The core-

periphery framework, however, dissolves rural and urban sectors as discrete analytical categories, and then “urban transition and agrarian transition become two expression of the same process” (Browder and Godfrey, 1997: 46). That is, the growth of urban areas, and its functions, is to be interpreted in the light of the structural changes that took place in rural areas as a consequence of the spatial expansion of capitalism.

Like Souza-Martins (1975), Torres (1988) focuses on land markets as being the expression of capitalism development. The author understands that urban areas functions as real estate markets, as peasants add value to the land, which is subsequently captured by capitalised social groups. Rural space is "ephemeral", in the sense that its original resident labour is dislocated, and rural property is consolidated into capitalist units. Monte-Mor (1980) moves the focus from estate to labour markets. Capital penetration displaces peasants from their land, leading to rapid urban migration. The rapid expansion of the labour market increases the price of urban land, at the same time that it depresses the price of rural land. The urban élite – merchant capital, State bureaucrats, the petite bourgeoisie, and professionals –, acquire rural plots and therefore subordinate the agrarian frontier to its interests. In this process, the State plays a central role by inducing urban concentration as a means to capitalist development.

Bertha Becker (1985, 1995), and Becker *et al.* (1990), understand urban areas in the Amazon frontier as fulfilling three basic functions. First, urban settlements provide the organisation of a labour market for the displaced peasantry, and the successful or capitalist rural landowners that are urban residents. Second, it provides a political-ideological function that acts in a twofold way: it gives the peasantry the illusion of an alternative livelihood, while diffusing modern consumer values and ideologies. Finally, urban areas provide conditions for the social differentiation of some migrants that are able to capitalise, mainly on the basis of commercialising their rural production in the urban setting. A similar view is shared by Peluso de Oliveira (1987), which sees the urban organisation of labour as politically linked. In other words, displaced peasants are ultimately forced to

occupy private rented houses, or to acquire government-built residences. By doing this, local governments force the migrant labour force to participate in politics as a captive client.

In all these accounts urbanisation is to a greater or lesser extent linked to capitalist transformation of the countryside, with displaces rural producers and converts them into urban, landless or otherwise, semi-proletarians. Other influences on urbanisation of the Amazon region have been presented by Sawyer (1987, 1989). The author places the functionalist interpretation of urban growth in a broader dimension, and analyses some of the effects of urbanisation at the local level. Urbanisation, Sawyer (1987, 1989) states, reflects national tendencies, but have local peculiarities according to regional differences. Among the general tendencies, he points out that:

“The explanation for ‘urbanisation of the countryside’ in Brazil, through growth of medium and small cities, has to do with broader economic and demographic trends. They include partial modernisation of agriculture; the need of modern agriculture for urban services; new consumption patterns of Brazil’s rural population; the need for urban consumer services; decreased access to land; and, finally, decreased access to ownership and employment in large cities.”

Sawyer (1989: 7)

Sawyer’s analysis does not get into explanations of surplus appropriation processes, however the author’s report, based on strong field knowledge, helps to understand specific interactions between rural and urban areas. First, the partial modernisation of agriculture, for example, accentuates the seasonal character of agricultural labour demand, so that a considerable part of rural labour lives in urban centres. They are called “volantes” or “bóias-frias” (Sawyer, 1989). Such modernisation implies a second feature of rural-urban linkages. Agricultural modernisation presupposes technical equipment and assistance, and technicians, who need services like health, schools etc. Expanding technical inputs requires expanded urban infra-structure. Two other factors related to urban consumption are stressed by Sawyer (1987): the growing availability of consumer goods in urban areas of all Amazonia, and the expansion of typically urban services, such

as health care, water, education, energy, and television, contribute to urban residence. Additionally, road improvements make possible urban residence and rural work.

Moreover, two effects of economic change in modern Brazil have sustained the urban growth of small and medium towns. First there is the partial penetration of capital in agriculture, and the consequent expulsion of rural labour that finds in urban areas the only option for residence. Additionally, capital concentration and technology improvements in large urban cities have expelled residents from these areas.

Urban-to-urban migration, according to Sawyer (1989), already corresponds to half of total migration in Brazil. "Smaller cities also attract ex-proletarians in the process of becoming their own bosses, and ex-proprietors, who are victims of capital concentration and centralisation and of technical progress which dispenses with labour" (Sawyer, 1989: 8). One can conceive from these urban-related trends, that smaller cities are getting more "cosmopolitan", not only in the sense of expanded consumer services, but also in the sense of life-style and way of thinking.

This physical and cultural modernisation of Amazonia is an overarching process in the region. However, it has so far been overlooked by studies that, otherwise related to different fields of knowledge, could have nevertheless improved their comprehension by taking into account undergoing urbanisation trends.

Rural-urban linkages in the Amazon

Interactions between rural and urban areas, however, have been identified, for a long time, at the level of petty commodity production and trade. The role of these Amazonian traders, *tabernas* and *regatões*¹, was already a theme in the work conducted by Agassiz (1868), and gained prominence in Charles Wagley's (1953) classic ethnographic study. It seems, however, that the study of local rural-urban relations have overall remained locked within the theme of petty commodity production-trade. New possibilities of flows and interactions opened by overwhelmingly migration to the region and consequent urbanisation have not been properly addressed.

In relation to migration, whilst most research has focused on inter-regional mobility (for which official data is available), patterns of internal migration have been missed due to the lack of statistics. A number of studies, however, have observed high patterns of (geographical) mobility within different social groups, as for *caboclos* (Ayres, 1992), agricultural migrants (Lisansky, 1990), people of extractive reserves (Schwartzman, 1994), urban populations (Godfrey, 1990), and social groups linked to gold mining (Cleary, 1990; MacMillan, 1995). The general conclusion of these studies is that people undergo regular movement between points where different economic opportunities are available. Men, as usual, are a lot more mobile than women and cover larger distances when they move. In addition, there is a blurring of the already fragile distinction between the urban and the rural.

Put in the context of the Amazon, rural-urban flows and interactions should also be analysed in the light of merchant capital. Growing mercantile activities and urbanisation are clearly related processes, and have been analysed by a body of theory called mercantile models of settlement. The core idea advanced here is

¹*Tabernas* are small trade establishments, while *regatões* are small traders that travel around the Amazon by boat.

that commercial nodes develop with the boundaries of the mercantile system. Initially, trading points are established, but the long distances between them force the creation of new settlements, or “points of attachment”. This theory, advanced by James E. Vance, Jr. (1970), assumes that over time new settlements establish their own markets, which grow according to their capacity to set up information required for trading, improvements in transportation, and the creation of new products.

In areas where the mercantile network has been established to extract local resources, that is, under an export-oriented model, “lower-order centres are fundamentally similar in function and economic structure, serving specifically as points for mobilising exports and concentrating merchant capital” (Browder and Godfrey, 1997: 25). The network established under merchant capital, despite the theoretical criticism posed above, created conditions for expanded economic activities. Sawyer, for example, states that “the urban network of the frontier makes pioneer agriculture feasible for economic and social reasons, by providing productive and social infra-structure. Where it is vigorous, the agricultural frontier is strongest. Planners must take this intertwining and mutual reinforcement into account” (1989: 14).

Linkages between rural and urban areas, under a mercantile environment, are illustrated in the work of Nugent (1993). This analysis is particularly interesting because it represents an update of a previous research he conducted in the same location almost twenty years before (Nugent, 1979)². In his latest work (1993), Nugent differentiates two moments in the process of Santarém's urbanisation. In the first, which he classifies as pre-modern Santarém, class structure corresponded to a rural-urban division of society. Urban inhabitants could be ordered as merchant class, artisans and labourers, and domestics. The countryside was occupied by smallholder agriculturists and extractivists.

² Nugent's first research was conducted in Santarém from 1975 to 1976 as part of his PhD degree.

This occupational structure has changed over time, and today it is far more complex. Currently, rural and urban activities cannot be easily separated, and the division between these two spheres of residence/occupation is now blurred:

"... most Santareños live in the city, and most Santareños are involved in agriculture/extraction, but in the city proper such activities are quite specialised (i.e. seasonal gathering, market gardening). In other words, place of residence indicates little about occupation (or sector's position) or levels of employment."

Nugent (1993: 117)

The urban economy in Santarém, therefore, has for its population an unclear character, which reflects the conditions made available through merchant capital's relations. The urban economy is in fact a reflection of the contingent character of the many forms of income-generating activities in which people are involved. Small-scale production in Santarém has a twofold character: it is as much urban as it is rural. The city acts as part of a repertoire of petty commodity possibilities, but in the absence of a full capitalist economy this constellation of petty production is inserted in a bowdlerised economic environment.

This circumstance is made possible, Nugent argues, because of the uneven penetration of capitalism in both urban and rural areas. The fact that modern capitalism arrived in urban Amazonia without creating conditions for a broad absorption of labour contributed fundamentally to the expansion of petty commodity production. Santarém, for example, had 224.783 inhabitants³ in 1991, but in Nugent's account (of 1993) just one factory in which mass production techniques are adopted on a significant basis. As Nugent argues: "the appurtenances of developing capitalist relations of production are present, but cardinal features of capitalist production *per se* are not" (1993: 118).

³ IBGE, 1991

Conclusion

The evolution of Marxist-based ideas on capitalist development has been marked by an attempt to understand different patterns followed by social formations, especially in Third World societies. However, the large variety of economic, social and political relations was obscured by the need to fit the reality into pre-determined concepts. Theory has been applied as a formula, and not as an instrument to formulate a new comprehension of objective facts.

Some accounts that tried to qualify the application of Marxist concepts have been emphasised in this chapter. It has been shown how the variety of social relations of production found in Amazonian social formations was concealed by theoretical accounts of Marxist-based pedigree. Additionally, fundamental concepts, like "peasantry", did not fit easily to describe local social formations. As consequence, the subordinated character of the peasantry is called into question.

Bradby (1975), for example, questioned the "existential necessity" of articulation. She qualified relations of production under capitalism by asserting that if articulation is necessary, it may be so not to capital dogmatically understood as a hegemonic entity. Rather, forms of articulation may reflect the particular needs of individual capitals or branches of capital at particular times.

This position is to some extent followed by Nugent (1993), who demonstrated how merchant capital, and not a dogmatic industrial capital, dominates relations of production in Amazonia. Nugent's main argument is that articulation may exist, but it is bounded by the specific characteristics of capitalist penetration in the form of merchant capital. By allowing for the expansion of forms of production, merchant capital grants some autonomy to local "peasantry", an autonomy that may be reinforced by government, and aid interventions in the form of development programmes and projects.

The analysis of urbanisation within a Marxist framework highlights macro, universal features of the process. What authors like Nugent (1993) and Sawyer (1987, 1989) do is to dig deeper into this issue to investigate how rural-urban relations influence the livelihoods of local people. The common conclusion is that the urbanisation of the Amazonian frontier gives to both urban and rural populations some room for manoeuvre in their pursuit of a better livelihood. Urbanisation also reinforces existing patterns of both rural and urban development.

As noted in the introduction, this is not a conclusive chapter. The debate raised here will be contrasted with theories of liberal mould presented in the next chapter. There, a conclusive section will reunite Marxist and liberal accounts of development and the effects upon the peasantry. What comes out of the present chapter, however, is the notion that Amazonian development cannot be adequately understood in terms of rigid Marxist frameworks that overlook the diversity of social relations. This sort of problem, however, is not exclusive to Marxist-based ideas. The next chapter will show how classical theoretical approaches have also been inadequate in understanding social, cultural, political and environmental specificities of Brazilian Amazonia.

CHAPTER 2 - LIBERAL APPROACHES AND THE SUSTAINABILITY OF DEVELOPMENT

Duality, beneficial interaction, development. These are the core dimensions of mainstream liberal theories and practice. They stand in sharp opposition to Marxist approaches that emphasise exploitation and conflict as conditions for capitalist development. From the very foundations of sociological thinking until today, liberal thinking has carried a dual view of society and development, which is manifested in terms like "modern" and "traditional"; or "formal" and "informal". Despite such duality, a common view within liberal approaches is the prediction that developing societies would take a linear path of growth towards Western standards. The dualistic thinking has informed many of policies and programmes of a liberal pedigree, and resulted in an urban-biased approach to development.

This chapter reviews various liberal approaches and their economic and social effects. The text highlights how these approaches have been biased in favour of urban areas. It also examines how policy implementation under the prescription of liberal economics has more recently stressed the promotion of income generation and entrepreneurship as a tool for reducing the inequality created by past liberal blueprints. The income-generation strategy has been applied in both urban and rural areas, but without a cross-sectoral analysis.

This chapter also examines two works that have focused on the rural-urban interface. Lipton's urban-bias approach focuses on the ways that urban people find to exploit the rural ones. Rondinelli takes an opposite view: urban and rural areas can benefit from each other given some geographical circumstances, and the altruistic predisposition of urban leaders. Differences and similarities between the two accounts are highlighted, and then it is shown how both authors have touched on the issue of institutional influences without however developing it further.

The final section of this chapter opens the discussion on institutional dimensions affecting development possibilities. Drawing on rational-choice theory, this debate provides a framework within which to analyse the linkages between economic performance and public policies. This section thus completes the theoretical discussion of this work.

The roots of sociological thinking and modernisation approaches

At the very core of modernisation theory lies an urban-biased type of analysis. To the dualistic distinction between traditional and modern corresponds a necessary distinction between rural and urban. If modernisation is to take place, there should be an "urbanisation" of hearts and minds in the sense that they should adopt Western "modern" values, attitudes, and norms. The means to this project are clear: technology, expertise, and capital. The traditional/modern dualism of modernisation theory has its roots on the search for a theoretical framework that could explain the emergence of European industrialisation of early 19th Century. This was a time of social, political and economic revolution. Growing population clustered in urban centres. Urban-based industry superseded the importance of agriculture for the first time. Political and bureaucratic activities of the State assumed a new and important role. An analytical framework was necessary to interpret these processes, and at the same time explain why they did take place in Europe (in fact mainly in Britain, Germany and France), and not in other (non-European) countries.

Max Weber developed analytical tools that created a coherent explanation of such process. What seems fundamental in his analysis, for the purposes of this thesis, is the view of the Western, urban individual as a relatively free agent in relation to past tradition. A major contention of Weber's work was the understanding that the development of Western society was driven by principles of rationality. Conversely, backward countries were bound by customs of tradition. In the classic essays on "The Protestant Ethic and the Spirit of Capitalism", Weber (1971) argues that while capitalism had existed elsewhere in elementary form, it developed in Europe due to a wise endorsement of the idea of accumulating capital as an end in itself. It was the

asceticism of the Protestant religion that led people to engage in disciplined and rationally organised work.

Rational behaviour was particularly linked to urban entrepreneurship and capitalist development. What Weber has called "the spirit of capitalism" was, at the end, a life-style that should reconcile discipline, diligence, and moderation. This rational hard-working style was necessary to turn "peasants into labourers" (Weber, 1971: 7). The physical distance from the natural environment, and the very nature of non-agricultural activities would disperse superstition, an essential characteristic of traditional/rural societies. Finally, the capitalist development together with a more complex web of social relations would give rise to a system of administration, that is, a bureaucracy. As an organising agent, the bureaucracy could provide a universal system of social control necessary for capitalist development. As a legitimate power, the bureaucracy would regulate the conflict amongst classes.

For Weber, the population could be divided into classes according to people's capacity of getting a place in the market. Such market capacity brings about different life-chances, that is, the chances of an individual in sharing economic and cultural benefits of a society. In this sense, capital is seen as one source of market capacity, and therefore property-owners constitute a class. However, skills and education also formed the basis of market capacity, and therefore influenced class position.

The roots of the sociological thought placed in the 19th Century were later adopted by Western social scientists concerned with the "loss of influence in the old colonial areas" (Webster, 1990). The fact that just after World War II many countries gained their independence "encouraged social scientists to examine them as 'wholes'" (Harrison, 1988: 59). The approach that came out of this new view of development is known as modernisation theory. By the second half of the 1940s there was also a political concern on the part of industrialised countries to keep the newly created states away from socialist influence. By award granting, industrialised countries sought to keep political and economic control over their former colonies, as well as over other already independent non-industrialised nations. International institutions,

like the International Bank for Reconstruction and Development, the International Monetary Fund, and the United Nations, were then created to set up new conditions for the world development.

The language of development gained power, with modernisation theory as its theoretical basis, and right-wing governments as its forceful arm. Much of the development strategy applied to the Brazilian Amazon, as well as to the country's agricultural sector, was based on policies prescribed by the military government under the modernisation paradigm. They will be analysed in the next chapter.

What needs to be emphasised here is that the modernisation framework borrowed from the roots of liberal Sociology the tradition-modernity dualism, which carries the central argument that the passage from the former to the latter stage would depend on a prior change in values, attitudes, and norms of people. The "modern" was then identified with a society's "achievement orientation", which is expressed in terms of innovation and entrepreneurship. This sort of social and psychological approach also appeared in Lerner's (1964) proposition of a "transitional society". This is the society that, as far as it manifests a capacity to incorporate new roles and have a publicly minded orientation, so it will engage in the process of modernisation. There was in Lerner's work a sort of geographical prejudice against rural areas. "Traditional society is non-participant", he argued (1964: 50), to conclude that "people's horizons are limited by locale".

This evolutionary vision of modernisation, associated with a "stage" model, was further developed by W.W. Rostow in his 1960 text "Stages of Economic Growth: a non-communist manifesto". Rostow claims that the economic dimension of all societies would fall to one of five categories: the traditional society; the preconditions to take-off; take-off; the drive to maturity, and the age of high mass-consumption" (1960: 4). What is at the core of Rostow's proposition is the belief that poor nations could replicate the same path of development pursued by industrialised ones, and the performance of the former could then be evaluated against the latter. Rostow's economic propositions, associated with the entrepreneurial ethic as the driving force

of development, lead to policy recommendations whose basic prescription was an industrial, urban-based type of development. As the engine of growth, industry should be supported by agriculture from which resources, especially labour, should be transferred. Agriculture was treated by modernisation theory as a "black box from which people, and food to feed them, and perhaps capital, could be released" (Little, 1982: 106).

Some modernisation economists exerted particular influence during the 1950s in shaping the view of agriculture as a resource-transfer segment. The thesis of Raul Prebisch (1959) argues that the possibilities for growth through agricultural and other primary commodities are very limited because the terms of trade for these products in relation to necessary imports of manufactures are not favourable. The policy recommendation that followed this argument was that poor nations should give priority to imports of manufactured goods rather than to the production of agricultural exports. This import substitution industrialisation was strongly enforced in Brazil in the early 1950s, and maintained for more than a decade. The import substitution model resulted in strong detrimental effects for the agricultural sector, and boosted the country's urbanisation. Urban growth and environmental impacts associated with the import substitution model will be analysed in chapter 3.

Another influential article of that time was "Economic Development with Unlimited Supplies of Labour", by W. Arthur Lewis (1954). The author formulated his idea around a model of two sectors -- a modern capitalist exchange sector and an indigenous non-capitalist dominated by subsistence farming. Put simply, Lewis's thesis is that "surplus" labour and other resources should be transferred from agriculture to industry to promote growth, once industry would reinvest profits and carry out capitalist expansion. In Lewis' model, the supply of labour was "unlimited" in the sense that the supply of labour would be always greater than the industrial demand at the existing wage rate. In other words, it assumed a permanent rural to urban migration. This belief had widespread effects on other economists and policy makers. As Eicher and Staats (1990) put it, "many development economists concluded that since economic growth facilitated the structural transformation of the

economy in the long run, the rapid transfer of resources (especially "surplus" labour) from agriculture to industry was an appropriate short-run economic development strategy" (Eicher and Staatz, 1990: 5).

The fourth influential thesis was advanced by Albert Hirschman (1958). In his book "The Strategy of Economic Development", Hirschman explored the intertwined linkages, forward and backward, between different economic activities. His proposition was that linkages effects of a given product line as the "investment-generating forces that are set in motion, through input-output relations, when productive facilitates that supply inputs to that line or utilise its output are inadequate or non-existent. Backward linkages lead to new investment in input-supplying facilities and forward linkages to investment in output-using facilities" (Hirschman, 1977: 72). For him, manufacture had a "crushing superiority" in relation to agriculture in terms of setting up new activities through linkages. Therefore it follows that more rapid and more broadly based economic growth would be achieved via investment in industrial activities, and not in agriculture.

These ideas brought about a model of North-South aid for development based on the assumption that agricultural technology and agricultural extension practised in high-income countries could be packaged and transferred to non-industrialised nations. This strategy would be later labelled the "diffusion model". "Traditional" farmers, it is assumed, could substantially boost their productivity by combining a better allocation of resources and adopting agricultural practices, technologies and institutions from Western nations. The institutional dimension was based on adequate land tenure systems, local democracy, and education. At the basis of this reasoning was the conviction that small "traditional" farmers were poor decision-makers and could not develop without outside assistance in the planning of local development projects.

Still in mid the 1960s, another influential book argued that agricultural extension per se was not enough. A major change towards investment in agricultural research, technology-based inputs of production and human capital was necessary to increase

agricultural production per capita. "Transforming Traditional Agriculture", was the 1964 book in which T.W. Schultz maintained that poor farmers were not irrational, but rather efficient allocators of their meagre resources. The author saw small-farmers as potential profit-maximisers, which could, to some extent, be paralleled to small capitalists. The poor performance of small farmers was to be attributed their lack of capital, and technical expertise. One central objective of policies for agricultural development should be the provision of credit and agricultural extension at levels adequate to small-scale farmers' capacity. Schultz's thesis provided the theoretical and practical foundations for Western governments' aid assistance to developing countries.

In practical terms, such assistance took the form of the "green revolution", a term associated with growing technological knowledge in high-yielding grain varieties. The far larger production output allowed by technology intensive inputs (such as new grain varieties) was seen as applicable to all types of small-scale farming. Moreover, this model was believed to be able to provide productive employment for the rural labour force at the same time that it would "produce the wage goods needed for an expanding industrial labour force" (Eicher and Staatz, 1990: 9). Schultz's approach did act to lower the prices of food staples in urban areas. However, the benefits of the green revolution were not generalised.

A number of circumstances led to the failure of green-revolution-type strategies in some countries. Amongst them one could cite inequality in resources and in the land ownership structure, as well as farmers' distance from major consumer markets. In many cases, small farmers could not afford buying expensive inputs (like fertilisers). Even when they could buy such inputs, rare would be the case in that the production could be sold in local markets because the final price would be too high for local, people to afford paying for it. It was not rare the case that only affluent farmers or capitalists could stay in business. Furthermore, poor farmers that contracted loans for getting inputs face difficulties to pay them back. In certain places, the green revolution model inflated land prices. Consequently, tenants could not afford paying

increased rent prices. The side effect of what was meant to be an agricultural development was, in fact, a drift of rural labour to urban areas.

Hirschman's thesis that industrial activities would foster economic growth in other sectors of the economy found widespread acceptance. In France, François Perroux published in 1955 the article "La Notion de Pôle de Croissance", whose arguments were lately expanded in his 1961 book "L'Économie du XXe Siècle". Perroux introduced the concept of development poles (adopted by Hirschman), which represented for the industrial sector of many Third World countries a sort of industrial counterpart of what the Green Revolution was for agriculture. The central proposition of Perroux was that governments of developing countries should invest heavily in capital-intensive industries, and the economic growth of this sector would spread outward to generate regional development. As in other modernisation these, Perroux's proposition was that investment should be concentrated in the industrial urban sector, and the development brought about would trickle down to rural areas both at local and regional scale. Such a "ripple" effect would take place thanks to the free operation of market forces.

Particularly in relation to the development poles approach, three main lines of criticism have been formulated. Firstly, the experience proved that the expected trickle-down effects were quite limited to the geographical area in which it was placed. The accelerated national economic growth foreseen by the proponents of this thesis was not realised, as the benefits of such poles did not reach the poorer strata of society. Furthermore, many poles operated as economic enclaves within the region. They were introduced by the central government and did not relate economically or politically within the locality where the physical operation was taking place. Poles also failed to absorb local labour. The industry's operation often demanded skilled labour, which could not be provided by the local population. Finally, the development pole strategy was an expression of a top-down style of planning. This sort of development "from above" has proved to be insensitive to the characteristics and needs of local populations, which remain at the margin of the benefits. Many consequences brought about by poles were in fact adverse. The

"backwash effects ... increased inequality between cores and peripheries, and between urban and rural areas" (Potter and Unwin, 1989: 14).

Critique of modernisation strategies

Sectoral imbalances created by the application of this model of development were already perceived during this period. Mick Moore (1984) summarises the main discussions of that time in relation to rural-urban imbalances, and points out two major criticisms that were posed. First, as identified by Schickele (1968), the rural sector was coerced in to meeting the reproduction costs of the industrial labour force through transfers of financial resources. These were obtained via depressed agricultural produce prices, heavier taxation on agricultural in comparison with industrial products, and taxation of agricultural exports. These resources, extracted from the agricultural sector, were largely applied to the development of urban industry. A second line of discussion, which Moore identifies as pursued by Schickele (1968), Dumont (1966) and Balogh (1966), was related to welfare expenditure. These authors pointed out that government social efforts, especially in education and health provision, were consistently biased against rural areas. Education in particular, prepared the youth for urban positions, not for rural work. Additionally, it was identified that within the public sector, those departments dealing with urban issues were privileged in terms of budgets and allocation of personnel.

These questions, however, were not at the forefront of the concerns of modernisation theorists. For them, urbanisation reflects development, as new settlements create new markets. The basis of this though is central place theory. Initially posed by Christaller (1933, published in English in 1966), this theory suggests that human settlements have identifiable hierarchical relations, and their spatial configuration responds to an economic logic. Central places are nodes of commerce, and the size of their market is a function of the minimum economic size of supplier activities and the maximum range of goods in demand. The larger the central place the more specialised its functions. Other lower-order places provides only basic economic services to more localised populations.

Three factors would provide an order to the pattern of spatial distribution of these settlements: market, transportation and administrative efficiency. Central to this theory, therefore, is its perception of the formation and growth of new settlements as a response to the growth of rural activities. In this sense, urban areas are functional to the supply of goods and services to the encircling rural population. Both sectors were to benefit from their linkages. This basic formulation served as the basis for the latter development of the mercantile model of settlement (revised in chapter 1), and two (among various) other important approaches in terms of rural-urban dimensions.

The first is Hoselitz's (1957) distinction between "generative" and "parasitic" cities. The former refers to those cities that create beneficial economic and cultural influences on their surroundings. Only a minority of cities would be "parasitic", that is, have an unfavourable impact on local economic growth. Hoselitz's positive vision of urban settlements was rapidly challenged by the pervasive effects of the rapid urbanisation in Third World countries that took place after World War II, but perhaps mostly during the 1960s and 1970s. As soon as 1961, the concept of "over-urbanisation" was already put forward by Berry to illustrate the mess of slums and shanties, the growing informality in economic activities and, finally, the dysfunctionality of rapid urban growth.

In summary, modernisation theory brings in itself an urban-biased view of economic and social relations. Departing from the basic argument that development is a process of cultural change, different modernisation approaches argued that "traditional" societies should change values and attitudes to suit rationality, individualism, entrepreneurial ambition, achievement orientation, and innovation – all of them seen as urban attributes. Third World countries would develop to the point they were opened to the diffusion of Western values and had adopted the logic of industrialism. The urban space was the appropriate arena for the new, modern lifestyle, which would encourage literacy as people are exposed more frequently to printed information. Benefits of the economic growth would naturally trickle down,

and "traditional" social formations would be able to appropriate these benefits, and generate a sort of endogenous development.

The main criticism that has probably been made of modernisation theory is its superficial interpretation of the social relations that inform the processes of urban growth, commercialisation of agriculture, and the development of industry. Modernisation is basically a Western view of the world, and generalisations were made through the lenses of the European and North American historical patterns of development. The gradual process of urbanisation in Europe led to more balanced relations between countryside and urban areas, at least up to the beginning of this century. Despite large differences of patterns of urbanisation in the former colonies that now constitute the nations of the so-called Third World, modernisation theory saw the countryside as benefiting from urban areas as urban population growth required more food. No conflict was envisaged between rural and urban societies: both would benefit from each other and grow together as rural goods were exchanged by urban culture. As analysed in the previous chapter, such conflicts were made evident by dependency theorists. As Hardiman and Midgley note, dependency was very effective in calling academic and development agencies' "attention to the problems of international inequality and international trade, which subsequently became a major issue in development policy" (1982: 55)

Mainstream development thought: the growth-with-equity plan

The 1970's witnessed a shift within liberal scholars and development agencies in terms of the perceived effects of modernisation policies. It became clear that the benefits of economic growth did not trickle down as expected, and that the income gap between richer and poorer strata of society in Third World countries was widening. Additionally, the prescribed top-down style of planning fostered the establishment of authoritarian and sometimes murderous regimes. Moreover, the critics of dependency theorists fostered debates on liberal grounds. The answer came in the form of policies directed at the poorer strata of society, as a mean of promoting growth-with-equity. This more responsive form of economic growth was to

be reached through policies directed to employment, income distribution, and "basic needs" (broadly understood as nutrition, housing, and education). That was, however, a turn in policy prescription. The major paradigm of cultural change assigned by modernisation theory remained as a background orientation. Therefore, the "answer" to theories of underdevelopment came in the form of policy prescription, and not as an ideological shift. The subscribers of this new approach became known as developmentalists (Hardiman and Midgley, 1982: 57)

Much of the liberal debate then centred on employment and income distribution, leading research and policy making into two major areas of contention: the linkages between rates of economic growth and income distribution, and the trade-offs between agriculture and industry in terms of investment and employment. The two-sector model of the modernisation paradigm had created an economic, social and political crisis in many Third World countries. This took place because the modern/traditional model precluded a better understanding of the internal workings of agriculture, and believed that urban industry would be able to absorb the rural labour force being thrown into the market, which was clearly not happening.

The agricultural sector was then brought to the forefront of the debate. A large number of micro-economic studies were undertaken to support public action. They focused on various levels of analysis: farmers' behaviour, markets, and agricultural research and development processes. Two major outcomes derived from these researches: a better perception of the role of small-scale production in agricultural development (hence the need for agrarian reform), and the need for a more supportive social, political and financial environment for small producers.

The reassessment of the role of small- versus large-scale agriculture in national development led international organisations to pursue two broad strategies. The first was called Integrated Rural Development (IRD), aimed at integrating in one project economic and social objectives. Improvements in health, education, and sanitation, amongst other aims, should be matched by increases in production. Such a balance was hardly achieved, and this sort of programme, as a whole, failed to grant more

attention and funds to the provision of social services than production (Mellor, 1990: 75). Moreover, as a top-down type of planning, IRD projects were very complex to implement and replicate, and tended "to isolate rural development from the mainstream of government initiatives and political life" (de Janvry and Sadoulet, 1990: 454).

The second line within the new international strategy was labelled the Basic Human Needs Approach (BHN). It gave priority to increasing the welfare of the rural poor by redistributing existing assets. In terms of agricultural policies, BHN recommended that food prices should be kept low in order to ensure that poor people, both rural and urban, could get a decent diet (Stewart, 1985). However, low-income countries faced problems in meeting the costs of investments in basic needs (such as education, housing, nutrition etc.) without simultaneous economic growth to support these investments. Once more, the reconciliation of economic and social ends could hardly be achieved, although some countries such as Cuba, Sri Lanka, and China are pointed as having achieved a great deal of success in implementing BHN strategies.

The liberal thinking of the 1970s, therefore, brought the benefit of a better understanding of the whole of agriculture, that is, the role of small-scale production, and its economic and social requirements, started to be taken into account. Nevertheless, attempts to reconcile both ends failed to produce an adequate framework for action. Policy recommendations did grasp some core issues such as the need for better education and nutrition, but failed to provide a plan of action that could provide developing countries the means for achieving the necessary balance between social and economic objectives.

The informal sector debate

A parallel discussion born in the 1970s relates to small-scale activities in urban areas. High rates of rural-urban migration and rapid urbanisation without widespread industrialisation in the Third World during the 1950s and the 1960s

stimulated economists' analysis of urban economic activities. They were interpreted under a dualistic "two sector" framework, firstly introduced by Geertz (1963), who proposed a model focusing on urban exchange rather than production. Geertz enumerated and described various features of a type of economy he called a "bazaar" economy, which operated outside the norms of the "firm" economy.

This dualistic thinking received an essential boost in 1971, when Keith Hart presented his paper "Informal Income Opportunities and Urban Employment in Ghana". Hart's (1973) basic proposition is that the linkages between informal and formal sectors, and between small- and large-scale enterprises are benign, and both would benefit from each other advantages. An even more enthusiastic defence of the informal sector is found in the work of De Soto (1987), who considers the informal sector not as "traditional" or "unproductive", but rather as "dynamic" and "entrepreneurial".

The informal sector model gained momentum when it was largely adopted by international agencies, like the United Nations Development Programme (UNDP), and the International Labour Office (ILO). The latter applied this concept in its World Employment Programme. The ILO further developed the informal sector concept in its studies of the economy of Kenya, Colombia, and Sri Lanka. As a result of these studies, but mainly from the first one, the ILO (1972) set up a framework of informal sector characteristics. Informal activities were believed to be absorptive of rural labour, low-cost, and labour-intensive; they provide competitive goods and services using locally produced inputs, and develop their own skills and technology. The recommendations that derived from these country-studies strongly recommended governments to give incentives for the promotion of informal activities. The studies also recommended further analysis of the linkages between formal and informal sectors of the economy.

An extensive analysis of the informal sector debate lies outside the scope of this thesis. What is worthwhile to noting, firstly, is that the informal sector concept

contrasts sharply with the neo-Marxist petty commodity production approach. The latter sees small-scale, "informal" activities as being subordinated and functional to capitalist development, as discussed in the previous chapter. The former understands informal-formal links as being beneficial to both sectors. In fact, further analysis on the theoretical basis has shown a great deal of divergence as to characterise this "sector" of the economy.

A summary of these debates is provided by Moser (1978). The author distinguishes the following approaches to the informal sector: two types of economy, a "firm centred economy" and a "bazaar type economy" (as in Geertz, 1963); "two juxtaposed systems of production, one derived from capitalist forms of production, the other from the peasant system (as in McGee, 1973); two circuits, 'the upper and the lower circuits' (as in Santos and Gerry, 1979); and two sectors, "a high profit/high wage international oligopolistic sector and a low profit/low wage competitive capitalistic sector' (as in Brown, 1974)". Additionally, there is an important distinction made by Castells and Portes (1989) between protected and unprotected labour. As a matter of fact, the authors deny any analytical validity of the informal sector concept, arguing that informal relations can be found even inside formal firms. This was also confirmed by Roberts' (1989) study of modern Mexican companies.

The second, and probably most important point, refers to the policy prescriptions that derived from the ILO informal sector analytical framework. The central point here is that policy recommendations were biased in favour of urban areas. As Moser states, "there was a prevalent if reluctant recognition that rural-urban drift and increasing urbanisation were unavoidable and therefore it was the recommendations to increase urban employment which received primary attention" (Moser, 1978: 1049). Policy advice largely suggested the application of measures to divert infrastructure and investments away from the capital city to smaller urban centres. This proposition echoes both François Perroux's growth poles proposal and Hirschman's diffusion pole thesis, and was latter adopted by Rondinelli (1983), whose work will be analysed further in this chapter.

The bias of the informal sector debate towards urban areas was not, however, just a question of policy prescription. As Bromley (1978) argues, “there is a curious tendency to view the informal sector as exclusively urban, and to use alternative terms such as ‘the rural traditional sector’ to describe analogous activities outside the towns and cities” (Bromley, 1978: 1034). The author stresses that the activities of rural artisans, petty traders, and peasant farmers could also be classified as “informal activities”, if the analytical framework created for the concept was to be maintained. Such pitfalls opened the flank for strong criticisms from a neo-Marxist standpoint. Bromley (1978), for example, argues that the sectoral division between formal and informal invalidates any policy prescription. The issue is that the informal sector comprises such a large variety of activities, that it became impossible for governments to address policies correctly. Moreover, Bromley (1978) pointed out that the two-sector approach does not capture the linkages and the process of transition that exists along the continuum of intermediate categories. Furthermore, the recognition that internal differentiation does exist among petty enterprises in many sectors has reinforced criticisms of the formal/informal dichotomy.

Despite these shortcomings, policy recommendations based on a formal/informal analytical framework have served as the basis for a number of policies implemented by governments, official donor agencies, and some non-governmental organisations since the 1970s. Bromley (1978) offers one explanation to this. Support of the informal sector", he says, "appeared to offer the possibility of 'helping the poor without any major threat to the rich', a potential compromise between pressures for the redistribution of income and wealth and the desire for stability on the part of economic and political élites" (Bromley, 1978: 1036). For the promoters of policy prescription, however, the informal sector approach retained its rationale as a powerful concept with which liberal policies could be built.

During the 1970s, for example, the alternative approach launched by Schumacher (1973) in the form of "Small is Beautiful" contributed to the implementation of policies directed to training, credit provision, and simplification of rules and regulations among other prescriptions for targeted groups. The general idea of easing work conditions, and investing in entrepreneurship, was captured by international agencies, and applied as an adequate strategy of development policy to combat poverty, mainly in urban areas. However, this proposition was highly influenced by the outcomes of the world economy during the 1980s. This is the focus of the following section.

The structural adjustment process

This chapter has previously discussed the effects of the liberal thinking of the 1970s, and how the paradigms of modernisation theory and its top-down style of planning failed to tackle income inequalities, and therefore the sectoral rural-urban imbalance. Both macro- and micro-economic policies favoured urban areas. Additionally, rapid urban growth rates oriented research and policy towards urban labour markets, and the urban informal sector. During this period, and parallel to official policy and assistance, there was a revival of Marxist theory in terms of research. This revival has been analysed in chapter 1.

By the end of the 1970s and beginning of the 1980s, however, rash economic conditions, and a right-wing political revival, led to a major swing in research and policy "towards economic growth, policy reform and market liberalisation" (Eicher and Staatz, 1990: 21). Macro-level recommendations associated to this new agenda became known as structural adjustment. At the micro-level, research and policies were channelled to the promotion of entrepreneurship as the best means of alleviating poverty. In general terms, there was a move from the structuralist position of the 1970s, to a neo-liberal approach to development. This move, nevertheless, produced the embryonic conditions for the perception of non-economic factors affecting livelihood chances, as well as impacts on the natural environment.

From the 1980s onwards, structural adjustment policies advocated by the World Bank, combined with the International Monetary Fund (IMF) "conditionalities", restricted the capacity of State economic intervention and public sector investment in Less Developed Countries (LDCs). These policies, associated with deterioration in the terms of trade for basic commodities, demanded from the LDCs a sharp reduction in State expenditure and an export-led orientation in order to adjust the balance of payments. Related policies, such as the privatisation of State-owned enterprises, resulted in increased open unemployment and enlarged informal-sector activities. Additionally, cuts in State expenditure reduced the delivery of social services to the poor. Economic and financial constraints over industrial investments turned attentions to agriculture as being the sector that could help equilibrate the balance of payments.

In relation to agricultural commodities, the 1980s were characterised by the intervention of industrialised countries' governments to ensure food security. Developed countries became producers of staple foods by applying huge amounts of capital and subsidies to agriculture, whilst developing countries were forced to grow secondary products. At the same time, industrialised countries and Trans National Corporations (TNCs) in particular, started to control the distribution of developing country products, regulating their prices (Delfin, 1990). This economic environment brought into question the need to understand how agriculture relates to the broader macro-economic issues.

The major policy proposal for agricultural development of this time was introduced by Timmer, Falcon, and Pearson (1983) in the book "Food Policy Analysis". This is a broader approach that tries to reconcile Schultz's economic concern with the Basic Human Needs approach presented in mid-1980s. "Food Policy Analysis" recognises the increasing interdependence of countries in the world economy, and proposed that food and agricultural policies should be formulated in the light of macro-economic policies, that is, at the level of adjustment and sectoral level policies.

For Latin America, particularly in Brazil, structural adjustment policy implementation was translated into a bimodal strategy. It recommended a "crash" strategy, that is, the concentration of private and public resources in a small number of very large farming enterprises, known as agribusiness. In political economy terms, this strategy allowed for the "conservative modernisation" of the Brazilian countryside. In other words, it created the necessary conditions for the capitalisation of large farms with property rights derived from the pattern of land ownership established since the colonial period (Graziano da Silva, 1996). Capital-intensive agribusiness was meant to be able to generate sizeable surpluses by attending the demand of the global market. The increase in agricultural output, however, proved to be inadequate to generate economic benefits for all the rural population. Agribusiness did increase the share of agriculture in national accounts, especially in some mid-income countries, like Brazil. However, it had pervasive effects on small-scale production, which was sidelined from government policies. In the Brazilian cases, this "crash" strategy reinforced trends of land ownership concentration, and therefore rural-urban migration. In some areas of the country, as was the case of Eastern Amazonia, this process increased violence in the countryside as a reflection of disputes over land. Additionally, the new pattern of land-use had detrimental effects to the natural environment (Mueller, 1992).

A review of all the discussion that took place in relation to the implementation of these policies lies outside the scope and the length of this text. What should be stressed, however, are the main conclusion of critics of "bimodal" strategies. Johnston and Kilby (1975) point out that the promotion of agribusiness failed to reach (and therefore empower) the rural poor; failed to increase production per acre, because large farms are managed extensively; and finally failed to spread benefits locally, like off-farm employment in nearby rural and urban locations. To counter-balance these trends, Johnston and Kilby support a "unimodal" strategy, based on the mass of small-scale farms. However, they consider that this kind of policy is "blocked" by the interests of élites, and also by the limited force of

"institutions which can hold these tendencies in check and make the élite give the public value for its privileges" (1995: 120).

The social dimensions of development and the environment

The limitations of structural adjustment policies became evident even before the end of the decade, and opened discussion on the social aspects of development. The burden of structural adjustment policies, it is generally agreed, fell more on the poor and vulnerable than on the better off (Messkoub, 1992). During the 1980s, Third World countries in general experienced growing poverty in both absolute and relative numbers (Lipton and Maxwell, 1992).

The answer for the failure of macro-economic policies came from the United Nations Children's Fund (UNICEF) report "Adjustment with a Human Face". As the authors of the report put it, "Adjustment with a human face ... [adds] ... a poverty alleviation dimension to adjustment . . . and may be thought of as the 'basic needs' approach to adjustment" (Cornia *et al.*, 1987: 7). The general tone of the report urged (a) economic growth rather than economic squeeze; (b) targeted State investments on the poor and vulnerable; (c) support for the development of small-scale production as a means to increase employment; (d) more public spending in the sphere of basic needs.

The UNICEF report, which emphasised the need for a more socially responsive approach to economic development, was criticised for being only an "ineffective and partial palliative for the destructive and impoverishing effects of orthodox adjustment programmes" (Messkoub, 1992: 198). The proper approach, Messkoub argues, would be an economic reform alongside democratising measures, together with the empowerment of the poor. "Adjustment with a Human Face" was shortly followed by two other important studies on the social impacts of macro-economic policies: the World Bank Development Report (1990), and the first Human Development Report (1990), of the United Nations Development Programme (UNDP), from 1991. Also in 1991, the World Bank released its policy

paper named "Assistance Strategies to Reduce Poverty", together with other publications tackling the same issue. If considered together, these international documents form a new agenda for development, one that relates development to poverty alleviation and environmental protection. Chapter 4 examines this agenda in detail. Here, the fundamentals that gave rise to this debate are analysed. They relate to the concept of sustainable development.

By the end of the 1980s, growing industrialisation combined with rapid urbanisation and extensive use of agricultural land promoted by the Green Revolution, resulted in large-scale environmental degradation, generalised pollution of air, water, and soil. The deterioration of the natural environment brought about consequences for living conditions and both agricultural and industrial production. In 1987, the release of the influential report "Our Common Future" from the World Commission on Environment and Development (WCED), established the dimension of sustainability for development. According to the report, sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 43). Conditions of sustainability were to be met at local, regional, national and global levels.

This first definition of sustainable development has proved to be a good parameter against which to compare development practices. However, it has two main limitations built in. Firstly, as Vivian (1992: 54) notes, it "leaves a good deal of room for manoeuvre". That is, it does not identify which pattern of development should be followed nor who will decide the social, economic and biological needs of the present or future generations. Secondly, the very concept of development carries a strong perception of development as being an economic transformation, a transition from a non-developed situation towards a developed one. In other words, it carries the idea of modernisation of "traditional" practices according to the path established by Western societies. Additionally, as Nugent (1993: 255) notes, it tends to promote the "language of the market", while not paying enough

attention to the circumstances in which these same people meet their reproductive needs, given the current dominant modes or forms of production.

From the broad definition provided by the WCED, the concept of sustainable development has been approached from three dimensions: economic, biological, and social. While in the earlier debates some authors have tended to analyse these dimensions separately, Barbier (1989) has stressed the importance of analysing the trade-offs that derive from the relationship amongst these dimensions. This has been captured by the World Bank, which defined sustainable development as being "the maximisation of net benefits of economic and social development, subject to maintaining the services from, and stock of natural resources over time" (Munasinghe, 1993: 4).

This approach, while trying to reconcile the three dimensions was, however, highly economic. What is central to the economic-focused debate on sustainable development is that sustainability is a matter of keeping available a necessary stock of natural resources for sustained economic development. In this account, "sustainable" is not only an euphemism for "sustained", but also an instrument for managing the stock of natural resources in such a way as to guarantee the needs of capital. Even though this economic approach provides useful means of accessing trade-offs, it tends to reflect, as Pearce *et al.* (1989) note, the concerns of developed countries. Moreover, the economic valuation of natural resources is based on economic utilitarianism, that is, the classical liberal approach is that the natural environment can be valued against the commodities that can be extracted from it.

A contrasting economic approach has more recently been presented by Pearce and Myers (1990). They argue that a valuation of the environment against commodity production does not take into account the value of non-market environmental goods and services. These goods and services are, however, necessary for the very production of other commodities. Additionally, from the point-of-view of local people, other sorts of value may have precedence over use-

values. Turner *et al.* (1994), for example, consider that "there are preferences held by people (e.g. anthropocentric and instrumental value) ... [that do] not encompass any value that may intrinsically reside 'in' environmental assets" (Turner *et al.* 1994: 109). Vivian (1992) adds that the achievement of human needs is dependent upon environmental factors unrelated to economic or physical resource yields. It includes, she argues, "the availability of clean air and adequate living space, and, in many circumstances, people's ability to maintain a spiritual, cultural or aesthetic relationship with their environment" (Vivian, 1992: 55).

Despite these more recent changes in economists' perceptions of environmental functions and services, the bulk of the debate on sustainable use of natural resources has concentrated on factors affecting production, at all levels. Increases in global temperature have led to concerns on sustainability at the global level. As tropical forest cutting and burning are believed to play a major part in global warming, there have been increasing calls for the adoption of less destructive farming systems. In 1985, the Food and Agriculture Organisation (FAO) of the United Nations released the Tropical Forestry Action Plan (FAO, 1985), aimed at assisting developing countries to make more rational use of forested areas, mainly for timber production. The general language of this document is one of forest development, but it did launch concerns about the social impacts of deforestation on the livelihoods of local people.

This issue was also captured by other international organisations. The International Labour Office's Programme for Industrial Activities produced the report "Working, Living and Social Conditions in Forestry (ILO, 1985). A few years later the World Bank issued a more comprehensive document, with stronger references to sustainability: "People and Trees: the role of social forestry in sustainable development" (World Bank, 1989). These documents, nevertheless, were primarily concerned with methods and technologies for reconciling peoples' needs and capacity for co-operation with mixed use of forest areas for crop and livestock production. Once again, the discourse of environmental management played its role, as noted by Barraclough and Ghimire (1995): social forestry,

agroforestry, farm forestry, and community forestry "are all new names for very old and partially interchangeable concepts practised since Neolithic times. The authors, however, do not play down the role of social forestry, or agroforestry in meeting the needs of reproduction of small-scale producers in tropical areas.

Linkages between environmental degradation and rural production also raised concerns at national and local levels. National strategies of capital-intensive agricultural practices resulted in large-scale rural pollution (by agrochemicals), and destruction of wildlife and habitats. Furthermore, the capacity of countries to afford and sustain this sort of agricultural practice was called into question due to the high costs it generated in relation to foreign earnings it provided. At the local level, "increasing population pressure on fragile environments led to worries that existing farming systems in many parts of the world were no longer sustainable" (Eicher and Staatz, 1990: 23). The lack of sustainability implied that existing practices of small-scale farm production would reduce the support capacity of the environment, leading rural people in to a downward spiral in agricultural productivity, and resulting in increasing poverty.

Environmental protection and poverty alleviation then became a central issue. Michael Redclift (1992), a leading author on this topic, states that in developing countries circumstances are such that the fulfilment of basic needs for immediate survival may be the actual backdrop of apparent indiscriminate environmental degradation. For Redclift, in cases like the deforestation of the Brazilian Amazon, one should "specify greater equity, or the reduction of poverty, as the primary objective of sustainable development, before the question of environmental quality can be fully addressed" (Redclift, 1992: 29).

Linkages between environment and poverty gained became clearer during the United Nations Conference on Environment and Development (UNCED, also known as the Rio-92 summit). The proceeding of the conference, that took place in 1992 in Rio de Janeiro, made it clear that there is no point in talking about sustainable development without addressing the alleviation of poverty:

"A development policy that focuses mainly on increasing the production of goods without addressing the sustainability of the resources on which production is based will sooner or later run into declining productivity, which could also have an adverse impact on poverty. A specific anti-poverty strategy is therefore one of the basic conditions for ensuring sustainable development." UNCED (1992, Agenda 21, Chapter 3, "Combating Poverty" article 3.2)

This focus on the human aspects of sustainable development is shared by Robert Chambers (1988), for whom the sustainability of the resource base makes little sense if it is separated from the human agents who manage the environment. Therefore, at the local level, the concept of sustainability is intrinsically associated with the livelihood conditions of those whose reproduction depends on the use of the environment. Within this dimension, sustainability is shaped by the extent to which conditions of livelihoods are themselves sustainable. The social dimension of development allows therefore for the formulation of a new definition of the concept "sustainable development", as proposed by Hall.

[Sustainable is the] "development which allows the productive use of natural resources for economic growth and livelihood strengthening, while simultaneously conserving the biodiversity and sociodiversity which form an integral and indispensable part of this process."
Hall (1995: 4)

This definition is particularly relevant in that it brings together economic, biological and social dimensions at a level of livelihood analysis. It explicitly manifests concern with the local cultural setting ("sociodiversity"); and it reconciles production and conservation, making it clear that they are not opposite in nature, but are in fact parts of the same process. As it will be seen in the next chapter, the focus on local level sustainability helps to clarify much of the confusion around the definition of sustainable development. In addition, as Vivian (1992) stresses, what is fundamental in the concept of sustainable development is the perception that non-egalitarian forms of development are not sustainable either in economic, biological or social terms.

The next section examines the debate underlying the economic dimension of the sustainability thesis. The "productive use of natural resources for economic growth and livelihood strengthening", as defined above, requires the organisation of production so as to allow it to reach the market. In other words, it depends on some sort of enterprise.

Promotion of enterprises and entrepreneurship

The macro-economic reforms of the 1980s also had a parallel in studies of development, and produced what John Toye (1993) calls "the populism of the right". This movement, labelled a "counter-revolution", meant for small-scale production a shift from approaching income-generating activities as a mere supplement to household activities (the 1970s' basic needs proposal), to the promotion of profit maximisation, self-employment and entrepreneurship. As Corbridge (1989) notes, the "counter-revolution" is a form of liberal economics in which Third World countries are urged to adopt the economics of comparative advantage and subjective preference.

Within the circumstances of market liberalisation and State retraction, the most severely affected group has been the poor. Precisely the group with fewest assets and instruments to overcome the burden of adjustment policies. For the "poorest of the poor", as prescribed in the World Bank 1990 Report, the last option consisted of trying to use their most abundant asset: labour (World Bank, 1990). In terms of policies, the poor should be reached through targeting groups (Sethuraman, 1981; Neck and Nelson, 1987; Rodgers, 1995).

As a mean of targeting appropriately, the "counter-revolution" searched for appropriate mechanisms. One was found in the informal sector, the other was the establishment of partnerships with NGOs. The informal sector became fashionable for being perceived as a useful tool for addressing governmental aims, employment creation, promotion of social equality, as well as market goals. Informal activities were to be promoted in the form of small enterprises, as a

"response to unmet public needs" (Neck, 1987: 21). A market-led approach was then prescribed for the promotion of small enterprises and entrepreneurship.

This strategy was then labelled the "hard-nosed approach", as it stressed a market-led plan for development, believing that entrepreneurs would generate wealth and the poor would benefit in a trickle-down effect. This view is expressed by Akhouri (1990), for whom "there is enough historical evidence to suggest that whenever the number of such persons (entrepreneurs) has grown in a society or country that society and country has attained greater prosperity at that point of time" (Akhouri, 1990: 65). In practice, this approach represents a shift in terms of policy orientation from those with the greatest need (the welfare view) to those with the most ability. Entrepreneurship in this variant, does not carry a welfarist dimension, rather it sees entrepreneurial promotion as the best way to meet explicit market-led objectives. Two variants could be recognised within this approach.

Put briefly, the first variant stresses the need of entrepreneurship development and a focus on individuals. This variant, which will be called "entrepreneurial", has a less complex bureaucratic framework, and a minimalist approach to action, as it prescribes provision of credit for selected individuals. This variant relies heavily on modernisation paradigms, as becomes clear from Loucks' (1990) writings for the ILO: "the poor should rely on the 'trickle-down' effects of business creation to share in the rewards of commerce and industry" (Loucks, 1990: 21).

As a consequence of the market-led and "trickle-down" perspectives, this variant is more concerned with enterprise replication and market competition than with economic sustainability of enterprises, and hence that of entrepreneurs. Hence, existing patterns of reciprocity (e.g. co-ops and associations of producers, and group credit schemes in general) should not be supported as they carry a welfarist component. Community-based financial arrangements, as seen in this variant, do not break the dependence between borrowers and the financial organisation. It is also believed that such arrangements do not suspend the dependence between

the financial organisation and the sponsoring organisation. This variant borrows from the liberal thinking the trickle-down perspective that was employed by modernisation theorists. It therefore moves away from redistributionist strategies, as those present in Basic Human Needs strategies, for example.

The second variant introduces a mix of the components presented in the entrepreneurial variant of the hard-nosed approach with past welfarist approaches of the 1970s. It emphasises the necessity of institutional development through "indigenous and ostensibly low-cost, grassroots and sustainable forms of organisation" (Panayiotopoulos and Gerry, 1991: 30). This variant, that will be called "institutional", reflects a concern with community development strategies advocated by defenders of a welfarist approach. This variant aims at enabling a complementary environment between individuals and institutions. Consequently, programme inputs in this framework seek to change promotional efforts from "hard" (i.e. technical skills, raw materials, equipment, etc.) to "soft" (i.e. personal and entrepreneurial development). Nevertheless, it retains a market orientation, as advocated by the entrepreneurial variant, but there are significant differences.

The institutional variant does not seek to charge full market interest rates fully, as the entrepreneurial variant does. Additionally, this variant suggests that patterns of reciprocity can play an important role in the provision of credit, which is perceived not only in terms of a mean to achieve or improve production, but also as a way of attending to a number of householders' basic needs. This approach has been more recently adopted by international organisations, like the World Bank, and by NGOs like Oxfam. In this approach, grassroots organisations and their patterns of reciprocity are seen as a suitable instrument to cope with the livelihood necessities of the poor. Writing for Oxfam, a British-based NGO with international operation, Brian Pratt summarises:

"A hard-nosed or business approach to income generation is essential if we are to avoid perpetuating 'hidden' welfare schemes, in which the use of unsustainable high levels of subsidies to unfeasible economic activities is little better than long-term welfare."

Hurley *et al.* (1990: 10)

In brief, the promotion of labour-intensive activities has been fostered by a policy environment in which the liberal "counter-revolution" sets the general tone. The promotion of labour-intensive activities, which general parameters were discussed above, was applied both for rural and urban areas. In fact, as Corbridge (1989) points out, there is in the "counter-revolution" an rural-urban internal logic. The author writes:

"Central to this [liberal] project is a reassessment of the structure of rural-urban relations in the developing world. Counter-revolutionaries identify a Third World beset of urban bias, by excessive rural-to-urban migration and by inefficient import-substituting industries."
Corbridge (1989: 233)

The medicine that the "counter-revolution" prescribes for the malaise of past development approaches is therefore a balanced State-market relations that could help reduce rural-urban imbalances. But this project fails to address clearly the mechanisms that would alter the politics of intra-sectoral production and consumption. Once the market, in the final analysis, is the engine of change, little attention is paid to the fact that this new market "realism" is to be matched by institutions which are controlled by the same propertied classes that have for so long benefited from sectoral imbalances and all sorts of inequalities.

Hurley *et al.* (1990) illustrates this point when writing about income-generating activities for the urban poor. The author, who approaches the issue from a NGO perspective, examines how urban élites control access to particular income earning opportunities. The advantaged, he states, control "markets, resources, or skills, within the harsh and highly competitive economies of these cities, and especially of their informal sector" (Hurley *et al.*, 1990: 15).

The three main issues discussed in this section, the market-led approach to labour-intensive income generation, the role of institutions, and rural-urban imbalances, are in accordance with the new international agenda for poverty reduction. Such an agenda emerges from the framework of development policy

established after the structural adjustment process. The next section explores Lipton's proposal for explaining why rural-urban imbalances persist, despite attempts to reduce it through State-market relations.

Lipton's urban-bias approach

The point of departure in Lipton's thesis is the objective fact that in many developing countries governments tend to adopt economic policies that twist prices in various markets against agriculture. At the same time, small, poor farmers do not receive economic, financial or technical support. This sort of urban favouritism forms the idea of an urban-biases development, advanced by Lipton in his book "Why Poor People Stay Poor" (1977).

For the analysis of this imbalance, Lipton does not make use of class categories, but rather develops an analytic model based on spatial relations, that is, a supposed clash between urban and rural sectors. Therefore, for Lipton, the major "class" antagonism of poor countries does not occur between labour and capital, or foreign and national interests, but it is rather between rural and urban populations.

This is possible because the urban élite, "comprising mainly businessmen, politicians, bureaucrats, trade-union leaders and the supporting staff of professionals, academics and intellectuals, can in a modern State substantially control the distribution of resources" (Lipton, 1977: 12). That is, the urban sector contains "most of the articulateness, organisations and power" (Lipton, 1977: 13), so urban people are able to control the development process and squeeze the rural sector. It is in the rural areas where most of the poor can be found, and where most of the low-cost sources of potential advance are.

Two central questions evolve from the notion of "urban-bias": which "instruments" are used to keep or foster such bias; and to what extent a given spatial settlement configures an urban area. Lipton (1977) identifies symptoms of urban-bias in a

number of mechanisms. First, the urban sector pays low prices for food. Tax policies favour urban populations and urban capital. Also, price twists undervalue rural outputs relative to urban outputs. One can also find urban-bias in the lack of appropriate educational and health services that encourage a rural skills drain. Finally, investment policies favour the urban/industrial nexus to the detriment of the most efficient resource-allocation rural sector. Facing such constraints, Lipton argues, rural people migrate to urban areas believing that they will be better off, which, he believes, is often the case.

As noted above, the division of urban and rural spaces is complicated by the fact that the division between city and country is not always clear. For Lipton, however, urban-bias is clear in the case of "large towns", that is, settlements of more than ten thousand people. As Moore (1984) argues, Lipton does not identify a major tertiary, or a "rurban" sector in which social, economic and political dimensions are not easily divided between rural and urban, and therefore an urban-bias identified. Additionally, Lipton does not deal with the issue of concomitant rural and urban residence.

While the concept of urban-bias has some plausibility, and has brought the benefit of spelling out an unfair relation that does in fact exist, its generalisation and theoretical basis is problematic. A major difficulty resides in the fact that Lipton identifies class antagonisms with rural and urban populations. In such terms, the concept of "classes" gets mixed up with rural and urban populations. As Harriss and Moore (1984) argue, Lipton's thesis is reductionist to the extent that "it depends on the view that classes defined by their relations to the means of production are simultaneously interest groups in the political sphere" (Harriss and Moore, 1984: 3). Additionally, Lipton's thesis has also been criticised on the grounds that urban and rural sector cannot be taken as distinct and homogeneous economic sectors. There are the rural rich and the urban poor.

Moreover, as Corbridge (1982) objects, quoting examples from Sen (1977), Frankel (1971), and Das Gupta (1977), famine, "green revolution", and bank

investments have brought differentiated impacts or benefits to rural populations, so that it is difficult to talk in terms of an undifferentiated urban bias. Additionally, Lipton's case that labour-intensive agriculture can use scarce investments more responsively, and should receive priority over investments in large-scale industrialisation, has led to criticisms of an anti-industrialism bias.

Yet, Lipton, and Johnston and Kilby, have been criticised along two other lines of a Marxist pedigree. Bernstein (1977) maintains that the advocates of small-farming do not spell out the consequences that such a policy could lead to, like the parallel intensification of peasants' self-exploitation. A second line of criticism is that from Byres (1982), who consider industrialisation, and not small-farming, as the only way out of backwardness.

Nevertheless, Lipton's insight provided the development vocabulary with a useful concept to interpret disparities between rural and urban areas. However, the analysis of the social, economic and political forces that mediate sectoral imbalances require an analytical framework in which forces acting at both rural and urban levels can be disentangled from Lipton's broad "categories" urban and rural people. Yet, Lipton's insight into the role of local urban institutions, and the powerful influence of local politicians in shaping development, remained as a central issue for the analysis of rural-urban linkages.

Rondinelli and the benefits of rural-urban interactions

A quite different view from Lipton's is sustained by Douglas Rondinelli (1983), who makes a positive assessment of the role of urban areas and argues for a geographically equitable distribution of human settlements as a means of achieving rural development aims. The author's position therefore contrasts directly with both the diffusion pole thesis of Hirschman, and Hoselitz's view of cities as potentially parasitic. For Rondinelli, links between rural and urban sectors are essential for the good performance of both, as he states:

"... the major markets for agricultural surpluses are in urban centres; most agricultural inputs come from organisations in cities; workers seek employment as rising agricultural productivity frees rural labour; and many of the social, health, educational, and other services that satisfy basic human needs in rural areas are distributed from urban centres."
Rondinelli (1983: 10)

A spatially scattered, articulated and integrated system of cities would provide necessary and sufficient conditions for both urban and rural people in getting access to markets. "Decentralised investments in strategically located settlements", claims the author, "can created the minimal conditions that enable rural people to develop their own communities through 'bottom-up' and autonomous processes" (Rondinelli, 1985: 8). Conditions for cities to have developmental influence over their regions, however, would depend on whether a set of ten factors is met.

Potter and Unwin (1989) provide a summary of Rondinelli's analysis, who list these factors as: (1) local leaders recognise that their success depends on the success of their cities and regions; (2) local leaders invest in their cities and towns; (3) local leaders have an innovative approach; (4) local leaders are aggressive; (5) the growth of the city and its region is supported by the national government; (6) urban economic activities are linked to its hinterlands via mutually beneficial processes of exchange; (7) urban economic activities are linked to each other to create multiplier effects; (8) economic activities are organised in such a way as to create income for local residents and promote internal demand; (9) public and private sectors co-operate to promote economic activities that generate widespread participation and distribution of benefits; and (10) the willingness of the city's leaders to promote and encourage social and behavioural changes responsive to new conditions and needs, which in turn are acceptable to the city's residents.

From the work of Rondinelli two main conclusions can be draw. First, his position contrasts with that of Lipton, in which Rondinelli believes that the provision of social and economic facilities in medium-sized cities can led to rural development.

This implies that both rural and urban areas will benefit from marketing facilities in towns. The author, however, does not provide sufficiently convincing arguments that urban investments can be beneficial to both urban and rural areas. This is because Rondinelli bases his analysis on a liberal, capitalist framework, in which, according to modernisation theory, urban development can spread beneficial effects to both rural and urban areas. In his work, the urban settlement structure is more relevant than the underlying mode of production.

The second conclusion is that, in Rondinelli's model, there is no reference, amongst the ten factors mentioned above, to the structure and performance of the rural economy, nor to overall regional economic conditions. Additionally, his analysis of the political influence of leaders is based on the belief that these local politicians will have some sort of altruism, and be committed to relinquish some power and economic influence for the benefit of the urban and rural poor. This clearly contrasts with the position sustained by Hurley *et al.* (1990).

While contrasting among themselves, Lipton and Rondinelli failed to provide a convincing framework for the interpretation of the conditions for development of both rural and urban sectors, at the local level. The two have in common the fact that the analytical framework they adopt is claimed to be valid, "regardless of the political and economic structure of the society under consideration" (Potter and Unwin, 1989:17). Furthermore, in both cases the unit of analysis has a geographical rather than a class dimension. That is, a Marxist critic would state that rural-urban relations must be seen within a framework of class struggle.

A different view is that of Dixon (1987: iv) for whom "it is not urban and rural areas, or rural and urban classes that interact". Dixon's attention seems to focus on the wide range of interests that exist in both rural and urban classes, and that could not be read off from a clear class division. This position, which echoes David Cleary's analysis of modern Amazonia (reviewed below), is also pursued by Potter and Unwin, as they assert:

"What is interesting is to see how different people and classes benefit from different types of urban-rural interaction, and thus how the flows between the two types of area related to broader social and economic transformations . . . Although (the flow of resources between town and countryside) . . . are usually seen as being economic, as a result of differing terms of trade and pricing policies, it is important to emphasise that political, social and ideological factors also play important parts."

Potter and Unwin (1989: 25)

In this regard, both the analyses of Lipton and Rondinelli contribute in adding the dimension of local institutions to the highly economic-led discourse on development. For Lipton, urban people and the institutions they create block possibilities for an equitable development. For Rondinelli, urban people and their institutions may bring about change. Central to their analysis is therefore the role of institutions in fostering or blocking the conditions for economic and social development.

The consequences of institutional factors, despite being perceived, were not developed in the accounts of Lipton and Rondinelli. Both authors also interpreted rural-urban interactions in a static way, and failed to analyse the rich variety of existing interaction, from which both rural and urban people and classes can benefit, as stated by Potter and Unwin above. The perception of such variety of interactions has already emerged in the works of Nugent (1993) about the Brazilian Amazon, mentioned above. The next section further examines the complexity of rural-urban interactions in the Amazonian setting.

The heterogeneity of socio-economic relations in modern Amazonia

Recent investigations of small-scale rural production in the Amazon, surveyed in chapter 1, have pointed to trends towards more heterogeneity in both economic structure and social relations. Nugent (1993), in particular, stated how socio-economic relations mix characteristics of different modes/forms of production, creating a bowdlerised form of economic environment. Nugent's analysis describes some characteristics of both rural and urban people livelihoods, and interpreted "urban" as a space of petty commodity (production and trade)

possibilities for both groups. The rural-urban dimension is further analysed by David Cleary, who focuses on current trends in Amazonian development, at the local level.

Cleary's analysis is particularly interesting because it complements Nugent's in the sense that the former explores the outcomes of the economic discussion provided by the latter. Cleary (1993) suggests four features of the modern Amazon economy that are basic for understanding local people's livelihood strategies: geographical mobility, complexity of livelihoods, the role of government, and the growth of the informal sector.

According to Cleary, the blur of the rural and the urban occurs because much of the population movement is between these two areas/sectors, in both directions. Part of this mobility may be involuntary, that is, a consequence of a lost land conflict, or even a result of a peasantry's' lumpen-proletarianisation. When such mobility is voluntary, Cleary argues, it should not be understood as a desperate survival strategy, but rather an active process of livelihood construction.

From a strictly Marxist point of view, Cleary's statement should obviously be qualified in terms of whether peasants are able to construct their livelihood in conditions of their own choosing, or whether the options available to them are highly influenced by conditions dictated by the dominant modes/forces of production. This is central in the discussion of subordination, which Cleary tends to moderate by granting peasants/petty commodity producers a certain degree of freedom in relation to capital due to what he calls the complexity of livelihoods.

For Cleary (1993), livelihood dimensions are reflected in the activities undertaken by peasants. They "hunt, fish and practise extraction as well as agriculture; they spend periods in towns and cities; they engage in wage labour as well as in *aviamento*, and move seamlessly between monetised and non- or partly-monetised spheres of the regional economy" (Cleary, 1993: 335). According to Cleary, the complexity of livelihoods is a characteristic that can be found in both

urban and rural areas and among high and low income groups. In Amazonia a peasant may also earn part of his (or sometimes her) income as a miner, a construction worker or an extractivist. A wage labourer may also be a smallholder and a percentage stakeholder.

Another characteristic of modern Amazonia is referred to as the two-fold role of the Federal State. The Constitutional Reform that ended in 1988, and the economic environment of that time lead to the withdrawal of official investments and many subsidies for the Amazon. The author points to the limitations imposed on the State by the new legal framework:

(The State became) "unable to finance tax-breaks or build highways without the aid of multilateral banks, unable to include more than one per cent of the rural population in official colonisation schemes, unable to control land titling or land conflicts, unable to register or tax the greater part of the Amazonian economy, unable to enforce federal law on more than a sporadic basis."
Cleary (1993: 344)

Constitutional reform resulted in the deterioration of central government authority and power: it gave to municipalities a higher share of federal revenues, while they still benefit from the net transfer of funds also determined by the Constitution. For municipalities, this means that they can receive five to eight times more revenue than they actually collect locally. With higher economic and political autonomy, state and municipality agendas have increasingly diverged from that of the federal government. For Cleary, the result of such factors is that the Amazon economy has proved to be much more autarchic and less capitalist than frontier theory predicted.

Cleary then connects these features of modern Amazonia to another that he believes to be central: the significance of the informal economy. For the author, informal relations are more crucial to understanding the circumstances of modern Amazonia than formal ones. Much of the economic activity in Amazonian urban areas is not captured by official statistics because it takes place within the so-called informal sector.

The author regards the informal economy as the cardinal factor for explaining high rates of Amazonian urbanisation despite the lack of industrialisation, the low productivity of ranching and extractivism, and the demands of the natural environment. Other possible factors he identifies as fostering urbanisation are public sector employment and the timber industry. Together, informal sector activities enlarge livelihood opportunities and represent, for the rural people, a channel to earn off-farm income. For urban people, they signify an expansion of urban opportunities and "a jumping-off point for work in rural hinterlands" (Cleary, 1993: 340).

In a more recent work, Cleary (1994) places an even stronger importance to the informal sector: "The informal economy in the Amazon has grown to the point that today we could say that the capitalist economy is in fact subordinated to it" (Cleary, 1994: 164). The author recognises that the informal economy can be understood as a result of the form by which capitalism penetrated in the region. However, he argues that nowadays the informal sector has achieved such a dimension that one cannot say that it is structured in accordance to the needs of "regional capitalism". "The informal economy here (the Amazon)", Cleary says, "is too large and complex to be explained only as 'lumpen-proletarianisation', as would be the interpretation of classical Marxism. We cannot understand the regional (economic) dynamic if we do not accede some autonomy to it" (Cleary, 1994: 164).

Cleary then concludes that capital penetration and capitalisation in Amazonia should not be confused with capitalism. "The broad analytical categories which characterise it (i.e. capitalism), peasantry, mode of production, class, State", Cleary (1993: 345) points out, "become blurred when applied to the region, conflating and radically simplifying a complex social reality". As he notes, the ambiguous nature of livelihoods dissolves "consistent relationships to means of production . . . [and] traditional notions of class structure and collective identity" (Cleary, 1993: 342). Consequently, evolutionary-Marxist terms, such as pre-

capitalist do not describe economies or social formations one finds in the Amazon. In this case, he argues, non-capitalist is the correct term.

For the author, the interaction of the Brazilian economic, political, and juridical frameworks gave to the Amazon region the necessary conditions for an autarchic development. Cleary then ends his analysis by contesting a reasoning of world-systems theory: if the Amazonian economy is to a large extent autarchic, then it makes little sense to apply concepts of core and periphery to the region.

David Cleary's view of informal sector activities appears to resonate much of the liberal, dual-sector belief in the benefits that informality can bring. This favourable position, however, clashes not only with Marxist-based theories, but also with empirical evidence from the very Amazon region. June Wyer's unpublished PhD thesis, for example, analyses small-scale informal and formal enterprises in the city of Santarém. Her main aim was to understand existing ties of kinship, friendship, and clientage, in other words, factors that may constrain, or even expand, the "autonomy" of such activities.

Wyer's (1983) research focuses on the perverseness of indebtedness, of which she found clear evidence within petty producers and traders, as well as within the service sector. The mechanism of indebtedness that permeates all small-scale activities is based on "ties of patron-clientage similar to the credit relations prevailing between peasants and urban producers" (Wyer, 1983: 140). That is, merchants control urban production, trade and services by providing to urban and rural producers some advances of credit or cash loans, machinery or raw materials. If such circumstances are prevalent, then the autonomy visualised by Cleary could be more illusory than real. The next section develops this line of thought, that is, that political influences control local forms of production and trade.

Political dimensions of development

The work of Robert Bates on agricultural markets brings the theoretical contribution that is necessary for the policy-oriented research of this thesis. Despite the fact that the focus of Robert Bates' work is on tropical Africa (Kenya), many of his comments are certainly valid to other developing areas, including the Brazilian Amazon. A second precaution that should be made in relation to Bates' work is that what he is analysing is the functioning of agriculture at the national level. However, most of the logic underlying economic decisions at the regional level can also be applied to the local level.

This linkage will clearly emerge from the description of the politics in Carolina. This is the Amazonian small town where one Pilot Programme project has been carried out, and where the fieldwork of this research was developed. The point of convergence between Bates' Africa, and the Brazilian Amazon resides in the theoretical approach selected by the author. That is, the central point of Bates' analysis is that an apparently irrational economic decision may have a political rationality.

To explain the contradiction between economic efficiency and political decisions Bates makes the use of a rational choice approach. This theoretical perspective derives its roots from the institutional branch of the neo-classical economics. Born at the beginning of this century as the New Institutional Economics, it is a theory of property rights and transaction costs which hypothesis aims firstly to explain the conditions of existence, organisation, and behaviour of firms. This conceptual framework was further developed into a more general theory, the New Institutionalism, which aimed to relate the rational-choice framework to institutions of all kinds. Finally, it expanded into a more general approach, normally referred to as the New Political Economy, which is closely associated with the work of Bates.

Rational choice theory is in fact a model of purposive action, that is, it assumes that people act rationally with the aim of "optimisation". In other words, facing a set of alternatives for action, people act (mostly egoistically) in order to maximise benefits or reduce costs. The objective of the theory, however, is not to explain individual action per se, but rather to explain how individuals interact with systems, and vice versa. The approach tries to reconcile the dilemma of agency-structure from the perspective of how people make choices, given their preferences. Bates grounds his analysis on the rational choice framework, from which he emphasises the dynamics of "collective choice". That is, an approach that "recognises that markets are imperfect; that 'economic reasoning' can be employed to explain the way political processes and political institutions affect how individuals' desires for valued but scarce resources aggregate into outcomes for entire societies" (Bates, 1988a: 3).

The general tone of Bates' work is a challenge to the liberal, neo-classical economic approach that overlooks the very reasons of government policy failure. Neo-classical economics, according to Bates (1990), "treats governments as agencies whose job it is to maximise social welfare; public policy is viewed as a set of choices made by governments to secure society's best interests" (Bates, 1990: 155). This approach considers that in the case of developing societies, the best interest is achieved through development, so the performance of governments should be measure against this. In this case, development stands for the classical view of economic development, through industrialisation, which is able to spread benefits to all strata of society.

Bates (1989) also criticises the views of world-systems theory, and neo-Marxist accounts. The author considers that the former does not recognise the importance of domestic policy choice in influencing the outcomes of development initiatives. The latter, Bates argues, is bonded by economic reductionism, and fails "to appreciate the independent significance of politics" (Bates, 1989: 6). As a whole, he maintains, there is a failure to interpret correctly the way in which public policies are formulated and implemented.

Central to Bates analysis is the understanding that institutions like public agencies, political institutions, bureaucracies, and electoral systems have a major influence in the way Third World markets are organised. They may even be more influential than markets themselves. In many cases, public policies result in economic decisions that are "inefficient" from a strictly economic point-of-view. Bates (1988b) gives a number of examples that illustrate how Kenyan governmental intervention in agricultural markets is, under the economic perception, "irrational".

What Bates is arguing, however, is that there is a rationality underlying apparently irrational economic decisions. In most cases, this rationality is based on the political need of keeping constituencies tied through a set of policies that, despite being detrimental to the people who are supposed to benefit, help maintain the political status quo. Other political arrangements complement this strategy, such as the substitution of price polices for projects, in which the bargaining power of national governments, in co-operation with local élites, creates a vicious circle in which a few benefit from the poverty of the majority.

Bates' work is also important for the comprehension of the aims of this thesis as it also brings to the discussion an urban-bias dimension. Bates demonstrates how government policies favour urban-industrial interests. In the much cited article "Governments and Agricultural Markets in Africa" (1988b), Bates maintains that prices for agricultural products are depressed in many African countries due to various government mechanisms that protect both urban industries and consumers.

Industries are protected from foreign, and even internal, competition as a means of fostering development. Urban consumers are privileged by their capacity to demand government action. Geographically concentrated, the urban population controls transport, communications, and public services. They can therefore exert pressures that influence the outcome of elections. Bates is concerned with African

countries, where the majority of the population is rural. In the case of Brazil, where even in the Amazon region the urban population exceeds the rural, the political influence of the former is emphasised. The striking rate of urbanisation in Brazil, and in the Amazon region, will be presented in the next chapter.

Therefore, Bates' analyses how politics influences the allocation of resources in a way that cannot be economically "efficient", but is "efficient" from the point-of-view of the political élite and its associates, given the circumstances needed for their political reproduction. From this derives Bates' view of public policies. They do not necessarily reflect the search for public welfare, as it is supposed to be the aim of public policies in Western nations. Instead, in developing countries, public policies may be the outcome of private interests' influence over the public sphere.

A final comment relates to the relationship between Bates' work and the discussion on sustainability. One important dimension of sustainability, often overlooked, is that of political sustainability. If interests that have little to do with public welfare control the mechanisms of welfare promotion, the internal dynamics of any development effort is contaminated by default. In other words, it means that development, be it at national, regional or local level, cannot totally bypass public authority. Even in situations where the local public office is not involved, as occurs in the case study contained in this research, the local authority together with local politicians usually retain enough power to undermine the sustainability of the initiative.

Conclusion

Liberal and neo-classical approaches to development have up to the 1970s interpreted relations between rural and urban areas exclusively as being beneficial for both sectors. This rationale derives from the very foundations of the Weberian branch of sociology, in which urban life transcends the backward character of rural traditionalism. Therefore, rural areas are to benefit from the innovation and entrepreneurship of urban inhabitants, guided by an "achievement orientation".

This formulation has served as the basic ingredient for policies of a liberal pedigree that were applied in Western and Third World countries, mainly after World War II.

Such policies have been largely channelled through development projects that perceived urban industrialisation as the engine of growth. The agricultural sector, in its turn, was the resource-transfer segment. To bring the rural sector to modernity, capital- and technology-intensive agriculture was prescribed for its capacity to release the necessary resources required by the urban industrial sector. The rural sector would then benefit from the industrial trickle-down effects towards agriculture. However, applied to Third World countries like Brazil, this model benefited largely capitalised farmers, to the detriment of the majority of small-scale producers.

The negative affects of these policies resulted in the adoption of a new strategy during the 1970s. Small-scale forms of development, both in urban and rural areas became fashionable. In the agricultural sector, the approaches of Integrated Rural Development projects, and Basic Human Needs, tried to change the tendencies of the previous decade. Large-scale rural-urban migration and over-urbanisation became a central concern. In the urban setting, projects directed at the so-called informal sector aimed at the promotion of employment and income distribution. As a whole, growth-with-equity became a central concern.

However, harsh economic conditions in the late 1970s and beginning of the 1980s resulted in the application of structural adjustment programmes in Third World countries. Further investments in capital-intensive farming were recommended, since this sector had to contribute more positively to the equilibrium of the balance of payments. For urban areas in particular, entrepreneurship became the watchword. The application of adjustment policies, based strongly on economic and financial concerns, with few, if any, concerns on social issues, resulted in growing impoverishment.

A parallel trend of the rapid pattern of development was widespread environmental degradation in both rural and urban areas. From the beginning of the 1980s onwards, concerns over the possibilities of sustained economic growth led to the formulation of a new agenda for development. Environmental protection was needed not only to match an economic logic, but also to shelter human life. The idea of sustainable development was then applied from the global to local levels. Sustainability at the local, or household level, was then related to the poverty conditions of householders.

A second trend has been the focus on the institutional factors that undermine the implementation of more equitable approaches to development. Despite the fact the institutional limitations have been a common theme since Weber, only recently has this dimension gained a central place in economic analysis. The work of Bates in African rural markets is revealing as it demonstrates the political logic of apparently irrational economic decisions.

So, in theoretical terms, liberal prescriptions for development have contrasted sharply with the interpretations of neo-Marxist approaches. While mainstream classical propositions have supported the view of a beneficial relationship between urban and rural areas, Marxist accounts have stressed the relations of exploitation and conflict that, in their view, are inherent to capitalist development. Nevertheless, in both accounts, rural-urban imbalances are interpreted as being natural and, to some extent, a necessary outcome of the expansion of capital into rural areas.

A second fundamental difference refers to the way in which small-scale production relates to capital. In the Marxist proposition, such forms, whether rural or urban, are named petty commodity forms of production, and are believed to be exploited by capital. By releasing surplus and labour they are functional to capital. For the liberal (modernisation) school, small and large-scale forms of production complement each other and benefit mutually. In terms of policy prescriptions, liberals tend to target groups, while Marxists tend to influence the process of

transition. Nevertheless, both approaches have resulted in an urban-biased conceptions of development, in practical or theoretical terms.

Both liberal and Marxist approaches have also failed to carefully interpret the diversity of economic, social and political circumstances found in Third World social formations. In both accounts, development has been a matter of the application of formulas. The Marxist formula underestimates the capacity of human agency. A number of authors that focused on local-level relations in the Amazon setting have pointed to the variety of circumstances in which small-scale producers have managed to improve their livelihoods. A significant trend amongst Amazonian livelihoods is the way in which urban and rural areas perform productive functions for the same people. The liberal formula, on the other hand, overestimates the capacity of human agency. There is a general belief that given the right economic conditions, small-scale rural and urban producers would turn sand into gold. This view fails to recognise the limitations imposed by economic and political forces that manifest themselves in terms of privileges for the élite or in policies that at first hand seen to be "irrational".

Additionally, both liberal and Marxist accounts have failed to understand the internal dynamics of capital in the Amazon region. The concept of capital penetration has been confused with capitalism. However, capital penetration in the Amazon has been uneven, and has not managed to replace, in most of cases, local structures controlled by merchant capital. However, this is not a pure form of merchant capital, but rather one that is intertwined with an uneven penetration of modern capitalism. What should be taken into account when analysing the possibilities of development in the Amazon, particularly small-scale forms of development, is the fact that the local economic setting represents, in the words of Nugent (1993), a "bowdlerised economy".

This chapter has therefore discussed the functions performed by urban areas in relation to rural ones. It has been noted how institutional and political factors are present, but often not spelled out in the various theoretical formulations analysed.

What is at stake, therefore, is the need for a new framework that can explain diversity, particularly in developing countries (Booth, 1985, 1994). This matter has already emerged in Amazonian studies. The contributions of David Cleary and Stephen Nugent, both from 1993, are examples of a growing literature that intends to escape from deterministic and reductionist accounts of development. Two other important contributions are those from Anthony Hall (1997) and Robert Bates (1989).

The work of Hall parallels the case study of this thesis in which it deals with the action of social movements for "productive conservation", and will be examined together with this research's findings, in chapters 7 and 8. Hall's research examines in detail the policy implications of the international agenda that aims to reconcile anti-poverty action with environmental protection for the promotion of sustainable livelihoods.

This agenda for sustainable development is examined in detail in chapter 4, together with the explanation of the G7 Pilot Programme for the Conservation of the Brazilian Rain Forests. This is the largest programme of the poverty reduction plus environmental conservation with sustainability concerns ever financed in that region. This research focuses on a project financed by the Pilot Programme, the *Frutos do Cerrado* (Fruits of the Savannahs), which is introduced in chapter 5. Economic, social and mainly political circumstances in which the project is inserted makes necessary the addition to this theoretical review of a framework that can provide a convincing explanation of the relationships between economy and politics.

The next chapter links the theoretical discussion set in these two initial chapters to the pattern of development pursued by the Brazilian government in relation to the Legal Amazon region. It is discussed how official intervention has led to an urban-biased type of development, to environmental destruction and social violence.

CHAPTER 3 - DEVELOPMENT, URBAN BIAS AND URBANISATION IN THE BRAZILIAN LEGAL AMAZON REGION

This chapter provides a historical overview of Brazilian development and agricultural policies that have influenced the pattern of human occupation and capital penetration in the Amazon region. Throughout the text, it is highlighted how official policies and programmes have had an urban-biased rationale, and how they have been detrimental to small-scale forms of production. Consequences of the official strategy for urbanisation and environmental change at the region are shown in the end of this chapter.

In the first section, the various periods of development efforts are described in different subsections. They explain how the Amazon experienced an early cycle of economic development during the rubber boom, which was followed by two distinct periods. The first has been characterised as a period of economic stagnation, and the second, started in the 1960s, as an epoch of huge government intervention. This was a period in which top-down governmental planning supported by the military played a major role. Modernisation policies, discussed in the previous chapter, were largely applied in the region from this period onwards.

With the return of civilians to government, in the mid 1980s, the era of state planning and big infra-structural projects came to a halt¹. In its place emerged a time of fragmented development policies. Agriculture, in its turn, remained as a resource transfer segment. The effects of both development and agricultural policies have more recently been contrasted with growing environmental change

¹In the first government of Brazilian president Fernando Henrique Cardoso (1994-1998), a series of projects aiming at infra-structure building and production expansion were launched under the umbrella name "Brasil em Ação". This could represent a new era of state planning for the Amazon, but the financial crisis started in August 1998 called into question the State capacity of implementing such projects. Sooner or latter, however, one should expect new State and private investments in the region.

and social problems. A major outcome of this circumstance has been the formulation of the G7 Pilot Programme for the Conservation of the Brazilian Rain Forests (PP-G7). This, together with other initiatives aimed at changing the pattern of resource-use in the Amazon will be analysed in the next chapter.

Colonisation Period: *drogas do sertão* and the rubber boom

Brazilian control over the Amazon region has been a geopolitical priority since the colonial period (1530-1822) when the Portuguese Crown promoted widespread territorial expansion. During this phase, the colonial power had to defend the Amazon against the Dutch, French and English, all of whom tried to occupy the area militarily during the union of the Portuguese and Spanish Crowns (1580-1640). It was after the separation of the two Crowns in 1640 that the Portuguese colonised areas that had belonged to Spain as agreed in the Treaty of Tordesillas signed by the two countries in 1494. The idea behind this territorial occupation by the Portuguese military was to guarantee political hegemony over this area, and to maintain control over the spice trade (Carvalho, 1979).

This period constitutes the first entrance of merchant capital into the Amazon, and it is known as the *drogas do sertão* cycle² (17th and 18th centuries). Until 1776, labour was mainly provided by enslaved male Amerindians³. A series of ten major epidemics, desertions and rebellions, however, drastically reduced the Amerindian population clustered in local settlements (Hemming, 1978). Shortage of labour power fostered racial miscegenation, as the percentage of Amerindians in Amazonian settlements was reduced from 92% in 1775 to 63% in 1840. During this period, the white population (former traders of Amerindian slaves, representatives of the Crown, and soldiers) married female Amerindians and

²*Drogas do sertão* were natural products extracted from the forest and used mostly as medicines, amongst other applications. Some of these products were indigo plant, cinnamon, clove, and sarsaparilla.

³Due to Catholic missionaries' pressure, aboriginal enslavement was formally abolished as early as 1570. In practical terms, Amerindian slavery only came to an end in 1750 (see Hemming, 1978).

settled in the region. The mixed blood offspring of this marriage is the Brazilian *caboclo*.

A far more far-reaching economic period succeeded the *drogas do sertão* cycle. Known as the Amazonian rubber boom (1870-1912), this period marks the political and demographic consolidation of Brazilian hegemony over the territory. Diplomatic negotiations over the fixing of frontiers with Great Britain (the Essequibo area), France (the Orinoco area), and a military confrontation in the Acre region with Bolivia, defined most of Amazonia's current territory. Demographic occupation was made possible by the migration of half a million peasants from the Brazilian Northeast between 1877 and 1880 (Cardoso and Müller, 1977). Such a huge migration was a result of two concomitant factors. At the same time that a severe drought affected the Brazilian Northeast, the market for rubber was in steady expansion after Charles Goodyear's invention of the vulcanisation process in 1839. This was particularly beneficial for the Amazon because the region had a virtual monopoly of rubber (*Hevea brasiliensis*), for which demand soared.

Amazonia then experienced a period of steady growth, in which a local merchant élite, known as "rubber barons", emerged (Mahar, 1989; Becker and Egler, 1992). The economic organisation of the extraction of forest resources was based on the system of *aviamento*, which had been introduced during the very early colonisation period. During the rubber boom this system expanded as a response to international demand. In order to expand control over production, rubber states (*seringais*) were established on public lands and maintained through physical coercion. As Ayres (1992) notes, the ownership of the rubber states was not always legalised. In many cases, the territorial limits of the *seringais* were established according to the capacity of the rubber barons (also called *patrões*) to control the area via commercial monopoly (*aviamento*), and private police vigilance.

With the expansion of trade, *aviamento* took the form of a hierarchical chain of commercial exchanges. The rubber produced by rubber-tapers (*seringueiros*) was delivered to the owner of the *seringais* as a partial payment of the debt incurred. The *patrão* (patron) of the state transported the rubber to major urban areas and sold it to a merchant owner of a vessel who had provided him with manufactured goods on credit. This merchant himself was financed by another merchant, who had given him credit of goods in exchange for a future delivery of rubber. Therefore, the *aviamento* system included not only the relationship between extractor and rubber baron, but entailed a long-reaching network linking local production to external markets.

The rubber boom came to an end by the early 1900s. At that time, the British established rubber plantations in their Asian colonies that could produce rubber at only one-fourth the cost incurred by Brazilian producers (Resor, 1977). After that, the share of the region in the world rubber market fell from 60% (in 1910) to 1% (in 1934). Since then, Amazonia's participation in this market has remained at insignificant levels (Mahar, 1989).

As a response to the steady decline of Brazilian rubber exports, the Hermes da Fonseca government formulated the Rubber Support Plan in 1912. It was a comprehensive plan, aimed at maintaining Brazil's share in the international rubber market, as well as promoting general improvements in the social and economic conditions of the region. Central to the plan was a misplaced idea that the prosperity and future development of Amazonia could rely on the export of just one product, i.e. rubber. This commodity was sold in a market in which the country could not compete effectively. Only two years after, the plan proved to be a complete failure, and was abolished.

The dismantling of Amazonia's rubber apparatus meant the collapse of local economic structures. This period, in which mansions were abandoned as capital was driven from the region, has been described by a number of authors as an era of economic stagnation (Mahar, 1979, 1989, Hall, 1989, Messias-Franco, 1995).

Most works on Amazonia overlook these 30 years of recession, and jump directly to the spasmodic economic recovery experienced during World War II. It is however necessary to look at some possible explanations of what may have happened to local economic structures at that time.

The decline of the rubber trade and incipient urbanisation

To understand the economic processes that took place during the decline of the rubber extraction, a period known as economically “stagnant”, it is firstly necessary to analyse the demographic processes that took place during that period. The Amazonian population had increased from 332,000 in 1872, to slightly more than 1,4 million in 1920 (IBGE, 1951). According to Cardoso and Müller (1977), immigration would have been responsible for almost 50% of this growth. From 1920 to 1940, the size of the Amazon population remained unchanged, which suggests an emigration of about 190,000 people⁴ (Cardoso and Müller, 1977).

According to the authors, most of the emigrants were people that had previously lived in the State of Pará (150,000), which did not have the major rubber production of that period, as it was concentrated in the states of Amazonas and Acre. Therefore, this population would not have been involved in rubber production directly. It is more likely that these people would rather be engaged in other urban activities dependent on the income generated by the rubber trade. So, if the rubber trade, the far more important component of the Amazonia economy was smashed, how would the local population of about 1,4 million people by that time have earned their living?

One account of economic activities maintained during the collapse of the rubber trade is provided by Velho (1972), for whom the complete infrastructure of rubber production was transferred to the extraction of Brazil nuts, under the same system of *aviamento*. While this may have occurred in part, it is difficult to imagine that the

⁴This number corresponds to the estimated vegetative populational growth.

whole *aviamento* network could be easily shifted to another commodity, with a different form of extraction, seasonal characteristics, labour demand, and location. The more productive areas for rubber, the states of Acre and Amazonas, are not the same for Brazil nuts, which is concentrated in Pará state. Additionally, no significant inter-regional migration was observed during the "stagnation" period (Cardoso and Müller, 1977).

What happened during this period was that the population of migrants working under *aviamento* for rubber production decided to settle down in the region. Immediately after the rubber boom, "more than 70% of the Amazonian population was made up of immigrants (about 1 million out of 1,4 million), while, in 1940, almost 90% already had their roots in the region" (Cardoso and Müller, 1977: 38). This argument is also followed by Ribeiro (1995), for whom the population of rubber producing areas in the hinterlands (in the *seringais*) clustered in new towns on the margins of big, navigable rivers, and incorporated local forms of livelihood. In other words, they adopted a subsistence way of living that embodies many of the aboriginal traditions and practices of natural resource use.

In some areas, subsistence conditions were enhanced by a local market that grew up around cattle ranching, small-scale mining, and Brazil nut extraction (Cardoso and Müller, 1977). The latter was, however, concentrated in the forest areas of Eastern Amazonia (mainly Pará State). This was the only one to generate some marketable surplus. Cattle ranching provided meat for the local population, while mining was performed as wildcat.

At the same time that this process of riverine urbanisation took place, new settlements formed on the former rubber states. This happened because part of the rubber tapper population stayed in the hinterlands as bankrupted *patrões* were substituted by others, less powerful merchants (Ayres, 1992). The *aviamento* network of commerce changed its original form, and small-scale traders, *taberna*

owners and *regatões*⁵, started to perform the functions previously undertaken by one single *patrão*. These new merchants had less capacity to finance extractive production, and had to liberate agriculture in the states, free of rent (Ayres, 1992). Extractivists shifted production to include Brazil nuts, timber and fishing, the market for which was growing due to increasing urbanisation and better means of communication and transport. At this time, only rubber production remained regulated by *aviamento* (Ayres, 1992).

Under these circumstances, it appears difficult to classify the Amazonian economy as “stagnant”. The rubber economy was probably stagnant, but other commodities directed at local or regional urban markets were introduced. For Nugent (1993), the conventional wisdom that the local economy was “stagnant” reflected the fact that most of the links that Amazonia maintained with external markets had been cut. From the point of view of local rural population, Nugent asserts, there was in fact an expansion of local forms of production. The local economy, he argues, was not stagnant at all, but rather developing a “peasant” form of production without the immediate supervision of large-scale (merchant) capital.

The mercantile model of settlement, presented in chapter 1 can therefore explain the early conditions of urbanisation in the Amazon. The nature of transport conditions has played a major role in defining the locus of settlements in the Amazon. Most of the main urban areas of the present, are former “points of attachment” that developed due to their conditions as nodes of trade. It is not a coincidence that the older urban areas of the Amazon are located at the margins of the rivers, and alongside cattle routes. The newest urban areas, in their turn, are located at the margins of the road network that began to be established after World War II. This period is the focus of the next section.

⁵*Tabernas* are small trade establishments, while *regatões* are small traders that travel around the Amazon by boat.

World War II and Brazilian developmentalism

It was the start of World War II that provided spasmodic market recuperation for the Amazonian rubber economy, a period that a number of authors identify as the end of the “stagnation”. By the beginning of the 1940s, the Brazilian president Getúlio Vargas had strengthening diplomatic links with the United States, making way for the signature of the Washington Accords of 1942. This settlement established that Brazil would supply the Allied forces with strategic raw materials, such as rubber (Mahar, 1979, Hall, 1989). The effort that followed to increase production was labelled the “Battle for Rubber” (*A Batalha da Borracha*). It involved the establishment of international and national credit arrangements, as the foundation of the Rubber Credit Bank (*Banco de Crédito da Borracha*), which would be latter transformed into the present regional development bank.

At this time, the Amazonian population, despite previous migration, was seen as insufficient for meeting production commitments. To increase the availability of labour, the Special Service for Labour Mobilisation (*Serviço Especial de Mobilização de Trabalhadores*) was set up in 1942. Between 1942 and 1945, this agency facilitated the resettlement of over 32,000 workers and their families (a total of 48,000 people), almost all originally from the Northeast (Mahar, 1979). However, the rigours of rubber extraction resulted in many workers abandoning their posts, while the lack of adequate transport meant that the output of natural rubber rose by only 10,000 tons between 1941 and 1945. At the end of the War, Amazonian rubber production was at a level only slightly more than half that registered in the peak production year of 1912 (Mahar, 1979).

At the end of World War II, the regional élite and parliamentary representatives were pressing the government to develop a more comprehensive development plan for the region. The basis for this was provided by the Brazilian Constitution of 1946, which called for the establishment of a special fund to be financed through a 3% share of total federal tax revenues over a period of 20 consecutive years. This

Constitutional directive, however, only came into force after a six-year period of studies, debates, and bureaucratic delays. In 1953, a development plan was finally approved by Congress, and a development agency, the Superintendency for the Economic Valorisation of Amazonia (SPVEA), was created. The jurisdictional area of SPVEA attribution, initially the North region (i.e. classic Amazonia) was enlarged to accommodate with political pressures, and possibly economic realities, involving a territory covered not only by tropical forests, but also by savannahs. This area, is one-third larger than classic Amazonia, covers about 58% of the Brazilian territory, and became known as the Legal Amazon⁶.

The institutional goals of SPVEA comprised the improvement of agricultural, extractive, mineral, livestock and industrial projects, and were to be achieved through a series of five-year plans, the first of which was published in 1955 (Hall, 1989). Problems with the implementation of the first of the plans started almost at its inception, due to the "comprehensive nature of its goals and the rudimentary knowledge of the region's socio-economic structure and potential" (Mahar, 1979: 7). Within the aims of the plan, priority was to be given to agriculture, health, and river transport. (Hall, 1989). Yet, Congress was sceptical about the aims of the plan and never approved it; instead it determined cuts in its budget (Hall, 1989), and approved disbursements for development programmes on an annual basis (Mahar, 1979). Much of the credit disbursed ultimately flowed to the extractive rubber sector and for short-term commercial operations, whilst projects of a more social nature did not receive adequate funding (Mahar, 1979; Hall, 1989).

At this time, the Brazilian government had adopted a development model called *desenvolvimentismo* or national-developmentalism (Becker and Egler, 1992). A comprehensive national plan, the Target Plan (*Plano de Metas*), which included the action of SPVEA in Amazonia, was set up in 1956 for a period of four years.

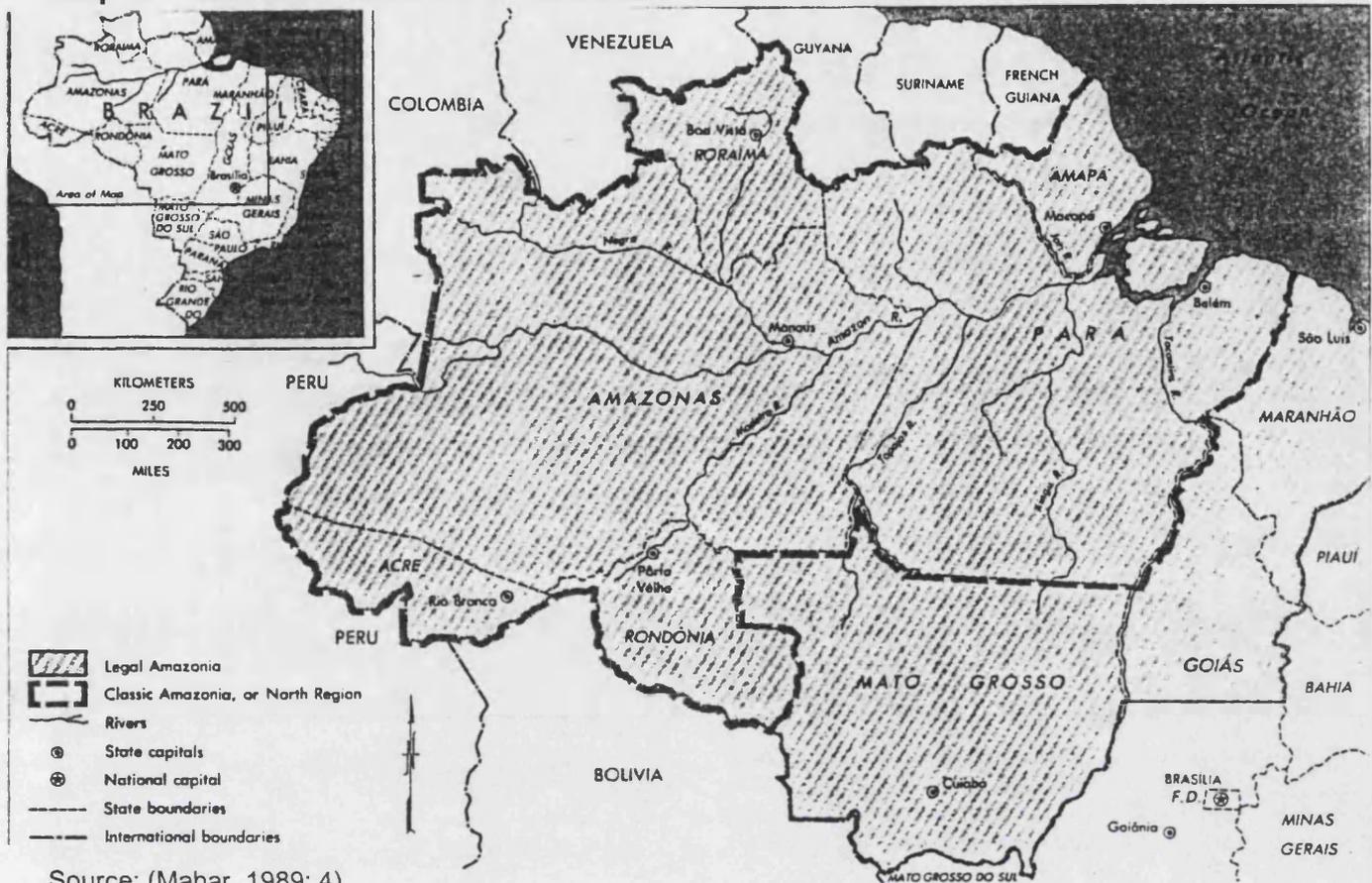
⁶Two geographical concepts of the Amazon are in use in Brazil: the "Legal" and the "Classic" Amazon. The term Amazon, in this thesis means the "Legal" concept, which is used in Brazil for purposes of regional planning and policy. "Legal" Amazon is an area of just over 5,0 million square kilometres, which is about 58 percent of Brazil's total land area. This region (see map 3.1) comprises eight States -- Acre, Amapá, Amazonas, Mato Grosso, Pará, Rondônia, Roraima, and Tocantins --, and part of another, Maranhão. The region known as "Classic" Amazon is used for statistical purposes.

The plan was rooted in a strategy in which "national private capital produced non-durable goods, foreign capital dominated production of durable goods, and state capital operated in the sphere of production goods" (Becker and Egler, 1992: 51). This strategy became known as import substitution industrialisation (ISI).

The ISI was a model of forced industrialisation, with the agricultural sector playing a passive and functionalist role in releasing the surplus necessary for rapid urban industrialisation (Goodman and Redclift, 1981). Agricultural surplus was to be obtained via the manipulation of the foreign exchange rate, and of agricultural product prices (Mueller, 1992). Additionally, as Neto (1989) argues, there were geopolitical concerns underlying the adoption of the plan. This was the aim to transfer of the federal capital from Rio de Janeiro (Southeast coast) to the central plateau region, where a new city, Brasília, was to be constructed in a period of only five years. There was, for the first time in Amazonian history, therefore, a set of governmental measures that integrated infrastructure development with agricultural policies and geopolitical concerns.

After ten years of activities, the major achievement of SPVEA in Amazonia was the construction of the Belém-Brasília. This 2,000-km road, conceived in 1947, was mapped out in 1956, finished in 1960, officially inaugurated in 1965, and paved by 1973. This road was the first territorial link of Eastern Amazonia with any other part of the country, and opened up a vast area for migration. In fact, there was a high, but not precisely estimated migration to this region, which comprises the north part of the country's Centre-West region and the Southeast of Amazonia (see map 3.1). Figures for migration in the period 1960-1970 vary from 174,000 to 320,000 (Hall, 1989). Following the Belém-Brasília, a number of highways were constructed in the Amazon Basin and paved the way for significant human and economic penetration into the region. As noted before, transport links play a major role in urbanisation. However, this is a twofold process. While some regions benefited from the new Belém-Brasília, others, as the location of this case study, had their fragile economies undermined.

Map 3.1 - AMAZON REGION OF BRAZIL



The ISI strategy had a clear urban-biased approach to development. It established subsidies for imports directed to the urban industry, while setting implicitly taxes for exports, mainly constituted by commodities. By the 1950s, almost 80% of Brazilian foreign exchange came from agriculture. The rural-urban surplus transfer is clearly illustrated by the fact that during the 1950s, industrial GDP grew at a rate of almost 10% a year. This growth was based mainly on the expansion of the urban market for consumer goods. A further development in the federal government control over the economy came into force in the early 1960s.

Development approaches after the military coup of 1964

Public interest in the Amazon was further increased when the military seized power in 1964. A series of legislative acts and presidential decrees was introduced between 1966 and 1967, and set up a number of development projects. These acts became known as Operation Amazonia. They included the continuation of the road-building programme (to link Amazonia with the Northeast and the South), agricultural colonisation schemes, and fiscal incentives to attract to Amazonia new industrial and agricultural enterprises. These measures were expected to help free Amazonia from its historical dependence on extractive trade (Mahar, 1989). Additionally, this strategy aimed at ensuring national sovereignty by establishing self-sustaining settlements in frontier areas. However, it paid little attention to the singular physical environment of the region, and the needs of small-scale producers, who were kept sidelined in terms of access to credit and other facilities.

To implement these plans a regional development agency, the Superintendency for the Development of Amazonia (SUDAM), was created in 1966 within the Ministry of the Interior. Fiscal incentives were substantially widened from their first conception in 1963. Investors into agriculture, livestock, industry, and basic services such as education, colonisation, transport, tourism, and public health were given 50% exemption from income tax liabilities until 1982.

This system was widely applied from the mid-1960s. In fact, the number of livestock projects approved by SUDAM jumped from only four, in 1966, to 162 by 1969. By 1974, tax exemptions had increased to 100%, both for new and existing projects (Cardoso and Müller, 1977; Hall, 1989). This incentive scheme was to be funded by a new regional development bank, the Bank of Amazonia (BASA), which still exists.

This fiscal incentive scheme was supported by the construction of another highway, the BR-364 Cuiabá-Porto Velho (1,500-km). This road, together with the Belém-Brasília, opened up markets for expanding industrial consumer goods whose production was based in the Centre-south. With the new road network, modern industrial production gained access to raw materials in the country's hinterland (Millikan, 1992). For the first time, Hall notes, "subsidised credit was given for land acquisition on a substantial scale, setting a precedent whose social and environmental consequences have been felt to the present day" (1989: 6).

This development effort, however, enjoyed a strong military backing, one that repressed rural labour movements and maintained the inherited institutional framework (Goodman and Redclift, 1981). In 1964-65 the government established the National System of Rural Credit, which determined that private commercial banks should allocate the equivalent of 10 per cent (later 15%) of their demand deposits to rural credit. However, the expenditure of these resources was highly selective and exclusive. Moreover, these agricultural modernisation policies were also selective by crop. They gave priority to financing export commodities and wheat over foodstuffs. Special credit lines to subsidise mechanical and chemical inputs were introduced.

The effect associated with investments in these priority crops was a reinforcement of spatial inequalities. The total rural credit available annually quintupled in real terms during the period 1969-78, but by 1981 "only 20-25 per cent of all producers, accounting for possibly 30-50 per cent of agricultural output, had access to institutional sources" (World Bank, 1979). Therefore, the concession of agricultural credit, and the Brazilian agricultural policy as a whole, reflected the interests and needs of the urban industrial capital, which benefited from, and invested in the constitution of an agricultural-industrial capital. Urban capital also benefited from cheap food supply.

The low value of food was made possible because, despite the lack of investment in traditional agriculture, the overall performance of the sector was positive.

Between 1948 and 1969, agricultural GDP increased at an annual rate of 4.2 per cent; during the same period, the growth of the population was "only" 2.9 per cent (Mueller, 1992). Despite discriminatory trade and finance arrangements, and policies towards agriculture, this sector managed to increase food production at an annual rate of 5.4 per cent between 1950 and 1969. This performance was possible due to incentives for horizontal expansion. That is, rather than an increase in productivity and technical improvements, the agriculture benefited from the incorporation of new land into production. Between 1950 and 1970, "the area in farms increased by 62,3 million hectares, and land in crops increased by almost 15 million hectares" (Mueller, 1991). Most of this new agricultural land was in the North and Centre-West regions of Brazil.

The incorporation of new land into agriculture had two other consequences. Firstly, it presented a parallel benefit for capital, since it released pressure on land in the South and Southeast Brazil, where capital had a larger participation in agricultural production. Secondly, it made extremely high rates of capital accumulation possible through the unsustainable use of land. "The easy availability of land in relation to other factors of production", writes Mueller, "induced agriculture to use it with a minimum of capital, and with total disregard for conservation and sustainability" (1992:3). Once production had declined, producers would then abandon the land and move further into the countryside. This was a socially destructive form of land use, but a profitable one for the farmer.

This process, nevertheless, allowed expanded capitalist accumulation. "As the frontier moved, it left behind 'low-density population pockets' where small farming activities had once been carried out. . . [A]s small landowners sold their plots, small tenants and squatters were evicted . . . commercial agriculture took over, often converting farmland into pasture" (Ozório de Almeida and Campari, 1995: 6). The backdrop of this policy, notes Hall, was a "*latifúndio*⁷-biased strategy which

⁷*Latifúndios* are large-scale, productive or unproductive rural units.

subsidised the gradual monopolisation of increasingly large areas of tropical rain forest for commercial and speculative exploitation" (1989: 9).

Finally, it should be noted that Operation Amazonia also had its urban counterpart. In 1967, the federal government set up the Manaus Free Trade Zone (ZFM). The ZFM is administered by the Superintendency for the Manaus Free Trade Zone (*Superintendência da Zona Franca de Manaus - SUFRAMA*), whose main aim is to develop industrial, agricultural and cattle ranching activities in an area of 10,000 square kilometres (Cardoso and Müller, 1977). The underlying strategy of the ZFM was to create an urban growth pole (Neto, 1989), as an attempt to stimulate development in the western portion of the Amazon Basin (Hall, 1989). In fact, the ZFM contributed to the introduction of Brazilian and multinational firms in the urban area of Manaus, creating the second largest city in the whole Amazon region. Once more, large-scale activities received special tax incentives, while small-scale activities were not taken into account.

The economic crisis that took place by the end of the 1960s required the government to shift from the ISI model to a set of measures aimed at attracting foreign exchange via the expansion of exports. This new phase of development strategies caused profound impacts on small-scale agriculture, and in the Amazon region.

Conservative modernisation, national integration and failed settlement

In the early 1970s, federal activities in Amazonia were expanded from economic-based strategies to include the promotion of human occupation and physical integration. A number of reasons lay behind the new form of government intervention. Urban wage demands and growing inflation reinforced the need to supply urban markets with cheap food. Additionally, it was necessary to provide humanitarian assistance for the victims of a severe drought that took place in the Brazilian Northeast in 1970. Moreover, the military government, under the doctrine of "national security", was facing left-wing guerrilla movements both urban and

rural areas. Programmes of a social character were needed to counter left-wing appeals. Parallel to these development policies, there was under way an agricultural modernisation strategy. This approach to agriculture became known as conservative modernisation, since it discriminated in favour of capital-intensive undertakings and did not alter the existing pattern of land ownership. Only large or capitalised medium-size agricultural enterprises were able to comply with official demands for land titling and collateral, and, additionally, could take the risks implicit in getting a loan.

In 1970, the federal government launched the National Integration Programme (PIN), which would finance the construction of the Trans-Amazon, a 5,000-km highway linking the western Amazonia to the Brazilian Northeast. The PIN also envisaged the construction of another road, the Cuiabá-Santarém, linking Northeast Amazonia to the country's Centre-West. The government strategy was to intensify and integrate economic development of the Northeast and Amazonia, and to consolidate federal control over regional development strategies. For this purpose, a new plan, the First National Development Plan (PND 1) was issued in 1971 for the period 1972-74. The PND 1 aimed at improving the infrastructure in peripheral regions; providing regional fiscal and credit incentives; establishing special inter-regional development programmes; and creating new regional growth poles (Neto, 1989). Rio Branco, Porto Velho, Itaituba, Santarém, Altamira, Marabá and Cuiabá were the main growth poles created by the plan.

In 1971, PIN was complemented by the so-called Land Redistribution Programme (PROTERRA), whose main aim "seems to have been that of promoting agricultural industrialisation and creating a new class of 'modern' small and medium farmers" (Hall, 1989: 11). As Goodman and Redclift note, "although couched in redistributive rhetoric, efficiency criteria, particularly short-term output expansion, took precedence at the level of policy implementation" (1981: 148). The Brazilian National Institute for Colonisation and Agrarian Reform (INCRA) was revitalised, and given the task of settling thousands of migrants along the Trans-Amazon highway.

The road network was further expanded in 1972 with the provision of credit for the construction of the *Perimetral Norte*, 2,700-km highway alongside the Brazilian north border, which was only partially implemented. The concern with occupation and integration was complemented by a natural resources' radar survey called RADAM, which mapped 1.5 million square kilometres from 1972-74. Results of this survey were made available too late to assist in the routing and building of the Trans-Amazon. However, they confirmed the existence of vast mineral reserves and provided a first evaluation of timber reserves and land available for livestock, what would later influence commercial expansion in the Amazon.

Migrants were attracted from different parts of the country, but mainly from the South, to be placed in 100-hectare plots over an area of 2.2 million square kilometres administered by INCRA adjacent to the Trans-Amazon. The urban promotion strategy associated with this plan included the constitution of three different sorts of urban nuclei. The *agrovila* was a small village for up to seventy families; the *agrópolis* was a small town for up to 600 families; and the *rurópolis*, gathering from eight to twelve *agrópolis*, with a population up to 20,000 people. Land prices in this area were heavily subsidised at the price of US\$ 750 per plot, payable over twenty years at 7 per cent interest annually and with a four-year grace period (Hall, 1989). However, the result of this US\$ 2.3 billion colonisation programme (at 1984 prices), was almost a complete failure (Hall, 1989).

INCRA could not match the administrative demands of the programme, and was also not able to provide the basic services and infrastructure needed (Hall, 1989). In addition, constructed roads were impassable during the rainy season; the fast-growing seeds provided matured at the wettest time of the year in Amazonia; some farmers were given infertile lands; and the credit mechanism were not adapted to farmers' needs in the agricultural calendar (Hall, 1989).

A number of authors have pointed out causes for the non-achievement of planned colonisation goals. Amongst the various motives of failure, the following ones, as

summarised by Hall (1989), appear to be the most relevant. (a) INCRA was poorly equipped to tackle the vast influx of aspiring colonists in the early stages of migration; (b) promised infrastructure and services (like health credit and extension) were not provided, and land alone was not enough to secure a livelihood in the harsh Amazonian environment; (c) top-down planning and rigid management from INCRA and other government bodies resulted in basic errors, such as allocating to farmers infertile areas and providing them with fast-growing seeds that matured at the wettest time of the year in Amazonia; (d) colonists mistrusted government because INCRA delayed in providing them land titles, essential for obtaining subsidised credit, which was being monopolised by larger commercial producers; (e) very poor conditions of transport, together with high incidence of diseases and parasitic infections, undermined conditions of work; (f) government overestimated the region's agricultural potential, imagine the process of small-farmer development as straightforward, and did not study and incorporate indigenous techniques for the benefit of colonists; (g) settlements were carried out without previous appropriate appraisal, and feasibility studies were made available too late to affect settlement policy; (h) over half of the settlers were from outside the region and tended to ignore local conditions and agricultural practices.

When faced with the poor achievements of the colonisation programme, government reaction was to "blame the victims" (Schmink and Wood, 1979). Official discourse was that colonists themselves were primarily responsible for the failure, mainly for not being prepared for life in Amazonia. Such an argument tried to hide the fact that "without the use of carefully adapted agroforestry techniques and the application of large quantities of expensive fertiliser, long-term cultivation of neither permanent commercial varieties nor short-cycle subsistence crops is possible without causing severe environmental damage through deforestation and soil erosion" (Hall, 1989: 18).

The poor performance of colonisation programmes, associated with political pressures "exerted by certain State sectors operating in alliance with business interests" (Hall, 1989: 18) resulted in the government's retreat of the road-building,

and direct settlement strategy embodied in the PIN/PROTERRA scheme. The government blamed small-farmers for their "predatory occupation", and moved toward an "economy of scale" rationalism. Also underlying this shift was the oil crisis of 1973, which hit Brazil particularly hard. This encouraged the idea that Amazonia's large potential (identified by the Radar in Amazonia Project - RADAM) could contribute to Brazil's annual foreign exchange earnings.

This new vision was presented in the Second National Development Plan (PND 2), which planned Amazonia's development for the period 1974-79. The new strategy consisted of promoting large-scale export-oriented projects in the livestock, forestry, and mining sectors, together with expansion in communication and transport networks. Investments should be geographically concentrated in fifteen "growth poles" dispersed over the Amazon. This was in fact the "development pole" theory of Perroux being put into practice. One consequence of the PND 2 was the Programme of Agricultural, Livestock, and Mineral Poles in Amazonia (POLAMAZÔNIA), established in 1974 and abolished in 1987. Mahar (1989) points out that POLAMAZÔNIA would combine existing fiscal and credit incentives in order to create a more favourable investment climate in Amazonia for private enterprise.

Industrial investments were concentrated in the Manaus Free Trade Zone, and in the region of Belém (Pará State). In rural Amazonia, investments were strongly channelled to heavily subsidised large-scale cattle ranching, especially in northern Mato Grosso, northern Goiás, and southern Pará. According to Cardoso and Müller (1977), the average size of cattle ranch projects approved by SUDAM was of almost 19,000 hectares. Later, this agency refused to consider projects in which the size of the ranch was less than 25,000 hectares. Projects were not only concentrated in terms of size, but also in terms of funding. In the period 1970-74, SUDAM approved 169 cattle ranching projects, with tax rebates of £152 million, or about £1 million per project on average. Later, between 1975 and 1979, a smaller number of twenty-seven projects were approved, but together they enjoyed a total tax rebate of £212 million, an average of £7.85 million per project (Hall, 1989).

Some economic and environmental problems associated with this policy became evident quite soon. Large-scale cattle ranching in Amazonia proved to be inappropriate quite rapidly. Degradation, soil compactation, and erosion occur quickly, unless large amounts of fertilisers are used. Drastic methods of forest clearance and harsh conditions of use give Amazonian pastures a life of only ten years in most cases. Secondly, livestock production in the Amazon is not labour-absorptive, generating only one job per two thousand head of cattle, or per twelve square miles. A third problem was that many so-called "entrepreneurs" were taking cheap money, which was supposed to finance cattle ranching, and diverting it to other activities, mainly speculation in land. The failure of cattle ranching in the Amazon has been pointed out by a number of authors. Mahar, for example, states that "the environmental damage associated with cattle ranching (including operations not benefiting from fiscal incentives) may account for as much as two-thirds of the deforestation in the region" (1989: 19)

As the poor results of cattle ranching and the misuse of incentives emerged, tax breaks became more difficult to obtain. Large companies which had acquired land from government at nominal prices opted for reselling their properties for private colonisation schemes directed to small farmers. The same group of entrepreneurs that had convinced the government to switch from INCRA-directed small farmer colonisation in the mid-1970s, was now "exerting pressure to obtain official support for a policy of establishing large-scale, integrated private colonisation schemes" (Hall, 1989: 27).

At this time, the colonists attracted were mainly small farmers from the South and Southeast of the country. This was mainly because private colonisation schemes were conceived as part of the vertical integration of farmers into agro-industrial production chains. This would require that colonists had a significant amount of capital in order to make the initial investment (e.g. buying land and inputs of production). Consequently, most beneficiaries of this initiative were former small farmers in the South and Southeast, which had sold their valuable properties there

to gain a relatively secure place in Amazonia. While this scheme favoured southern companies and capitalised small farmers, the greater portion of landless labourers and small cultivators with few resources continued to be resolutely excluded.

At the same time that the government was adopting these development policies towards human occupation and the physical integration of Amazonia, agricultural policies were designed to benefit exports, both from inside and outside the Amazon area. The period of import substitution industrialisation had co-operated to increase the country's foreign debt, and it was necessary to deal with the balance of payments deficit. Efforts were then directed at modernising some sectors of the agriculture that could help address foreign exchange problems. For this purpose, the "conservative modernisation" set of policies encouraged the formation of agribusiness complexes, mainly with the aim of promoting the export of semi- and processed goods. The nature of agribusiness promotion was twofold. Agriculture should receive industrial inputs, like equipment, but also sell a substantial part of its production to processing industries.

However, the government maintained a policy of cheap food supplies for urban dwellers to overcome wage demands caused by growing industrialisation, urban life, and inflation. Agricultural products of wide popular consumption, and small processing inputs (like beans and manioc), failed to modernise. They received little attention for technical change, had only partial access to credit and other support activities, such as agricultural extension. On the other hand, the "modern" agricultural sector, directed at industrial inputs and exports, was backed by official research institutions, faced rapid technical change, and received incentives and subsidies, together with access to credit (Mueller, 1992). Government policies that subsidised mechanical and chemical inputs into agriculture reinforced patterns of inequality in Brazilian society as a whole, and in relation to development standards existent in rural and urban areas in particular. The conservative modernisation strategy for agricultural development combined with colonist and infrastructure

development projects for the Amazon setting in motion a process of regional rapid urbanisation, which was fostered by the economic crisis of the 1980s.

Brazilian agricultural and environmental policies for the 1980s

The effects of the world economic crisis of the 1980s were particularly felt in Brazil. The country's huge foreign debt, associated with low levels of foreign exchange reserves and high inflation led the Brazilian government to ask financial help from the IMF, and adopt a series of adjustment policies, including cuts in wages and imports. From 1982, the country attempted to increase agricultural and agribusiness exports as a means of balancing foreign debt costs. Additionally, it attempted to improve the balance of trade (Graziano da Silva, 1996). The effects of the 1980s for the Amazon were drastic. This occurred because of the coincidence of two processes. In the words of Mueller, "in the 1980s the Brazilian economy lost momentum" (1992: 5); however, according to Ozório de Almeida and Campari, "during the 1980s, (Amazonian) frontier urbanisation gained momentum" (1995: 5) The perverse conjunction of these two factors is explored in this and in the next section.

Agricultural policies started in the 1970s had an enormous impact in Amazonia, as most of the land incorporated into "production" was located in this region forested or savannah areas. Between 1970 and 1985, land incorporated into agriculture totalled 82.1 million hectares, while land under crops, for the same period, grew by 18.4 million hectares (Mueller, 1992). The sheer difference between the two figures indicates the widespread use of land for cattle ranching, or alternatively for speculation. Land clearing was stimulated by fiscal incentives and official programmes. The economic benefits of clearing land were only marginal. State action in the Amazon region took a "pioneer" role. That is, by inducing colonisation, together with the provision of fiscal incentives, it created conditions for opening up sectors and areas that were not attractive to capitalist investments. The sectors that benefited mostly from this policy were those of agribusiness.

Table 3.2 separates the growth of crop production for the period 1970-1989, according to "modern" and "traditional" crops. The former refers to those crops chained in the agribusiness process. The latter refers to the two most commonly crops produced by small-scale, peasant agriculture. The data were collected by Mueller (1992), taking into account three years' averages of the area cultivated and of production of each crop, based on official statistics.

Table 3.2 - Selected crop production, Brazil; 1970-89 (3 years' averages)

Type of Crop		Variation (%)	
		Production	Area
"Modern" Crops	Soybeans	1.234.6	767.0
	Oranges	433.5	358.0
	Sugar cane	228.5	143.4
	Maize	77.0	24.7
	Wheat	75.6	17.8
"Traditional" Crops	Beans	3.7	41.6
	Manioc	- 22.5	- 8.7

Source: Modified from Mueller, 1992

The table above shows how those "modern" crops, that is those which benefited from government policies, experienced an enormous growth in both area and productivity. The largest increase was in soybean production. This commodity has been mainly cultivated in the savannahs of the Centre-West, and in those savannahs of the North region that are already inside of the Legal Amazon area (i.e. in the States of Tocantins and Mato Grosso). The other "modern" crops have been cultivated mainly in the States of the South and Southeast. "Traditional" crops are planted all over the country, but their importance is higher in regions where subsistence agriculture is predominant. This is the case of the Brazilian North region, but mainly of the Northeast. The latter is, overall, a region of poorer natural resources, with a semi-arid climate. Therefore, agricultural policies implemented during the most difficult years of economic crisis were directed at large, capitalised producers. The aim was to increase foreign exchange reserves that could help reduce foreign debt.

As an attempt to lessen the impacts of such excluding policies, in 1985 the government created in 1985 the National Plan of Agrarian Reform. The priority of the plan was to improve production in the areas of the South and Centre-West that already had the infrastructure necessary for production (Graziano da Silva, 1996). This aim faced huge political opposition from the landed oligarchy, which founded a pressure group called Rural Democratic Union (*União Democrática Ruralista* - UDR). The results of the plan were disappointing. Only 6.5% of the families firstly targeted were given land (Graziano da Silva, 1996). In practice, the structure of land ownership in the country has remained virtually unchanged, and violence against untitled occupants and landless people is still today a reality in areas where the needy are struggling for land. The administration of President José Sarney ended in 1990 in the midst of a huge economic crisis and little political support, which prevented any new attempt at policy change.

However, the financial and political straitjacket experienced by the Sarney administration in its final years directed government attention to the Amazon region. Environmental problems had grown more serious, particularly in the Western Amazon, as a consequence of colonisation projects, arousing national and international attention. There was already scientific evidence that forest burning could accelerate global warming by contributing to the emission of "greenhouse gases" (mainly carbon dioxide). This would elevate global temperature, with very negative effects on production and living standards. It was suggested by climatological studies that burning of rain forests contributed up to a third of total global carbon dioxide emissions. Brazil was identified as the largest contributor for the emissions of "greenhouse gases" among tropical countries (Hagemann, 1994).

As scientific evidence, political pressure and NGO lobbying increased throughout the 1980s, the Brazilian government was pressured to control the growing rate of deforestation in the Amazon. For the government, however, such pressure was translated as a political opportunity to use the issue of environmental protection as a good smoke screen for its failure in other policy areas. The Brazilian political

response to the Amazonian deforestation problem came in October 1988, when the government released the *Nossa Natureza* (Our Nature) programme. This was the country's first comprehensive programme specifically designed to harmonise development with environmental protection (Hagemann, 1994), so, despite the political benefits it brought for Sarney's government, it in fact constituted the first national environment policy, with especial focus on the Amazon.

In April 1989, the programme's co-ordination was transferred from the Ministry of the Interior to the National Defence Advisory Secretariat. In the course of the programme's implementation, a new environmental agency, IBAMA, was created. IBAMA (Brazilian Institute for the Environment and Renewable Natural Resources), resulted from the merging of four existing government bodies: the Secretariat of the Environment (SEMA), the Brazilian Institute for Forestry Development (IBDF), the Superintendency of Fishing Development (SUDEPE), and the Superintendency of Rubber Development (SUDHEVEA).

In addition, Our Nature also established a National Fund for the Environment (FNMA), which has been established to focus particularly on non-governmental organisations (NGOs) projects in Amazonia. This was a first initiative to benefit local communities, newcomer settlers and local governments that had historically not received support in federal government interventions in Amazonia. It was also an initiative that explicitly adopted the discourse of sustainable development promotion. The FNMA was then designed to fund local communities or governments in carrying out conservation or sustainable development projects. This fund, however, has since its beginning been troubled by an excessively rigid governance and administrative structure, which has restrained its capacity to disburse funds quickly⁸ (World Bank, 1994).

Our Nature was based strongly on "command and control" techniques like normative regulations and enforcement. However, the programme also used

⁸By October 1998, when this thesis was been written, IBAMA was restructuring the FNMA, and changing its operational criteria.

economic instruments by suspending the concession of fiscal incentives for agricultural and cattle ranching activities in forested parts of Amazonia (Redwood III, 1993) until the conclusion of territorial zoning of the region (Hagemann, 1994). The main objectives of the programme were to limit environmentally predatory activities; contribute to the regeneration of degraded ecosystems; implement an environmental protection system; promote environmental education; control occupation and promote rational exploitation of natural resources; and protect indigenous and *caboclo* populations. To achieve these ends, the government planned expenditures of around US\$ 350 million for the programme's first two years.

Implementation of the Our Nature programme, however, was undermined since its conception. Released in the last year of President Sarney's administration, the programme was largely vulnerable to political pressure. In addition, the extremely high rates of inflation of that period shifted the government's attention from long-term development to short-term macro-economic policies. As a result, from the US\$ 178 million planned for investment in 1989, only one-third was said to be available in that year (Hagemann, 1994). Furthermore, the programme was co-ordinated by the National Defence Advisory Secretariat (SADEN), a government body controlled by the military. SADEN designed Our Nature without public participation, and excluded from the programme the demarcation of indigenous territories in areas considered of national security interest. In the end, Our Nature could be interpreted as a highly politically inspired programme that brought about concrete benefits for the conservation of the Amazonia's natural resources.

Despite the poor results achieved by *Nossa Natureza* programme, Sarney's administration left an important legacy for the conservation of the Amazon by offering the country to host the United Nation's Conference on the Environment and Development (UNCED, which took place in Rio de Janeiro in middle 1992). By the time the conference took place, the administration of president Fernando Collor de Mello was in power, and the country was experiencing a period of economic and political agitation.

Amazonian development and environmental change in the 1990s

President Fernando Collor de Mello's administration was inaugurated in March 1990 with a new and highly controversial plan to combat inflation. The plan, that blocked bank accounts, and increased the rate of interest for agricultural loans, brought the agricultural sector to a halt. In August of the same year, the Collor administration issued a new plan labelled Economic Policy Directives for Agriculture, with a neo-liberal pedigree. It aimed to reduce the intervention of the State in the agriculture, and encourage market forces. The results were drastic. The crop production of that year experienced a reduction of 11.1%, the largest in the decade. In July 1991 the government resumed its financing of agricultural production.

During the short administration of President Collor, who was threatened with impeachment and forced out of office by Congress in 92, as well as during the administration of his successor, Itamar Franco (1992-94), no policy was conceived to assist small-scale agricultural production. In addition, the financial crisis of the State prevented further investments in infrastructure development that could affect the Amazon region.

Nevertheless, international attention on the environmental degradation of Amazonia resulted in the leaders of the G7 approving, during their 1990 meeting at Houston (Texas), the creation of an international mechanism to help conserve the region's natural resources. The Brazilian government formulated then the first version of what would become the G7 Pilot Programme for the Conservation of the Brazilian Rain Forest (PP-G7). This programme mixes social and environmental aims, and it is the most comprehensive plan already conceived for the promotion of sustainable development in the Amazon. The next chapter will analyse this programme in detail.

In addition to the Pilot Programme, a number of other initiatives affecting the development of the Amazon region came out of the UNCED. The whole content of the conference, and its implication for the region, cannot be analysed within the scope of this thesis. What seems important in terms of the approach pursued here, is that the UNCED set up the basis for a renewed perspective over the possibilities of development in the Amazon. This is based on the concept of sustainable development, which has already been analysed in chapter 2. However, the conference went further to include the concept of sustainable livelihoods, which will be examined in the next chapter. This concept, it should be mentioned now, is based on the application of the sustainable development concept at the household level. By taking this approach, it is possible to link social and environmental ends.

Therefore, the UNCED established the necessary conditions for a comprehensive reformulation of the discourse on Amazonian development. After the conference, the Brazilian federal government, as well as state governments and their agencies, adopted the official discourse of sustainability. This has influenced the formulation of new policies and programmes, but the extent to which official discourse has been translated into practice still has to be evaluated. An additional problem is that official discourse has accepted the concept of sustainable development, but the idea of sustainable livelihoods has not still be fully comprehended. Neither have key concepts like vulnerability been fully understood. This theoretical and political limitation has been reflected in the interface of development and environmental programmes for the Amazon region in recent years.

In January 1995, President Fernando Henrique Cardoso came to power with the aim of modernising the country. He now subscribes to the new international development agenda. In the absence of a better terminology, this could be understood as a post neo-liberal approach. This is one in which the State withdraws from its position of executor of the development process, and assumes increasing co-ordination and regulatory functions. It is not coincidence that under

Cardoso's administration the bulk of Brazil's public companies are being privatised.

In his attempt to modernise Brazil, President Cardoso has dedicated an enormous effort to change the country's financial sector, and has managed so far to reduce inflation rates to levels comparable to European standards. This has had a largely positive effect on the poorer strata of society, which was unable to protect itself from the pervasive consequences of high inflation. Cardoso's administration also recuperated the planning capacity of the State machine. The federal government issued a National Plan (*Plano Plurianual*) for the period 1996/99, which was submitted for, and approved by the Congress in May 1996.

Rather than establishing a straitjacket by defining *a priori* all the action to be implemented, the National Plan places the directives that would guide federal investments of R\$ 459 billions (about US\$ 402, in April 1998). This plan sets as its objectives the reformulation of the State apparatus; the modernisation of the capacity of production (industry and labour relations); and the reduction of regional imbalances. Within the latter, the plan foresees large social investments (about 66% of the total expenditure). Amongst its social aims, there is the improvement of rural people's livelihoods, and the work conditions and productivity of small-scale producers. Concerns about urban areas relate to the improvement of public services and public security. The plan, however, does not make reference to rural-urban imbalances, or to sustainability as a key issue in directing its implementation.

In order to increase society's awareness in relation to public action, the government gathered only one report on the initiatives undertaken by various government Ministries and agencies. The Brazil in Action (*Brasil em Ação*) document is in fact just a compendium of official projects the government considers more important, and has given priority for implementation. They include a series of infra-structure development, and two programmes that could affect small-scale rural and urban producers: the National Programme for Improvement

of Rural Families' Production (*Programa Nacional de Agricultura Familiar - PRONAF*), and the National Programme for Income Generation (*Programa Nacional de Geração de Emprego e Renda - PROGER*). The analysis of both programmes lies beyond the scope of this work. Suffice to say here that these two initiatives have not been able to reach the poorest strata of both urban and rural societies. They have demanded interest rates so high that most of those who in theory were to benefit from the programmes could not afford to borrow from the programme.

The National Plan and the Brazil in Action document, however, do not refer to environmental policies and programmes. However, the government has an environmental policy paper. Labelled Integrated National Policy for the Legal Amazon, it was introduced just seven months after Cardoso's inauguration. In its introductory section, presented by Gustavo Krause, Ministry of the Environment, the document claims to be "a break with past economic systems and with technological standards ... and delineates a new model ... based upon the newly emerging technologies of this end of the century, especially in the areas of energy, telecommunications and information technology, and a better knowledge and command of vital biological processes" (Government of Brazil, 1995, networked information; *original in English*). It is difficult to see how the ministry's emphasis on technological development could represent a priority policy area for a region in which economic and social indicators are amongst the poorest in a country that has one of the highest rates of social exclusion in the world.

In contrast to the introductory statement, the document presents as its final goal "the raising of the quality of life of the local populations, by means of sustainable economic growth, the full utilisation of its natural and cultural potential, and a better internal fixation and distribution of wealth" (Government of Brazil, 1995, networked information). The document, however, does not clarify how these aims are to be achieved. There is no reference to ongoing policies, programmes and projects, like the Pilot Programme. There is no reference, either, to the institutional arrangements necessary to implement the new policy. The general tone of the

document, as Hall (1997) notes, is a conservationist one. Conservation has been the cornerstone of Brazilian official environmental approach to the Amazon. It has not, however, prevented growing deforestation.

Legal Amazonia comprises an area of just over 5.2 million square kilometres, which is made up of different ecosystems and is intersected by rivers of all sizes including of course the Amazonas, the largest river (by volume) in the world. About 1.9 million sq. km consist of dense forests (38% of the region); 1.8 million sq. km of open forests (36% of the region), and 0.7 million sq. km of open vegetation such as *cerrados* (savannahs), or natural grassland. The remaining 0.6 million sq. km are made up by human settlements, secondary vegetation, and agricultural, industrial and livestock areas (Hagemann, 1994).

In the first two years of the Cardoso administration, the rate of deforestation resumed its growth after a period of decline and stagnation. According to official data, some 13% of the total Legal Amazon is already deforested (Folha de São Paulo, 1997). By 1970, when the construction of the Transamazonia highway started, deforestation had affected only 2.4% of Amazon (Hall, 1997). Until then, deforestation was at its highest in the period 1978-88, when it reached an annual average of 21,130 sq. kilometres. In 1995, however, it reached 29,059 sq. km; and then declined to 18,161 sq. km in 1996. The distribution of the rates of deforestation per state are, however, very unequal. In the Amazon State, deforestation has reached only 1.6%, but in other States the situation is much worse. In Acre deforestation accounts for 7%, in Pará 13%, and in Rondônia 16%. The two States where deforestation has reached dramatic levels are Tocantins, with 40%, and Maranhão, with 66%, the most deforested States in Legal Amazon (Fearnside, 1993).

Deforestation has been portrayed by researchers and the press as the result of mixed incentives. Among the most quoted are misguided rural and infrastructure development policies, and the class struggle between cattle ranchers and local "traditional" people, as the rubber tappers have been pictured. The policies and

projects analysed in this chapter have been pointed out as the main factors responsible for deforestation. However, linkages between growing urbanisation and environmental change have passed virtually unnoticed. In their study of urbanisation in the Amazon, Browder and Godfrey have found that "while a diminishing proportion of the urban population in the Amazon owns rural real estate, an increasing proportion of tropical forest real estate is coming into urban-resident ownership" (1997: 342). Links between urbanisation and environmental change, therefore, have an indirect connection. As the authors state:

"Urban-based interests are also indirect agents of deforestation. In contrast to popular portrayals of the rain forest as besieged by small farmers and shifting cultivators, individuals who are clearly urban-oriented in their economic activities but with mixed relations to capital are also directly poised on the cutting edge of the frontier. Through various social relations of production, small farmers are often only the pawns in the deforestation spectacle dominated by urban groups."
Browder and Godfrey (1997: 342)

Additionally, the indirect connection between urbanisation and deforestation may take other forms, as identified by the authors. Firstly, urbanisation demands more energy, and regional energy policy of the Brazilian government has led to the construction of large dams, like Tucuruí, in Pará State and Samuel, in Rondônia. These enormous reservoirs imply extensive forest conversion, the displacement local inhabitants, and various social, public health and economic impacts. In this case, urbanisation is both a cause and a consequence of dam building.

Secondly, the expansion of gold and tin mining leads to urbanisation. Informal, normally illegal mining result in the emergence of mining towns, and urbanisation on the periphery of existing cities, as has been the case in Boa Vista, Roraima state. Formal, legal mining, as in Carajás, Pará state, entails the emergence of corporatist towns, like Carajás town, and poorer settlements, as Parauapebas, a new town adjacent to the former. Mining towns, and urbanisation related to mining activities, both serve to market the mineral discoveries and to supply local miners with provisions and materials. Much gold extraction has a twofold character: it

depends on local entrepreneurship and fosters local growth, but has clear links with national and international capital. Browder and Godfrey also make an important point by considering:

Overall, the mining sector gives urbanisation in the Amazon region a dynamic but essentially irregular and regionally desarticulated aspect. The dramatic contrasts and vicissitudes of Amazonia's mining frontiers further argue against the validity of master theories of autonomous regional development or dependent development in a world system."
Browder and Godfrey (1997: 344)

Finally, the authors argue that most of urban growth in Amazonia has taken place on the periphery of existing towns and cities. This urban expansion has assumed the form of shantytowns, occupying the worst spaces in the urban setting. Such precarious forms of urban settlement cause, and are impacted by, extremely poor public health conditions. "Though still largely unrecognised by academics and policy-makers, the problems of the Amazon's burgeoning urban centres are well known to local planners and merit a higher priority in regional development policy" (Browder and Godfrey, 1997: 344).

Therefore, the pattern of development in the region has been one of expanding inequalities and growing social problems, which at the end have a direct or indirect relation to urban growth. The following section will then analyse the effects on Amazonian urbanisation of policies implemented until the end of the Sarney administration (1989).

Populational growth and urbanisation in the Amazon

One side effect of government planning for Amazonia has been the rapid demographic growth associated with rates of urbanisation. This growth has been, throughout the history of Amazonia, a consequence of natural populational growth and migration, the latter being more significant in the last thirty years, especially during the 1970s. Table 3.3 shows the total population of Brazil by geographical

region, and the relative importance of each in terms of the country's total population. Additionally, it shows the percentages of populational growth of each region per decade, for the period 1960-1991.

Table 3.3 - Total population, percentage over country's total and percentage of growth, Brazil and regions; 1960-96

Period	North	Centre-West	Northeast	Southeast	South	Brazil
Population						
1960	2.561.782	2.963.715	22.181.880	30.630.728	11.753.075	70.091.180
1970	3.603.860	5.099.787	28.111.927	39.853.498	16.496.493	93.165.565
1980	6.619.317	6.805.746	34.812.356	51.734.125	19.031.162	119.002.706
1991	9.983.585	9.372.631	42.400.736	62.356.050	22.023.908	146.136.910
1996	11.288.259	10.500.579	44.766.851	67.006.738	23.513.736	157.070.163
1960-96	8.726.477	7.536.864	22.584.971	36.370.010	11.760.661	86.978.983
Percentage Over Country's Total						
1960	3.65	4.23	31.65	43.70	16.77	100.0
1970	3.87	5.47	30.17	42.78	17.71	100.0
1980	5.57	5.72	29.25	43.47	15.99	100.0
1991	6.83	6.41	29.01	42.67	15.07	100.0
1996	7.19	6.69	28.50	42.66	14.97	100.0
Percentage of Growth						
60-70	40.68	72.07	26.73	30.11	40.36	32.92
70-80	83.67	33.45	23.83	29.81	15.36	27.73
80-91	50.83	37.72	21.80	20.53	15.73	22.80
60-96	440.64	354.30	210.82	218.76	200.06	224.09

Sources: Adapted from Ozório de Almeida and Campari (1995); and IBGE, Demographic Censuses 1960, 1970, 1980, and networked data for 1991 and 1996 (<http://www.sidra.ibge.gov.br/>)

All Brazilian regions have experienced a steady reduction in their rates of growth. This has been attributed to generally declining rates of fertility (Martine, 1994; Ozório de Almeida and Campari, 1995). In contrast to other regions, the North and the Centre-West have maintained high rates of growth during the period 1960-96, reflecting official development policies of the respective decades. Both regions, however, also experienced the highest decline in populational growth rates after the 1980s.

The Centre-West region, which was the frontier of the 1960s, experienced its highest growth during that period (72.07%). In the following decade, the highest growth is observed in the North (83.67%), showing that the frontier had moved from the Centre-West to that region. During the 1980s, both North and Centre-

West regions experienced far lower rates of growth. However, the rate for the North region during the period 1980-91 (50.83%), was still the highest in the country.

In 1996, the percentage of the population in the Northern region in relation to the country's total (7.19%) was virtually twice that of the 1960s (3.65%). It also became higher than the percentage of the Centre-West (6.69%). The North and the Centre-West are the only two regions in the country where the percentage of the population in relation to the country's total has increased. From 1960 to 1996 the Northeast experienced the highest decline in any region's share over the country's total.

Important for this analysis is the fact that the Amazonian population has grown considerably, and this is an issue that has been overlooked in most of the literature concerning the region, which tends to see the Amazon as an "open space" (Nugent, 1993). Such a misplaced view of the Amazon region has arisen partially because of the concentration of the Brazilian population in urban areas, a process that has affected all regions of the country.

The trends presented in table 3.3, above, also suggest a shift in the pattern of migration affecting the region. According to Ozório de Almeida and Campari, migration to the Amazon region ceased to be inter-regional, from the cerrado areas and from other regions to the Amazon. "Nowadays", the authors state, "migration from old to new frontiers seems to have become an intra-regional, Amazonic phenomenon" (1995: 5). The populational growth of Brazil can be better understood by analysing the share of urban and rural inhabitants. Table 3.4 presents data on the total, urban and rural populations for Brazil and its geographic regions, for the last census (1996).

Table 3.4 - Total, urban and rural populations in Brazil and regions; 1996

Area	Total	Urban	%	Rural	%
Brazil	157.070.163	123.076.831	78.36	33.993.332	21.42
Geographic Regions					
North	11.288.259	7.039.085	62.36	4.249.174	37.64
Centre-West	10.500.579	8.864.936	84.42	1.635.643	15.58
Northeast	44.766.851	29.191.749	65.20	15.575.102	34.80
Southeast	67.000.738	59.823.964	89.29	7.176.774	10.71
South	23.513.736	18.157.097	77.22	5.356.639	22.78

Source: IBGE, Demographic Census 1996 (networked data; <http://www.sidra.ibge.gov.br>).

Table 3.4 shows that Brazil is an urbanised country, with 78.36 per cent of its population living in urban areas. It represents an average of 18.4 inhabitants per square km. The most heavily urbanised area is the developed Southeast, where the largest cities in the country (São Paulo, Rio de Janeiro, and Belo Horizonte) are situated. The Centre-West, which was the agricultural frontier of the 1960s, already appears as the second most urbanised region. It suggests that the introduction of "modern" agriculture in that area has led to a process of massive land ownership concentration, and has expelled small landowners to cities and towns. Introduction of large-scale, mechanised soy beans production -- which was a symptom of land-concentration -- was particularly notable from the 1960s onwards in the Centre-West states of Mato Grosso, Mato Grosso do Sul, and Goiás (Mueller, 1991).

It is also shown in table 3.4 that the Amazon is now an urbanised forest. The North region, in which the bulk of the Amazon forest stands, has 62.36 per cent of its population living in urban areas. Within these states, total population has already reached 11.3 million. Additionally, it is important to note that the urban population of the Northern States has almost achieved the same level of urbanisation as the Northeast, an area in which human settlement goes back to the colonial period. This trend suggests that a significant share of total migration to the North was directed to urban, rather than rural areas (Martine, 1994).

It is also striking that the present rural population of the North is already larger than the total population of the same region in 1970. This indicates that, despite

intense urban growth, populational trends in this region also encompassed a large growth in rural areas. This growth, however, has been quite massive in Rondônia and Pará, where official and private colonisation programmes were developed, and in Roraima, where gold-mining attracted a large contingent. This differentiated growth in urban and rural populations resulted in the present situation shown in table 3.5.

Table 3.5 - Total, capital city, urban, and rural populations in the Legal Amazon region and Legal Amazon states; 1996

Area	Total	Capital City*	% Capital	Urban	% Urban	Rural	% Rural
Legal Amazon	18.746.274	4.511.537	24.06	11.445.808	61.06	7.300.466	38.94
States of the Legal Amazon Region							
Acre	483.593	228.857	47.32	315.271	65.19	168.322	34.81
Amapá	379.459	220.962	58.23	330.590	87.12	48.869	12.88
Amazonas	2.389.279	1.157.357	48.44	1.766.166	73.92	623.113	26.08
Maranhão**	5.222.183	780.833	14.95	2.711.175	51.92	2.511.008	48.08
Mato Grosso	2.235.832	433.355	19.38	1.695.548	75.84	540.284	24.16
Pará	5.510.849	1.144.312	20.76	2.949.017	53.51	2.561.832	46.49
Rondônia	1.229.306	294.227	23.93	762.755	62.05	466.551	37.95
Roraima	247.131	165.518	66.86	174.277	70.52	72.854	29.48
Tocantins***	1.048.642	86.116	8.24	741.009	70.66	307.633	29.34

Source: IBGE (1996; networked information)

* Includes only the population of the city, excluding what IBGE calls "agglomerations of urban extension" (i.e. areas of a "metropolitan" configuration).

** Excludes data from the Municipalities localised outside the Legal Amazon area.

*** The largest city in Tocantins is Porto Nacional, which has almost twice the population of the newly created capital, Palmas.

This table shows that there is a population of almost 19 million people in the Legal Amazon area. This represents 11.93 per cent of the country's total. In contrast to other analyses of the "Amazon" region, which focus only on the states of the Northern region, this table presents data from all the municipalities of the Legal Amazon area. It therefore includes the States of Maranhão and Mato Grosso, which have large areas of savannahs and huge deforestation rates, and the State of Tocantins, which is completely covered by savannahs. This approach allows a better visualisation of the populational growth in the region as a whole.

Like the North region, the Legal Amazon area is more urban (61.06%) than rural (38.94%). However, the percentage of urban population in the Legal Amazon is inferior to urban population of the North region (62.36%, see table 3.4). This reduction can be explained by the large rural population of Maranhão state. Until 1996, Maranhão stood as state in which the rural population was larger than the urban. This pattern has now been changed as urban residents (51.92%) have just exceeded rural ones (48.08%). Patterns of development in Maranhão State will be analysed in chapter 5.

Tocantins, a state created in 1988, originally formed part of Goiás state. Tocantins became part of the Northern region, and a member of the Legal Amazon, while Goiás remained in the Centre-West. An area of intense expansion of "modern" agriculture (mainly soybean), this state also mixes large and medium cattle ranching states. Populational concentration in urban areas, however, is very high: 70.66 per cent are now urban, as opposed to 29.34 per cent rural.

The most urbanised state is Amapá (87.12%), which, however, is one of the less heavily populated. There, official investment and policies have created large multinational mining companies, and a free trade area. Similar processes could explain the urbanisation of Amazonas state (73.92%), where the federal government created incentives for industries to settle in the capital city, home of the Manaus Free Trade Zone. The high rate of urbanisation in Mato Grosso (75.84%) suggests the failure of the various official and private colonisation programmes developed in that state. Pará and Rondônia also received large numbers of colonists. The relatively high percentage of their rural population by regional standards (46.49% and 37.95%, respectively), reflects the importance of the colonisation programmes developed alongside the BR-364 (Rondônia) and Transamazônia (Pará) highways.

Large-scale urbanisation in the states of Roraima (70.52%) and Acre (65.19%) does not only reflect national trends, but it is also influenced by the fact that the two are the most isolated states in Brazil. The case of Roraima is special: about

34 per cent of its area comprise Amerindian territory. Roraima is also an area that has faced the highest growth of (legal and illegal) gold and diamond mining in the Amazon. This has contributed to the growth of both urban and rural populations, as the process of gold mining influences the two. Acre is one of the oldest occupied areas in Amazonia. Its rate of urbanisation (65.19%) may reflect the long tradition of rubber extraction. Firstly, because it was dependent on "rubber barons" settled in the capital city, and controlled commerce as well. Second, because the failure of the rubber trade led rubber tappers to cluster in the capital city, which has an important share of the total urban population.

Table 3.5 also demonstrates that Maranhão has the second smallest urban population living in the capital city (14.95%). This small population in the capital reflects the fact that Maranhão has a far more balanced network of urban places than other states in the region. For the same reasons presented above, Acre, Amapá, Amazonas and Roraima have significant percentages of the total urban population living in the capital city. Data for Tocantins disguises the fact that Palmas, a city created in 1988 to be the capital, is not the largest in the state.

For the region as a whole, a number of circumstances have been presented by different authors to explain the urbanisation of the region. Ozório de Almeida (1992) suggests that many would-be colonists preferred to take the risk of finding a employment (or underemployment) in urban areas rather than face the adventure of living in the forest. Ozório de Almeida and Campari (1995) add that some colonists, perceiving that opportunities in frontier agriculture were shrinking, moved quickly to urban areas. Some colonists, one could suggest, may have used colonisation programmes as a premeditated step towards an urban life. Above all, urbanisation has been an overriding demographic tendency in Brazil, against which frontier expansion is but a weak counter-trend (Martine, 1994; Ozório de Almeida and Campari, 1995).

Some other factors related to land ownership are also important. Bertha Becker (1995) emphasises the formation of a market in land, and the concentration of

land ownership and the perverse effects of labour legislation applicable to rural workers. According to the author, the partial modernisation of agriculture, combined with seasonal labour employment, expelled workers out of agricultural establishments, so labour remains in small cities as rural workers, but urban residents. Moreover, Ozório de Almeida and Campari (1995) state that the growing speculation in land has expelled rural workers to urban areas.

In addition, urbanisation on the Amazon has also represented a response to state-led investments in capital intensive industries in some urban areas, and the overall concession of tax benefits for large agricultural and livestock farming. Industrialisation took place only in a few cities of the Amazon, like Manaus and Belém. These two cities have experienced a rapid urban boom, with the emergence of large shantytowns. If industrialisation was a localised process, what economic opportunities do people have within Amazonian cities and towns?

The public sector has surely represented one of the main employers in urban areas. During military rule, public sector employment assumed an essential role in the promotion of top-down strategies of development. In the case of Amazonia, this was reinforced by the fact that many territorial units were not considered autonomous states, but rather territories of the federation. That was the case of the current states of Acre, Amapá, Rondônia, and Roraima, where local administration and budgets were in the past under the direct control of the central government. Political power has also been influential in getting a public sector job. Concession of public employment in Brazil, but particularly in the Northeast and North regions, has been a matter of political control. It has acted as a means of fostering political allegiance and increasing electoral constituencies. Additionally, the informal sector, as analysed in chapter 2, has been an important source of economic gain in urban areas, and has attracted rural folk.

In-depth investigation of Amazonia's processes of urbanisation lies outside the scope of this work. What seems to be more important in the context of this research is the recognition that Brazilian approaches to colonisation and economic

development of the Amazon have contributed to a process of urbanisation which, was anyway under way all over the country. Nevertheless, it is important to point out the high rates of urbanisation experienced in Amazonia, a fact that apparently has not been properly addressed by either Brazilian government or official development assistance to the region. Being a result of mixed influences, this rapid and uncontrolled process of economic development and urbanisation has led to environmental change, mainly deforestation, and growing violence in both rural and urban areas.

Conclusion

This section has described the context of Brazilian government initiatives to develop Amazonia. The main argument here is that top-down centralised planning for Amazonian development has led to huge forest clearance, which has been linked with growing urbanisation and social problems. Agricultural colonisation schemes associated with fiscal incentives, and backed by a road-building programme constituted the initial approach to the development of the region.

Poor results achieved during this first period, in connection with social problems in the Brazilian Northeast, led to a new phase in Amazonian development. This was marked by military “national security” concerns, in which stronger investments in road building was associated with “social colonisation” programmes. Lack of appropriate incentives and control resulted in environmental change for which small farmers were blamed. The government withdrew from a “small-scale approach”, and moved to directed settlement programmes. In the process of programmes’ implementation, corporate investors and capitalised rural proprietors emerged as the main beneficiaries. They took the bulk of the land and forced small local producers and agricultural migrants to move further into frontier areas.

Deforestation that has resulted from this process has drawn the attention of foreign governments, worried by scientific evidence that forest clearance could produce global environmental change. In response, the Brazilian government

took on a green discourse, but the first official environmental programme, *Nossa Natureza*, had few practical effects. Foreign governments decided to help Brazil to conserve Amazonian natural resources by offering financial assistance. This resulted in the formulation of a set of initiatives for the conservation of Amazonian natural resources, of which the 97 Pilot Programme to Conserve Brazilian Rain Forest, the topic of the next chapter, is one of the most important.

Brazilian strategies for the region have mirrored modernisation policies, examined in the previous chapter. These strategies have affected both industrial and agricultural development. The main approach of the government for the Amazon has been its identification with a resource transfer frontier. The region has also assumed the role of lessening pressure for land, of both landless people and rural producers from other parts of the country.

It has been shown how development and agricultural policies have had an urban-biased orientation, with detrimental effects on small-scale farming. The result has been a widespread pattern of urbanisation, which has socially and environmentally perverse impacts. Urbanisation of the region as a whole has taken place with no significant industrial or agricultural expansion, implying that it has experienced some sort of autonomous form of development. This position, sustained by Cleary, has been contested in this chapter by Browder and Godfrey. The authors maintain that the pattern of urbanisation in the Amazon is associated with processes that qualify the region as both semi-autonomous and semi-dependent. Therefore, for Browder and Godfrey the development of the Amazon region takes place in a desarticulated way. This question will be further discussed in chapter 8.

CHAPTER 4 - URBAN DIMENSIONS IN THE PILOT PROGRAMME'S PD/A PROJECTS

Official intervention in the Legal Amazon has historically been detrimental to local disadvantaged populations and to the natural environment. Pervasive effects of government policies directed at infrastructure and agricultural development accumulated to the point that a shift in official discourse and practice became inevitable by the end of the 1980s. However, it was only at the beginning of the 1990s that the government started discussing a major programme for the region, under pressure from international public opinion. This chapter describes and analyses the outcome of these debates, that is the G7 Pilot Programme to Conserve the Brazilian Rain Forest (PP-G7), focusing on its Demonstration Projects (PD/A) component.

This initiative, which brings together the Brazilian government, international agencies, foreign countries and NGOs, will be approached in the light of the debate on urban dimensions within rural livelihoods. Urban dimensions are defined as the material and non-material linkages established by rural people in urban areas as a means of maintaining or expanding their sources of livelihood. Central to this debate are concepts and data already introduced in this work. Chapter 1 described Marxist concepts of peasant subordination, and analysed their application in an economic environment dominated by mercantile relations, resulting in a "bowdlerised" economy, one which mixes various forms of capital and allows for the expansion of petty forms of production and trade. Chapter 2 examined how liberal approaches presume cultural transformation and trickle down effects. Furthermore, the chapter discussed theoretical approaches that focus on the complexity of livelihoods, and a rational-choice framework that stresses political influences on decision-making. Theories that focus specifically on rural-urban relations complemented the debate. Finally, the high rates of urbanisation, described in chapter 3, show the Amazon as an urbanised forest.

This chapter has a twofold aim. It will first analyse the extent to which the PP-G7, and specifically the PD/A, fit within the current debate on sustainable development. Secondly, it will be shown how the urban dimension in rural Amazonian livelihoods has been considered at the programme level. The first analysis will require a deeper investigation of the sustainable development concept, introduced in chapter 2. The sociological perspective of this concept will then be expanded to include debates on management techniques. The investigation of urban dimensions at programme level is based on the theoretical discussion of chapters 1 and 2, on the analysis of PP-G7 and PD/A official documents, and on a series of interviews recorded during fieldwork in Brasília. The interviewees are key-informants within the institutions that make up the three main parts responsible for the conception and implementation of the PD/A: official bureaucracy, international organisations, and NGOs. A list of all interviewees' names, together with a description of their professional activities, is provided in annex "C".

The origins of the Pilot Programme

Environmental and political circumstances were the major influences behind the creation of the G7 Pilot Programme to Conserve the Brazilian Rain Forest (PP-G7). The rapid rate of environmental change in the Amazon, combined with huge forest fires attracted international attention and became a central issue for NGO campaigns in the late 1980s. Massive public interest in Europe and in the United States finally reflected in the top political agenda. In July 1990, the heads of State of the countries that make up the Group of Seven (G7)¹ officially manifested their concern over the destruction of the Amazon forest.

During their summit, in Houston, Texas, the German Chancellor Helmut Kohl proposed an official commitment to help Brazil reduce the rate of deforestation in Amazonia. This proposal was accepted, and the Government of Brazil (GoB) was invited to prepare a plan of action, which would be funded by the G7 members. Concomitantly, the World Bank was given the role of trustee, providing technical inputs and co-ordination needed for the implementation of the programme.

¹Formed by United States, Canada, Japan, Germany, France, Italy, and United Kingdom.

Within the Brazilian government, the (federal) Secretary of the Environment and Legal Amazonia (SMA) was put in charge of the programme's design. The first version of the programme was presented to a group of fourteen Brazilian NGOs in July 1991. Its proposed action plan included not only the Amazon region, but also the Atlantic Rain Forest. Together, these two ecosystems cover some 82 per cent of Brazilian territory (Moraes, 1997). The Atlantic Rain Forest (Mata Atlântica), which is a "hot spot" in the nature conservation jargon, has already had some 95 per cent of its original area destroyed. Because of the particular social and economic realities of this area in relation to the Amazon, it was excluded from the focus of this thesis. Therefore, the analysis of the Pilot Programme that follows is restricted to the Legal Amazon.

The NGOs that first analysed the proposal decided, during a meeting in the Ministry of the Environment, to create the Amazon Working Group (GTA). This is an umbrella non-governmental organisation, whose broad aim was defined as that of facilitating the participation of small NGOs, grassroots groups, indigenous groups, and other potential beneficiary organisations in the PP-G7. In 1992, NGOs working with the Atlantic Rain Forest² decided to create its own umbrella organisation (the Atlantic Forest Commission - CMA) similar to that of the GTA. The GTA has about 355 member organisations (Vaz de Lima, 1997), while the CMA has close to 80 affiliates (World Bank, 1994a).

The first Brazilian proposal was subsequently analysed by the World Bank and the Commission of the European Union (CEC), which required some modifications. The final proposal included a set of thirteen projects, which were agreed to by the donors at a November 1991 meeting in Geneva. In 1992, the World Bank established the Rain Forest Trust Fund (RTF), with grants from Germany (the largest contributor), Canada, Italy, Netherlands, Japan, United Kingdom, United States, and the European Union. The RTF today stands some US\$ 56 million. The remainder of the funding comes from project-by-project bilateral joint financing, from

²The Atlantic Rain Forest ecosystem runs along the coast of North-eastern, South-eastern and Southern regions of the country, advancing towards the interior in varied stretches. The domain of the Atlantic Forest is the most densely populated and industrialised region of the country.

some donors (Germany, CEC, UK, and the US), plus about a 10 per cent counterpart funding from the Brazilian government. Table 4.1 identifies the Pilot programme's sources of funding.

Table 4.1 - Pilot Programme funding (US\$ millions); 1998

Source	RTF ⁽¹⁾	For Projects ⁽²⁾			Total
		Contracted	Committed	Proposed	
Brazil	--	24.7 ⁽³⁾	0.6	10.2	35.5
Canada	0.7	--	--	--	0.7
European Union	14.1	33.6	11.0	23.7	82.4
France	--	--	2.0	--	2.0
Germany	19.4	57.6	21.7	45.6	144.2
Italy	3.9	--	--	--	3.9
Japan	6.8	--	--	--	6.8
Netherlands	3.2	--	--	--	3.2
United Kingdom	2.3	6.0	2.0	17.4	27.8
United States	5.5	2.0	8.0	2.0	17.5
Total	55.8	124.0	45.8	98.9	324.1

Source: Pilot Programme (1998: 10)

⁽¹⁾ Contributions to the RTF were converted to US\$ at the exchange rate of the date of deposit.

⁽²⁾ Project funding includes the estimate value of technical co-operation.

⁽³⁾ Contributions to projects at exchange rates in effect in April 1998.

Table 4.1 shows that Germany is by far the largest financial contributor to the Pilot Programme, with commitments of US\$ 144.2 million. The second largest is the European Union (US\$ 82.4 million), followed by GoB (35.5 million), United Kingdom (27.8 million), United States (US\$ 17.5 million), Japan (6.8 million), Italy (3.9 million), Netherlands (3,2 million), France (2 million), and Canada (0.7 million). The total amount of financial and technical assistance received by the Pilot Programme by the beginning of 1998 was some US\$ 324 million. The total resources of the Pilot Programme constitutes "the largest multilateral donation to promote environmental conservation in a single country" (Seixas Lourenço, 1998).

Since the first proposal was released, a large number of modifications have been introduced to the programme. After tortuous negotiations, a final structure was eventually approved in 1995. The implementation of the programme started in 1995 and its extended first phase will be prolonged until the year 2002. Its "pilot" nature was established to indicate that emphasis would be placed on innovative action and the learning process of conducting such a programme, and that lessons could be applied more widely in subsequent stages (World Bank, 1995). Its overall objectives are to:

- "a) Demonstrate that sustainable economic development and conservation of the environment can be pursued at the same time in tropical rain forests;
 - b) Preserve the biodiversity of the rain forests;
 - c) Reduce the Brazilian rain forest's contribution to the world's emission of greenhouse gases; and,
 - d) Set an example of international co-operation between industrial and developing countries on global environmental problems."
- Pilot Programme (1998: 4)

Despite the clear statement of objectives, the Pilot Programme works with a loosely defined concept of sustainable development, which is supposed to be the programme's backdrop. It states that "to conserve means both to protect the forests and the current generation without compromising the needs of the future generations" (Pilot Programme, 1998: 1). This definition, which is derived from the "Our Common Future" (the so-called "Brundtland Report"), is further dealt with when the official documentation recognises that "one lesson already learned is that projects need to be economically and politically sustainable as well as ecologically sustainable" (Pilot Programme, 1998: 5). Finally, the document makes reference to people's involvement by recognising that:

"[S]ustainable development cannot be imposed; it must be discovered. The challenge is to attract local support by making development that protects global values more attractive than development that does not by generating a higher quality of life."

Pilot Programme (1998: 5)

The references above represent a step forward from the first PP-G7 documents, which had a strong bias towards environmental conservation (World Bank, 1995). However, the inclusion of Amazonia people's interests, in the way it is spelled out, sounds more like a top-down vision of beneficiary involvement than the generation of true partnerships. Local support is meant to be "attracted", which implies that PP-G7 projects should be able to point to alternative uses of the natural environment in such ways that they will automatically receive people's support due to their capacity to provide a better quality of life. The point here is not to neglect this as an option for action, but to stress that the phraseology would probably be a different one if the programme was designed to really capture local people's aspirations and actual life circumstances.

However, not all the Pilot Programme's components deal with strategies for sustainable development that involve direct people's participation. Amongst the programme's five lines of action, as shown in box 4.2, the "experimentation and demonstration" one has direct involvement of local groups, as some of those related to conservation also have. This is so in the case of projects for extractive reserves and indigenous lands.

Box 4.2 - Pilot Programme components; 1998

Line of Action	Objectives	Projects
<ul style="list-style-type: none"> ▪ <i>Experimentation and demonstration</i> 	<i>To promote practical experimentation by local communities and governments in conservation, sustainable development, and environmental education initiatives.</i>	<ul style="list-style-type: none"> • <i>Demonstration Projects;</i> • <i>Forest Resource Management;</i> • <i>Floodplain Resource Management.</i>
<ul style="list-style-type: none"> ▪ <i>Conservation</i> 	<i>To improve management of protected areas and natural resources.</i>	<ul style="list-style-type: none"> • <i>Extractive reserves;</i> • <i>Indigenous Lands;</i> • <i>Rain Forest Corridors.</i>
<ul style="list-style-type: none"> ▪ <i>Institutional strengthening</i> 	<i>To enable public institutions to shape and enforce sound environmental policies, in co-operation with civic organisations, the private sector, and society at large.</i>	<ul style="list-style-type: none"> • <i>Natural Resources Policy;</i> • <i>Fire and Deforestation Control.</i>
<ul style="list-style-type: none"> ▪ <i>Scientific research</i> 	<i>To increase scientific knowledge about tropical forests and their sustainable management and use.</i>	<ul style="list-style-type: none"> • <i>Scientific Centres;</i> • <i>Directed Research.</i>
<ul style="list-style-type: none"> ▪ <i>Lessons and dissemination</i> 	<i>To make the knowledge gained from the programme widely available</i>	<ul style="list-style-type: none"> • <i>Monitoring and Analysis.</i>

Source: Pilot Programme (1998: 6)

Box 4.2 shows the broad scope of the Pilot Programme: it aims at influencing various dimensions of Amazonian development, from local level demonstration projects to national environmental policies. This is of course a formidable task, and requires complex co-ordination and negotiation arrangements. Implementation has been uneven, as those projects that involve policy reformulation (like the Natural Resource Policy component) tend to lag behind those with more direct, practical aims. Table 4.3 shows the specific objectives, values, and sources of financing for the various projects being formulated, or already in implementation, within the Pilot Programme.

Table 4.3 - Pilot Programme projects; 1998

Name	Value	Objectives
Demonstration Projects (ongoing)	US\$ 25.7 million ⁽¹⁾ plus US\$ 18.9 million under negotiation	To promote, test, and disseminate community-based conservation and development initiatives in the Amazon and Atlantic rain forest regions that are environmentally, economically, and socially sound and can be replicated elsewhere.
Forest Resource Management (ongoing)	US\$ 17.4 million	To support the development and adoption of sustainable forest management systems in the Amazon region by means of strategic actions and pilot experiments in priority areas.
Floodplain Resource Management (ongoing)	US\$ 15 million (prediction)	To promote the conservation and rational use of this ecosystem, with an emphasis on fisheries and other aquatic wildlife.
Extractive Reserves (ongoing)	US\$ 9.4 million, plus US\$ 7.7 million under negotiation	To develop and test appropriate approaches to the social, economic, and environmental management of four extractive reserves ⁽²⁾ based on refinements of the knowledge and traditional practices of the local population.
Indigenous Lands (ongoing)	US\$ 22 million	To enhance the well-being of indigenous peoples and promote the conservation of their natural resources by completing the legalisation and assisting in the protection of approximately 121 indigenous areas in the Amazon.
Rain Forest Corridors (formerly called Parks and Reserves; in preparation)	US\$ 40/45 million (financing yet to be approved)	To conserve biodiversity by creating rain forest corridors in the Amazon and Atlantic rain forest regions.
Natural Resources Policy (ongoing)	US\$ 83 million	To support the sustainable use of natural resources by defining and implementing at State level appropriate models of integrated environmental management for Brazil's Amazon region.
Fire and Deforestation Control (in preparation)	Not defined	To improve the surveillance and control of deforestation, burning, and forest degradation in selected areas of the Amazon.
Science Centres and Direct Research (ongoing)	US\$ 25.5 million	To promote the generation and dissemination of scientific knowledge relevant to conservation and sustainable development activities in the Amazon region by supporting competitive grants for scientific research and strengthening two established research institutions ⁽³⁾ .
Monitoring and Analysis (ongoing)	US\$ 2.6 million	To promote learning about the Pilot Programme and application of its strategic lessons.

Source: Adapted from Pilot Programme (1998)

⁽¹⁾ It is not clear from the PD/A documentation if this value includes the counterpart funding provided by beneficiaries, which can reach 20 per cent of the project's value.

⁽²⁾ The reserves are: Chico Mendes and Alto Juruá, in Acre state, Rio Ouro Preto, in Rondônia state, and Rio Cajari, in Amapá state.

⁽³⁾ The National Institute for Amazon Research (INPA), in Manaus, and the Emilio Goeldi Museum (MPEG), in Belém.

Table 4.3 shows the values, and summarised the objectives of the 10 Pilot Programme components. The table has been divided into two parts, separated by colours. The top half shows the projects that have a direct impact on people's livelihoods. The five projects that fall into this category total US\$ 97.2 million, including the values under negotiation. The bottom shows projects that focus on nature conservation, research, and monitoring. Although they will certainly have some impact on people's livelihoods, and they will also interact with other components, these projects tend to be directed more at the protection of natural

resources. Together, the projects of this second half total US\$ 151.1 million (considering US\$ 40 million as the possible value of the Rain Forest Corridors project). This value does not include the Fire and Deforestation Control project, still under preparation. The single most expensive project is the Natural Resources' Policy project, with US\$ 83 million. The focus of this research, however, is the Demonstration Projects' component (PD/A), which accounts for US\$ 25.7 million so far, and is expected to receive US\$ 18.9 million (a total of US\$ 44.6 million). The PD/A will be examined in the next section.

In order to assess the design and implementation of projects, as well as providing on-going monitoring, the World Bank created an International Advisory Group (IAG), composed by twelve experts from around the world, with a broad range of expertise and experience. Their role is to serve as a source of independent advice and monitoring of the Pilot Programme (World Bank, 1993). Of all the PP-G7 components, the IAG has paid special attention to the Demonstration Projects (PD/A). This is due to the experimental nature of the project, but also because community-based and NGO initiatives have historically been excluded from official development efforts in the Amazon.

Demonstration Projects' objectives and bureaucratic structure

This section analyses the administrative organisation of the Demonstration Projects (PD/A). They represent a major element in the PP-G7 (IAG, 1994), and the outcomes of PD/A experiences are expected to have external and internal demonstration effects. The former refers to the capacity of PD/A projects to be replicated elsewhere, and the latter to its capacity to influence other Pilot Programmes components, making use of the lessons obtained from small-scale projects. Additionally, the project is expected to contribute to recording the histories of small-scale and NGO activities in Amazonia, something that has always been poorly done. These characteristics make it particularly relevant that lessons be derived from the PD/A to inform similar future initiatives, both in the Amazon and elsewhere (IAG, 1993). Moreover, it is hoped that community-based initiatives to be supported under the PD/A arrangement, will pave the way for new paradigms of

natural resource management (World Bank, 1994). The specific aims of the Demonstration Projects have been stated in different forms. The first version, presented in 1994, stated that PD/A's aims were:

- "a) To stimulate the development, adaptation or dissemination of environmentally, economically, and socially sustainable systems of natural resource management and conservation by local communities;
 - b) To inform other communities, groups that represent them, researchers, and government policy-makers of the lessons learned from the local-level sub-projects; and
 - c) To strengthen the capacity of local populations to plan and implement activities leading to conservation and sustainable development, through support to the NGO networks, the GTA and CMA."
- World Bank (1994: 4); CEC (1994: 15)

In this definition sustainability is recognised in three dimensions, but it is referred to in relation to "systems of natural resource management and conservation by local communities". This is reminiscent of Nugent's (1993) criticism mentioned in chapter 2, according to which the discourse of "sustainable development" tends to promote the "language of the market". This, sustains the authors, refers to the fact that governments and international agencies place greater emphasis on protecting the environment (even if it involves marketing schemes, for example) rather than on creating conditions to improve existing production systems and make them sustainable. As a consequence, the production base of rural producers needs to be changed in the name of environmental protection.

A second definition of PD/A aims, presented in table 4.3, states that such projects should disseminate initiatives that are "environmentally, economically, and socially sound and can be replicated elsewhere" (Pilot Programme, 1998: 19). In both definitions, the notion of "sustainable development" appears as a result of interactions amongst three dimensions (economic, biological, and social). Although this is certainly the case, the PD/A does not specify indicators for the achievement of these objectives, leaving the impression that it takes a case-by-case approach based on the specificities of each project supported³. This question will be further analysed below in this chapter, as well as in other parts of this thesis. Suffice to say

³During the Pilot Programme fourth participants' meeting, that took place in Manaus in October 1997, a first attempt at indicator development was introduced by the World Bank (World Bank, 1997).

now that a loosely defined notion of sustainability means that partial achievements could be taken as being enough for claiming "sustainability". Because environmental and economic benefits derived from project implementation are more easily visualised, there is the risk that social aspects are neglected.

One further problem related to the PD/A's social dimension is the fact that the population of possible beneficiaries is not known precisely. The World Bank (1994) clearly assumes that there is no precise estimation of how many private groups, including NGOs, co-operatives, and producer associations, are actively operating in Brazil (World Bank, 1994). The closest estimate is that made in 1996 by the GTA and the Superintendency for the Development of the Amazon (SUDAM). Together, they carried out a study and concluded that there were around 1,000 organisations, (i.e. NGO and social movements), working in the Legal Amazon (Vaz de Lima, 1997). This number is imprecise, as it includes both rural and urban organisations, across a large spectrum of activities of institutions classified under the general heading of "poverty alleviation".

What is certain, however, is that the large majority of small civil society organisations in Amazonia do not have access to external funds. This is because they are not linked to international groups, or because the funds available are limited. The Bank (1994) calculates that those groups operating in that region, which have already received funding, have been granted in the order of US\$ 10 million annually. This funding, the Bank suggests, has been used to carry out projects in such areas as sustainable agriculture, agroforestry, and the processing and marketing of forest products. The World Bank's estimates of unfulfilled demand for funds indicate that existing groups working on conservation and sustainable development projects could absorb something like three times as much money.

As noted in table 4.3, the PD/A fulfils part of this demand by having made available US\$ 25.7 million for the period 1996-98. This amount "reflects combined contributions of the German government, the European Commission, the Rain Forest Trust Fund, and participating local groups" (Pilot Programme, 1998: 20). Additional funding of US\$ 10.4 million is expected from the French and German governments. The PD/A should also include a sub-project component directed to

Environmental Education, which is expected to receive US\$ 8.5 million from the European Commission and the Rain Forest Trust Fund. Additionally, the PD/A was expanded to include the financing of projects for Amerindian communities, and a sub-component of "area-based" projects was under negotiation. This would include projects targeting local authorities, and bridging PD/A projects to increase their beneficial effects.

The Brazilian federal government provides office space for the Technical Secretariat, which is the PD/A's management unit. The Secretariat co-ordinates and supervises the implementation of the project, and carries out the dissemination component, under the supervision of the Ministry of Environment. The three sub-components of the PD/A that have been operational since the project's beginning are: core funding of small grants; evaluation and dissemination; and NGO strengthening. Their main characteristics, according to the World Bank (1994), are summarised below.

- *Small grants programme (90% of project cost)*

This relates to the financing of community-based initiatives. Individual grants are limited to a maximum of US\$ 150,000 a year, with a limit of US\$ 300,000 to a single grantee, over the project period. Sub-projects receiving more than US\$ 15,000 in funding would be required to contribute counterpart funds. To receive from US\$ 15,000 to US\$ 50,000, the recipient would need to provide at least 10 per cent of the grant amount; to receive US\$ 50,000 to US\$ 100,000, at least 20 per cent; and to receive over US\$ 100,000, at least 30 per cent. Eligible sub-projects would be expected to reduce pressure on native forests by supporting (a) nature conservation; (b) environmentally sound management of already deforested land; or (c) low impact use of native forest resources. Sub-projects would represent a range of activities, from first-time trials of new ideas, to practical application of documented natural resource management techniques.

Eligible sub-projects in the area of nature conservation would support activities such as: environmental education for local populations in sensitive areas such as buffer zones; environmental enforcement procedures that make innovative use of local

communities; and management of local protected areas, such as private reserves, by local groups. Eligible sub-projects in the area of environmentally sound management of already deforested land would include activities such as agroforestry using native species; and dissemination of sustainable agricultural practices. Sub-projects in the area of low impact use of native forest resources would include: community management of concessions in national forests; processing and marketing of non-timber forest products, such as Brazil nuts; and development of indigenous handicrafts based on the sustainable use of natural products extracted from standing forest. Qualified grantees would include community groups, non-governmental organisations, local governments, and small producer associations and co-operatives in the Amazon and the Atlantic Forest. Seventeen per cent of the grant funds would be reserved for projects in the Atlantic Forest.

At the outset of the project, a study would be financed to generate assessments of innovative natural resource management practices already being used, which would be disseminated by the project. Sub-project grants could be used to purchase small civil works, equipment, supplies, and consultancy services. This component would also cover administrative costs of the grant programme, including technical assistance to applicants for proposal preparation, and general administrative costs for the project management unit and the Bank of Brazil.

- *Evaluation and dissemination of sub-project results to other communities, NGOs, local and central governments, researchers, and other interested groups (5% of project cost).*

This sub-project is expected to generate publications and workshops, and to gain access to radio and other media. This component includes the analysis of sub-project results, the preparation of appropriate dissemination materials based on these analyses, and the actual dissemination of information.

- *NGO network strengthening (5% of project cost)*

NGO capacity-building relies on the GTA network of member organisations. The GTA was responsible for organising the advertising of the small grants programme, which took place during 1996. The GTA is also responsible for providing technical assistance to local populations that solicit support from the programme. It is expected that the GTA could consolidate its role as a membership association within the period of funding by the PP-G7. This component would also cover a small amount of funding for the CMA, to carry out activities in support of the project.

Project criteria and geographical distribution

Approval of PD/A projects is based on a set of criteria for eligibility and selection. Eligibility criteria should “assure that they (the beneficiaries) are legitimate groups with experience in environmental or community work in the region, and that they have fulfilled their responsibilities in earlier commitments with the government or the PD/A” (World Bank, 1994a)⁴. Selection criteria, in their turn, “would ensure that the sub-project responds to the objectives of the PD/A, that it will not have a negative environmental impact, that it is sustainable and replicable, that the local population participates in its planning and implementation, and that the sponsoring organisation has developed an adequate work plan which it has the capacity to implement” (World Bank, 1994a). The latter point, as the recorded interviews have shown, is a question of major contention.

Agreed procedures for approval require that each project considered eligible by the Technical Secretariat should be analysed by two specialists from a group of consultants especially selected for this job. This is the Project Analysis Group (or GAP, the Brazilian acronym), whose performance has been considered unsatisfactory by all those involved in the PD/A. The two reports provided by GAP consultants are then analysed by a Projects Approval Committee (CAP), comprising five members of the government and five from civil society. It takes four months for a project to pass through these procedures (as opposed to three months originally

⁴This is networked information; it is not possible, therefore, to give specific page numbers.

planned.) Écio Rodrigues, one of the CAP members, asserts that the consultants are not only responsible for delaying the process, but their reports are so weak that "more than half of the CAP decisions for granting have been in opposition to GAP opinion" (Rodrigues, 1997).

By July 1997, a total of 405 proposals had been submitted, totalling US\$ 60 million. Of this, US\$ 21,6 million was requested for projects in the Amazon area, and the rest for the Atlantic Rain Forest. From the requested value, US\$ 10,3 million was given for the 97 projects approved in the Amazon region. The geographical distribution of projects in the region is quite uneven. There is a concentration of projects in the States of Pará (20), Acre (15), Maranhão (14), and Rondônia (8). Together, they represent 59 per cent of all projects for the Amazon. According to the report of the PD/A mid-term review (Santilli *et al.*, 1997), the concentration of projects can probably be explained by a stronger presence of NGOs in these areas, or by a larger flux of information, as well as a larger number of training courses. This would have helped improve the quality of projects, hence enlarging their possibilities for approval.

It is possible, however, to speculate about other reasons. These four geographical areas probably concentrate the larger number of cases of violence against small rural producers. Not surprisingly, in these areas the rate of trade unionism within the rural labour is particularly high in relation to other Amazonian localities. Therefore, it is possible that the specific pattern of capitalist penetration in these regions, which led to a rapid process of land commoditisation, has resulted in the expansion of associations of mutual support, such as Rural Workers' Trade Unions. Furthermore, such problems may have given rise to a greater participation of the church in community life. Together, these memberships and influences may have reflected on local groups' chances of being granted a PD/A project. Moreover, it would also be possible to speculate about political linkages of former GTA members, which had a stronger influence in Pará, Acre, and Rondônia. It is however difficult to establish a division between personal interests and the benefits of a closer relationship. Nevertheless, no-one in Brazil was prepared to openly recognise political influences in the distribution of PD/A projects.

Despite geographical concentration, there is a unifying characteristic linking approved Demonstration Projects. A large majority of them, some 75 per cent (Loßack, 1997), involve cash income generation via processing and marketing of non-timber forest products. This shows that, in spite of its lack of a clear definition of sustainable development, the PD/A is promoting a type of development that stresses income generation. In other words, the PD/A is having a direct effect on the livelihoods of its beneficiaries.

To some extent, such a high percentage of projects dealing with income-generation was unexpected, as some of those involved in the formulation of the PD/A were counting on receiving more projects related to nature conservation, and less to income-generation. Both Dietmar Wenz (1997), representative of the German Development Bank (KfW), and Christopher Diewald (1997) the World Bank's task manager for the Pilot Programme, stated that the number of project proposals dealing with income was a surprise for their institutions. They were expecting proposals that would fit an environmental-managerial perspective. According to John Garrison II, the World Bank's NGOs liaison officer for Brazil, "the (PD/A) criteria are concerned with the (natural) environment. They should provide conditions for testing new technologies and organise production activities that must be extractive or environmentally innovative" (1997).

This discussion on the balance between nature conservation and social aims has also been a central theme among PD/A administrative staff, representatives of international organisations and of NGOs that were interviewed for this thesis. Their views are put forward in the final section of this chapter. However, to better understand the discussion that follows, it is necessary to place the Demonstration Projects into the context of the debates on three main issues: small-scale management of the environment, livelihood dimensions within the sustainable development debate, and the role of NGOs in promoting local development. Each will be analysed separately, in the following two sections.

Small-scale sustainable use of forest resources

Growing deforestation of tropical rain forests in the post War period has reached alarming rates. Among the various possible alternatives to reduce deforestation, small-scale sustainable forms of forest use have been notable for their potential environmental and social benefits. One promising area for research and action has been the use of forest resources for household consumption and marketing. Timber has historically been the most valuable forest product. But despite improvements in forest management techniques, it seems that there is no capacity to harvest large amounts of timber without changing the forest's energy and water flow, and carbon-storage capacity (Nepstad and Schwartzman, 1992). This backdrop has turned attention to the possibility of using non-timber forest products (NTFPs) while leaving the structure and the functions of the forest more intact than allowed by timber extraction.

During the 1980s, debates on NTFPs increased in a wide range of institutions and in many countries, but the path that this debate took in Brazil is particularly important for the comprehension of PD/A origins. Brazilian and North-American NGOs working with environmental conservation in Western Amazonia found in the livelihood strategies of local inhabitants a model of NTFPs use. These people (*caboclos*), descendants of the migrants that settled in the area during the Amazonian rubber boom (1870-1912), established a diversified use of forest resources for consumption and petty trade when rubber commerce declined. The historical events of this epoch, described in chapter 3, provide the basis for the argument put forward by Nugent in chapter 1. The author maintains that, during the period of economic decline that followed the rubber boom, there was an expansion of various forms of livelihood. The defence of this form of livelihood became a political movement.

By the beginning of the 1980s, the struggle of the rubber tappers in Southern Acre against large cattle ranchers and loggers' encroachment gained political momentum. "An alliance between the members of this movement and scientists

involved in studies of the rubber tappers", writes Mary Allegretti in a book edited by Anthony Anderson, "calls for the creation of so-called extractive reserves. The involvement of scientists from Brazil and abroad is transforming the concept of extractive reserves into a widely recognised development alternative and an increasing source of pressure on regional policy makers" (Allegretti, 1990). What happened at that time as a reconciliation of interests between the rubber tappers and so-called "scientists", which in fact were sociologists and anthropologists working in NGOs concerned with Amazonian issues. Amongst these NGOs were the Institute of Amazonian Studies (IEA), directed by Mary Allegretti, the North-American Environmental Defence Fund (EDF), represented in Brazil by Stephan Schwartzman, and the Ford Foundation, whose Brazilian representative was Anthony Anderson.

It is not a coincidence, therefore, that the creation of the GTA was proposed by Juan Carlos Rueda, a member of the IEA, during the meeting in which the PP-G7 was introduced to Brazilian NGOs in July 1991. Rueda, who became the first co-ordinator of the GTA, is now the national co-ordinator of the National Council of Rubber Tappers (CNS). In that meeting, he was backed by Stephan Schwartzman and Gilberto Azanha. Schwartzman had come from the United States especially for the occasion. Azanha, who works with Amerindian populations in an NGO called Indigenous Working Centre (CTI), was largely responsible for the creation of the *Frutos do Cerrado* project. Anthony Anderson has recently left the Ford Foundation, and is now working for the World Bank, being responsible for monitoring the Pilot Programme in order to extract lessons that could be applied by the Bank elsewhere. Therefore, the GTA, and hence the PD/A, was born under a strong influence of the political action and needs of Amazonian populations that depend on the extractive products, rubber, Brazil nuts, and fruits.

The debate on NTFPs, however, faced a number of consistent critics based on the economic feasibility of the extractive activity. Homma, for example, considers that "extraction as an economic activity becomes unfeasible through the domestication of forest products, and through the development of synthetic substitutes for the product" (1992: 29). Browder adds that extraction has only proved to be "feasible" under government subsidies or when there are "high world market prices for specific

rain forest commodities" (1992: 35). A number of authors have considered that, if the conditions of NTFP exploitation deteriorates, extractors can themselves become agents of forest destruction (Anderson, 1992; Padoch, 1992; Browder, 1992). This fate is also possible because of the fragile economic conditions upon which the activity is based. Therefore, the logic of NTFPs is seen by some as having more to do with welfare maintenance than as a feasible system of forest use. Nepstad, for example, points out that "until society begins to reward landholders for maintaining their tropical forests, the fate of these ecosystems will depend on their value in the market place" (1992: 143). The author concludes that "in its current form, non-market values of NTFP extraction in Amazonia appear more important than market values" (1992:144).

The welfarist approach present in the maintenance of NTFP extraction, however, cannot be applied to the whole rural population of the Amazon. The population involved in rubber production, therefore extraction, was of only 68,000 families in 1980 (Allegretti, 1990). This is a very small fraction of the total population in the Legal Amazon (18.746.274), as well as of its total rural population (7.300.466), according to the 1996 Brazilian mid-term census. In addition, as noted by Anderson, the focus on NTFPs appears to hide the fact that "few rural populations in Amazonia depend exclusively on forest extraction for their survival; most rely to a varying degree on the combination of agriculture and extraction" (1992: 75). Therefore, the adequate approach to deal with the actual livelihood conditions of Amazonian rural populations seems to be the combination of traditional agriculture with new forms of natural resource management, which could include extraction and marketing of NTFPs.

If this is true, then the current approach of the PD/A seems to be misguided. As Fatheuer (1997) argues, "the PD/A is too concentrated on extractivism, and neglects agriculture. However, most of the beneficiaries of the project are small rural producers, not extractivists." The logic of marketing a few extractive products, which underlies most of the PD/A projects that deal with income generation, and specifically the Frutos do Cerrado project, could turn out to be detrimental rather than developmental. As Leroy (1997) points out, "diversification of production is

fundamental for the attainment for the household reproduction needs. Concentration of activities in a few products goes against the logic and needs of small producers."

In the beginning of 1998, the Pilot Programme together with the World Bank, sponsored the publication of a booklet focusing on the constraints and opportunities for agroforestry systems in the Amazon. Written by five non-Brazilian specialists in natural resources management, the publication suggests that the PP-G7, and particularly the PD/A, is to make a firm move towards agroforestry as a substitute for simple extraction strategies. The major argument presented is that agroforestry is "one of the most 'environmentally-friendly ways to develop rural areas of the humid tropics." In addition, the text recognises that "although some observers are sceptical that agroforestry will have much impact in alleviating poverty or slowing deforestation in the region, it can certainly help wean farmers from production systems that are in an ecological tailspin" (Smith *et al.*, 1998: 1).

Therefore, the change of focus to agroforestry systems represents an improvement in the environmental management logic behind the PP-G7 and the PD/A, and a more realistic approach in terms of economic feasibility. It changes the implicit welfarist approach of NTFPs to a more realistic market-oriented strategy. In this regard, Smith *et al.* point out that "agroforestry is particularly suited to small farms and has the potential to help raise living standards for many rural inhabitants. It can be seen as a risk avoidance strategy that diversifies sources of income for farmers" (1998: 4). The authors, however, recognise and briefly analyse the extreme difficulties faced by small producers in terms of market penetration and control; marketing strategies; agricultural and industrial development; community organisation; access to adequate credit and extension services; bureaucratic and political barriers; and security and control over land ownership. Nevertheless, the document espouses agroforestry, mainly the commercially oriented type, as a system that could be applied for the Amazon region as a whole, with environmental, social and economic benefits.

By expanding the range of items under cultivation and marketing, agroforestry appears to match the need for diversification in production stressed by Leroy (1997). It is also closer to the actual reality of rural populations in the Amazon, was

pointed by Fatheuer (1997). However, this initiative of the Pilot Programme is confined to the discussion of a management technique. It does not provide theoretical and practical links to broad issues concerning strategies for the promotion of rural development and poverty alleviation. These questions are tackled in the next section, which examines the dimensions of livelihoods in the debate on sustainability.

The sustainable dimension of livelihoods

While the Pilot Programme was in gestation, research institutions together with some international organisations that support the PP-G7 were redefining the basis of a new strategy for development. Central to this new agenda was the aim of poverty alleviation. In areas where poor people depend on the use of natural resources, the focus was on creating conditions to avoid the destruction of the resource base upon which poor peoples' livelihoods depend. In other words, the rural poor should be assisted by strategies that reconcile better living standards with sustainable use of natural resources. The concept of sustainable development adopted in this thesis (presented in chapter 2), matches this aim by reconciling the productive use of natural resources for economic growth with livelihood strengthening. The background of this formulation, and its practical implications, deserve a closer analysis.

As outlined in chapter 2, modernisation policies applied to industrial and agricultural development led to widespread environmental degradation and growing poverty. Until the 1970s, the analysis of poverty was centred mainly on its quantitative dimensions. In-depth analyses of factors that are not immediately quantifiable, allow for a broad, qualitative view that complements the quantitative, classical approach. The measurement of poverty levels was then balanced by the investigation of the stages of poverty, the distribution of poverty amongst the poor, and the strategies of the poor for coping with their disadvantage. The shift to a qualitative inquiry into poverty was based on the belief that the "economic view" tends to encourage the formulation of a bureaucratic and urban-biased judgement of poverty (Chambers, 1983).

This is reflected in statistical indicators based on income or expenditure, which permits the creation of "poverty lines". Financial organisations tend to approach the issue of poverty as the inability to attain a minimum standard of living. The World Bank, for example, uses a living-standards framework to measure living conditions, and to identify its minimum "acceptable" level. The urban-bias dimension of this account resides in the fact that the bureaucratic way of approaching poverty tends to reflect the view of an urban-based staff. The point here is that the view of poverty through urban lenses does not capture the dimension of poverty as it is seen by the very poor. The economist plus urban-biased approach to poverty may be useful to establish a statistically tangible parameter, which is useful for planning purposes. However, it does not take into full account issues like common property resources, seasonal variations in consumption, power, and decision-making (Chambers, 1983; Jodha, 1988). Official interventions to combat poverty, argues Chambers, have a built-in urban-bias, which is the reflection of the way urban élites understand poverty.

Along the same line of thinking, Sen developed his "entitlement" (1983) and "capability" approaches (1984, 1987). In "entitlement" theory, the analysis of poverty transcends the economic view based on the extent to which resources are limited. It then focuses on the limited or constrained access to resources by individuals or groups. In the "capability" approach, income, wealth, and utility are economic means to achieve economic and non-economic ends. That is, these economic values (income, wealth and utility) represent a tool with which to achieve the fullest possible realisation of individuals' or a community's potential in the sense of what they are capable of doing and being. In other words, human's capability refers to the possible accomplishment of human freedom, which is understood in its positive dimension as presented in the political philosophy of John Rawls. Therefore, the concept of income gains new contours: it not only refers to cash income, but also includes people's assets as a mean of developing a livelihood in its economic and non-economic dimensions.

Capabilities are therefore defined as the means for achieving economic and non-economic ends. It thus refers to the establishment and exercise of rights over material, moral or other personal forms of support needed to sustain a livelihood.

The exercise of such means is influenced by personal and social attributes (membership of institutions, support networks, etc.) and by economic attributes (i.e. entitlements) relating to resources and income flows. A person's capability will be directly and immediately affected by the possibilities of access to basic welfare conditions, such as education, health care, social services, etc. On a broader level, individual capabilities are affected by the way in which they are inserted in and treated by institutions. Poverty and deprivation are thus conceived as consisting of a failure to gain access to certain basic human capabilities important to a person's well-being. Poverty therefore does not only reflect lack of economic assets, but the absence of material and social conditions to overcome it.

A further theoretical development was provided when Chambers and Conway (1992) linked the capability concept to the notion of sustainable development at the household level. Three fundamental concepts are at play: capability, equity, and sustainability. Capability is taken from Sen, that is, it is understood as the life perspectives a person they can actually achieve by the exercise of his or her freedom. Greater equity is interpreted as being a movement towards a less unequal distribution of assets, capabilities and opportunities. Equity, in particular, involves the improvement of the conditions enjoyed by the most deprived. Sustainability is considered as the ability to maintain and improve livelihoods while maintaining or enhancing local and global assets and capabilities on which the livelihoods depend.

The term asset is used in this context to refer to tangible and intangible assets. Tangible assets are divided into personal and physical. Personal assets are education, health, training, and capabilities. Physical assets are housing, land, stores, savings, and credit schemes. Intangible assets refer to claims and access. Livelihood, as defined by the World Commission on Environment and Development (WCED) consists of "adequate stocks and flows of food and cash to meet basic needs" (1987: 3). Chambers and Conway therefore combined these concepts to present a definition of sustainable livelihoods:

"A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for means of living. A livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term."

Chambers and Conway (1992: 7)

The concept of sustainable livelihoods is particularly relevant because it reunifies quantitative and qualitative dimensions of poverty and relates them to the local level. In this sense, this definition complements that one on sustainable development, formulated by Hall (presented in chapter 2). Hall talks in terms of the "productive use of natural resources for economic growth and *livelihood strengthening*" (emphasis added). If sustainable development is a concept with meaning and relevance, then it should guarantee that livelihoods would be themselves sustainable. If the strength of a livelihood presupposes that it achieves sustainable standards, than an integral form of sustainable development is that contributes to the sustainability of livelihoods. Moreover, there is no logic in pursuing sustainable forms of using the natural environment, through agroforestry, for example, if the livelihoods of people that depend on this system are breaking down. The social dimension of sustainability, therefore, is that which allows for sustainable livelihood development. The question, however, is how to translate sustainable development of livelihoods into policy and practice.

In 1990, the same year that the leaders of the G-7 offered Brazil the support that resulted in the PP-G7, the World Bank dedicated its annual report to the theme of poverty. In that publication, the Bank states that "sustainable poverty reduction is the overarching objective of the World Bank" (1990: 15). Additionally, it suggests that poverty reduction can be obtained through "broadly based economic growth, to generate efficient income-earning opportunities for the poor, and improved access to education, health care, and other social services, so that the poor can take advantage of these opportunities" (1990: 16). Also at the beginning of the 1990s, institutions of the United Nations issued reports that placed stronger importance on social aspects of development. Together, they form a set of prescriptions that relate poverty alleviation to the conception of sustainable livelihoods. These prescriptions

were summarised by Lipton and Maxwell in what they call a new "statement of principles". Box 4.4 presents a summary of these principles.

Box 4.4 - Poverty and development: a statement of principles

1. *To escape from poverty, poor men and women seek secure and sustainable livelihoods for themselves and their families, resilient in the external shocks and with sufficient buffers to guard against destitution.*

2. *Helping poor people to achieve the secure livelihoods they seek is a prime aim of development policy.*

3. *The State has a key, enabling role to play in poverty reduction: by generating information about the causes, extent and severity of poverty; by providing a peaceful and remunerative environment in which poor people and poor communities can pursue their livelihoods strategies; by ensuring that the poor have access to physical, social and economic infrastructure; by providing a safety net beneath standards of consumption and social welfare; and, in general, through good governance.*

4. *The first requirement of a poverty reduction strategy is labour-intensive economic growth, designed specifically to increase the assets, employment, and incomes of the poor. Releasing the potential skills and entrepreneurship of the poor can be the fastest route to growth (though the reverse is not necessarily true).*

5. *The second requirement is greater access to social services, and must normally be ensured to the poor by the State, in competition with the private and voluntary sectors. Provision of basic health and full primary education for all is critically important if the poor people are to realise their potential and achieve tolerable security.*

6. *The third requirement is to put in place efficient and effective safety-nets, to guard against sudden shocks, guarantee food security and prevent destitution. Responsibility for this may be divided among individuals, communities, firms, voluntary agencies, and the State.*

7. *Wherever subsidies or welfare transfers are needed, for vulnerable groups or in resource-poor areas, they should be target on the poor. Cost, information and incentive problems usually impede direct means-testing. Self-targeting, or targeting on characteristics of the poor (e.g. location), are alternatives.*

8. *National poverty alleviation strategies have much better prospects where the international environment is conducive to appropriate, labour-intensive growth. This means in particular an appropriate trading environment, more debt relief for low-income countries and better targeted aid programmes.*

9. *Aid can do most to reduce poverty if it is directed to countries which have (a) large concentration of poverty, and (b) appropriate policies for reducing it. A combination of balance-of-payments support, sector aid, and projects will be appropriate.*

10. *Poverty reduction strategies must be sustainable, not only fiscally, politically and administratively, but also environmentally, in the sense that meeting the needs of the present does not compromise the ability of future generations to meet their own needs.*

Source: Lipton and Maxwell (1992: 7), based on World Bank (1990, 1991a, b), UNDP (1990), UN (1991)

Based on these "statements of principles", Lipton and Maxwell discuss the six main factors that, they argue, can be extracted from these international organisations' approach. An initial point is a new role for the State (items 3, 5 and 6), which should withdraw from direct intervention in production, but retain support for productive sectors and be brought back in social spheres like health, education, and environmental protection. Within these areas, the role of non-State bodies, like NGOs, should be fostered to reach the poor more efficiently. NGOs are believed to be able to identify, secure participation among, and serve poor people. It follows that States should be aware of possible external influences (points 8 and 9), like technology choices that are not accessible by the poor; trade agreements and practices that discriminate against small-scale production and have negative impacts on it; and the handling of national debt in such a way that jeopardises reproductive needs of the poor.

Another important element of the "principles" refers to the conditions of production for both rural and urban sectors (point 4). Within the rural one, land redistribution, suitable credit systems, targeted agricultural research, anti-downward spiral poverty-environmental degradation measures, and a concern not to make independent efforts cancel each other out, are the core issues. In the urban environment, measures should stimulate labour-intensive work by cutting protection, and supporting the informal sector against formal sector bias. The emphasis on "releasing the potential skills and entrepreneurship of the poor" resembles the liberal debate presented in chapter 2. Moreover, the international organisations prescribe improved social services and the application of safety-nets (points 3 and 6) to improve the quality of the labour supply (human development) and guarantee against shocks. These nets are to be established by the State, NGOs, families, communities, individuals, and firms. Finally, the set of measures also indicates a need for the sustainable use of the environment (point 10). However, it takes on the quite generic definition of the 1987 report "Our Common Future".

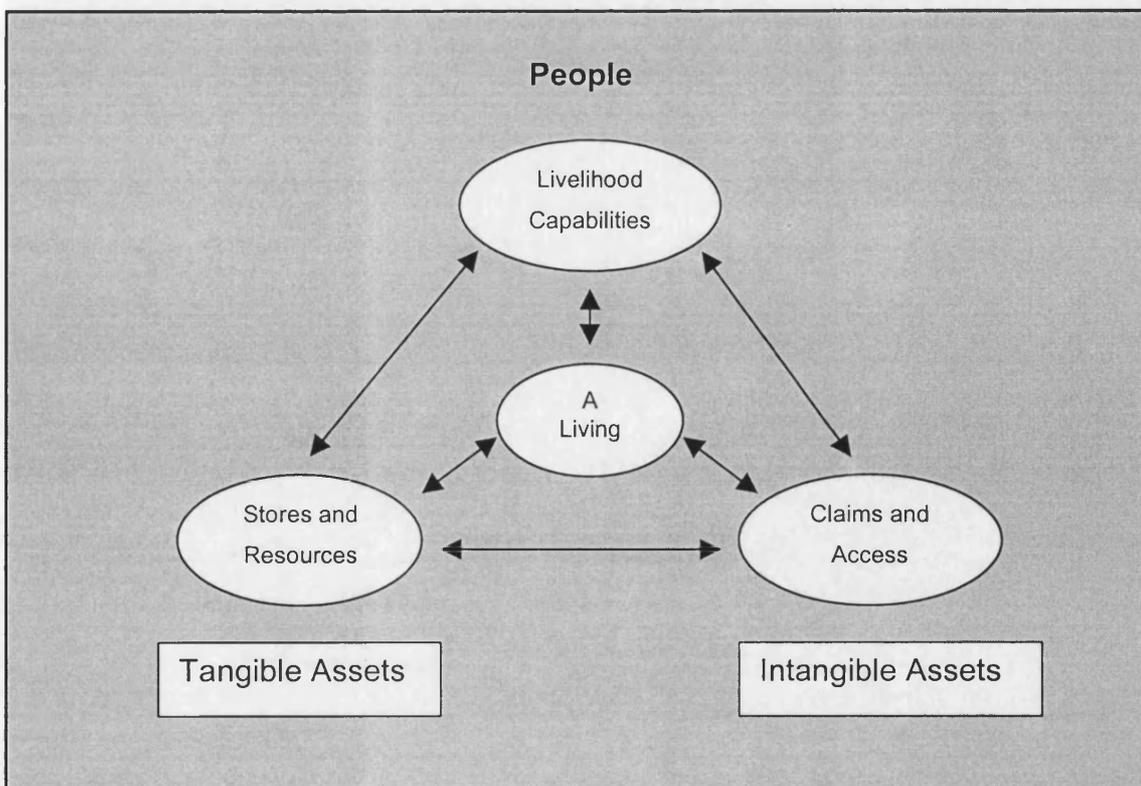
While the international organisations' position represents a development from narrow past economically-centred approaches, it has not yet escaped criticism. Chambers (1995), for example, shares the institution's concern with poverty, but points out that for the World Bank poverty should be primarily alleviated via

economic growth. In other words, income growth is the end, whilst social development is an accessory to economic growth, and not an end in itself. The author considers that:

"Income matters, but so too other aspects of well-being and the quality of life - health, security, self-respect, justice, access to goods and services, family and social life, ceremonies and celebrations, creativity, the pleasures of place, season and time of the day, fun, spiritual experience, and love."
Chambers (1995: 29)

To maximise their life potential, poor people adopt what Chambers (1995) calls a "fox strategy", i.e. livelihood strategies that are complex and diverse, and tend to minimise their vulnerability. In other words, reduce their exposure to shocks, stress and risk, and their defencelessness in face of circumstances that can represent a damaging loss. The graphical representation of the components and flows of a livelihood, as suggested by Chambers, is presented in figure 4.5.

Figure 4.5 - Components and flows in a livelihood



Source: Chambers (1995: 25)

Chambers considers that the core of a livelihood can be stated in terms of a living, and that people, tangible and intangible assets contribute to it. A household can establish command over assets. Tangible assets are stores and resources. Examples of stores are food, real value, cash savings, and credit schemes. Resources can be represented by land, water, trees, livestock, farm equipment, tools, and domestic utensils. As an intangible asset, claims refer to material, moral, or other practical support. Access means the actual opportunity to use a resource, store or service, or to obtain information, material, technology, employment, food or income.

What Chambers is proposing through the focus on livelihoods is that development efforts should understand that poor people establish life strategies in which cash income is an important component of their living, but may not be the most essential in given circumstances. Additionally, these "fox strategies", as a consequence of their very diversity, are more long-term than the strategies of those who are well-off. This is necessary to reduce the likelihood that sudden events could seriously increase their vulnerability by affecting a substantial part of their livelihoods.

Put into the theoretical framework of this thesis, the new dimension of the debate on poverty represents a move in the direction of an agent-focused approach. It also reflects the search for a new research and policy agenda, which could give greater emphasis to the importance of human agency in the process of development. This is one that recognises the capacity of individuals to influence the course of events, despite the recognition that there are evident influences of economic, social, and political structures. This new focus on agency reflects a break with the approaches that have dominated both liberal and Marxist-informed narratives to economic but also social problems. The livelihood approach, for example, recognises the pressures acting on small rural producers; pressures that in the neo-Marxist vein would be interpreted as subsuming the peasantry.

However, the assumption that a livelihood can be sustainable implies that it can gather the means necessary to find some autonomy in relation to the deterministic subsumption foreseen in the Marxist-based literature. Specifically in terms of the

Brazilian Amazon, the "bowdlerised" economy created by merchant capital relations, noted by Nugent (chapter 1), and the "complexity of livelihood" recognised by Cleary (chapter 2), illustrate how livelihood dimensions have entered the literature on Amazonian social and economic relations. Despite the focus on livelihoods, the perception of sustainability within them is not clear for authors. In fact, a general lack of clarity, not to say real confusion, takes place not only in the academic debate, but also in official initiatives, as is the case of the PP-G7. This is the theme of the next section.

The PD/A and the sustainable development discussion

This section examines how the Demonstration Projects component (PD/A) relates to the debate on sustainable development, to the approach on sustainable livelihoods, and to the urban dimension on peoples' livelihoods. This discussion is based on official documents of the programme, and on recorded interviews, conducted in Brasilia during fieldwork, with representatives of the PD/A bureaucracy and of international organisations, and with members of the NGOs involved in the project. As all the interviews took place between January and February 1997, the references and quotations relative to them will not include the year. The discussion here will be contrasted in the following chapters with fieldwork data from the *Frutos do Cerrado* project, the case study of this thesis.

Before entering the analysis it is necessary to remember the stated aims of the PP-G7, and the PD/A. The overall objective of the Pilot Programme is "to maximise the environmental benefits of Brazil's rain forest consistent with Brazil's development goals, through implementation of a sustainable development approach that will contribute to a continuing reduction of the rate of deforestation" (World Bank, 1995). Demonstration Projects, as part of the Pilot Programme, must pursue this broad aim by implementing activities at the community-level. This is clear in the first specific aim of the PD/A, which states that approved projects should "stimulate the development, adaptation or dissemination of environmentally, economically, and socially sustainable systems of natural resource management and conservation by local communities" (World Bank, 1994: 4).

However, despite the emphasis on sustainability, neither the Pilot Programme nor the PD/A documentation provide an explanation of the conditions under which those "sustainable systems" would be achieved. There is also no definition yet of the criteria against which such the sustainability should be measured. Considering that the PP-G7 was formulated with the assistance of the same international organisations that proposed the new "statement of principles" presented above in box 4.4, it is surprising that such a definition was not provided. A clue to this may be the fact that members of international organisations (Inter-Orgs) involved in the PD/A would admit off the record that officials of the Brazilian government lack a theoretical basis on this subject. It may also reflect that fact that, with these organisations, the focus on labour-intensive growth becomes an imperative that overshadows related aims.

The latter point emerges clearly from the opinions given by Cristopher Diewald, the World Bank task manager for the PD/A, according to whom "the Bank is not looking now at the possibility of undermining livelihoods. The objective is to find alternative uses of the forest that allow nature conservation and income generation". The same view is shared within the Bank by its NGOs liaison officer, John Garrison II, and in the German KfW by Dietmar Wenz, its representative. According to Wenz, before the PD/A had started, the KfW sponsored a study on the possible negative impacts upon livelihoods that the project could bring about. The study, says Wenz, concluded that possible negative impacts would not be as substantive as in the case of a large, top-down project and, in any case, the fact the projects were presented by the beneficiaries would minimise risks. This argument was also used by government officials and Inter-Orgs representatives, when asked if the projects' focus on income could undermine other aspects of the beneficiaries' life.

Income generating projects, according to Inter-Orgs personnel, should have two characteristics. They should be "elitist", in the sense that they must represent an innovation, which would require reasonable medium to large-scale projects, implying that beneficiaries are sufficiently prepared to assume the project demands (Wenz). Additionally, beneficiaries should have a "hard-nosed approach to income generation" (Diewald). Members of Inter-Orgs, however, manifested concerns about

the economic feasibility of projects, since economic aspects of them had not been properly addressed before approval was given (Wenz, Diewald). Problems in this area refer, for example to the lack of working-capital, cash-flow analysis, and marketing strategy. At the end, Diewald recognises, all projects will increase the participants' vulnerability "because they will be exposed to market fluctuations". In his opinion, the solution to this is to bring the activity from the stage of a project to a business plan.

Central to the economic fragility of projects, all the interviewees but one agreed, has been the poor performance of the consultants hired by the PD/A to analyse the projects, prior to and during implementation. It is expected that "many projects will fail in the economics" (Diewald), and that "after two years the economic sustainability will not be proved" (Wenz). Overall, the risk of failure within PD/A projects is considered to be very high (Loßack). The only interviewee who suggested that "all projects are economically feasible" is Écio Rodrigues, member of the GTA in the Executive Commission of the PD/A, and also member of an NGO that has been granted a project.

A different, more social view of the PD/A has been expressed by NGOs members. Jorg Zimmermann, the UNICEF representative that helped formulate the PD/A criteria, and the two representatives of a leading Brazilian NGO called FASE -- Jean-Pierre Leroy and Thomas Fatheuer --, stressed that "social aspects" have been overlooked in the PD/A conception. Zimmermann, for example, argues that the focus on environment and income was imposed by the donors, but it is inadequate for two main reasons. Firstly, it does not take into full account "social needs" that are the primary concerns of beneficiaries, such as education and health. Secondly, the "economic logic of the PD/A is unrealistic for economic, ecological and social reasons" (Zimmermann). In other words, "social needs", as perceived by these two NGO representatives, could be translated as a welfarist-type project. One should not consider that these interviewees are calling for the PD/A to be transformed into a welfare-type assistance, but that concerns on people's welfare should be more carefully analysed within the PD/A.

The Demonstration Projects' component economic defect, argues Zimmermann, resides in the overwhelming difficulties associated with producing and marketing NTFPs that are, in fact, new products in the market place. Leroy adds that all those involved in the PD/A are ignorant on every aspect involved in the commercialisation of forest products. This is reflected in the fact that all projects that deal with commercialisation of production (and the majority of projects do) were approved without a study of economic feasibility. There is also an incongruity between the economic logic that suggests specialisation of production, and the diversification needed for small-farmers to prevent shocks (Zimmermann; Leroy). Additionally, there is an ecological inconsistency. The time limit (three years) is too short to match the production cycle needed for the natural environment to recover. An agroforestry system, suggests Zimmermann, would take twelve years to complete the cycle of production and regeneration. Therefore, he suggests, the ecological sustainability of the PD/A will not be proved.

Social limitations to the economic orientation of the PD/A are no less worrying. In this subject the donors are blamed for being "insensitive to social needs" (Zimmermann), and not knowing "how to work with Amazonian populations" (Leroy). There is an agreement between Inter-Orgs and NGOs members about the overall lack of managerial capacity among small producers and NGOs to implement PD/A projects. However, the actual gap in terms of knowledge can be too wide if Zimmermann's opinion is valid that "people do not know how to deal with money". If it is true, then the elitist plus hard-nosed income-generating approach of the PD/A could represent an overstretching of responsibility for the beneficiaries.

This is not to say that the stress on income activities has been rejected by NGOs. According to Leroy, "the focus on income is necessary, but this should come after measures that would match householders' reproduction needs". Fatheuer adds that the PD/A lacks a discussion of the role of small production in the Amazon. "It would make sense if the PD/A supported small cattle ranching", says Fatheuer. "Questions such as the subordination of the peasantry", adds Zimmermann, "have not been considered . . . but it is certain that the PD/A will lead to differentiation of the peasantry", he concludes. "If the PD/A does not help to create marketing

mechanisms for more sustainable products", points out Fatheuer, "the result will be the creation of an environmentally correct peasantry".

NGOs view of social dimensions in development projects, says Garrison II, is marked by their left wing tradition. Influenced by Marxist thinking, Brazilian NGOs in general have been reluctant to engage in activities that are income-generating, and therefore deemed' capitalist. They have concentrated their efforts on the "process of transition", that is, on the activities that can provide buffers for the peasantry to face encroachment from capitalist relations of production. This is manifested in the promotion of activities that lead to empowerment, for example. Garrison II, however, differentiates between NGOs from the Amazon and from the "South" of Brazil (i.e. non-Amazonian ones). The organisations from the Amazon are, in his opinion, more diverse in nature and pragmatic in action. The others have been more ideological.

This vision is confirmed by Fábio Vaz de Lima, the GTA national co-ordinator. According to him, "a great deal of GTA membership was due to the possibilities of getting a grant". Vaz de Lima considers that "it was the big sin of the GTA", and that the organisation should now change its profile to work as a facilitator between local NGOs and the federal public sphere. In relation to this point, however, the GTA co-ordinator also manifests a pragmatic view by saying that "it is easier to discuss changes in policies towards the Amazon with representatives of the World Bank than with members of the Brazilian government". Vaz de Lima still considers that Amazonian NGOs working with environmental protection have historically faced resistance from left-wing parties, and the trade union movements linked to them. This is because they understand environmental conservation measures as going against the interests of the peasantry in the process of transition. Additionally, Vaz de Lima ponders, left-wing political action has been concentrated in the urban areas of the Amazon.

These considerations on the PD/A aims and problems, however, reveal an inadequate discussion about people's livelihoods. If a sustainable livelihoods approach were to be taken, then economic as well as other aspects that make up a living would be naturally considered in a framework that would, at least, try to reconcile all of these different dimensions. That is not the case with the PD/A. Leroy

and Fatheuer mentioned the need for an approach to integrate the PD/A into public policies and other PP-G7 programmes. Zimmermann called for a rural development strategy. However necessary, these recommendations do not necessarily imply a sustainable livelihoods approach.

The PD/A lack of concern with people's total livelihoods' dimensions is reflected on the low importance given to beneficiaries' urban relations in PD/A projects. During the fieldwork interviews, questions about the urban activities of rural producers were considered by the PD/A bureaucracy and the Inter-Orgs members not to be really relevant for the implementation of the project as a whole. As Zimmermann says, "this question was not really considered" when the programme was formulated. However, he stresses, the PD/A has the unspoken aim of trying to counter rural to urban migration.

The general view among all but one of the interviewees is that the "urban dimension" is not a central question, and is subsumed within the dynamics of rural production. Dietmar Wenz, for example, interprets the rural-urban dimension as a question to be tackled at the national level. He suggests that the PP-G7 Natural Resources Policy Programme would be adequate for this discussion. In addition, Wenz considers that "there should not be projects in urban areas because of the lack of funds". There are some possible explanations to this lack of importance attributed to urban dimensions.

Firstly, one should consider that the central aim of the PD/A is to promote the conservation and "sustainable" management of the Brazilian rain forest. However, the project does not relate these management strategies to the livelihood strategies of those who are supposed to manage the environment. Secondly, it shows a lack of perception of the complexity of livelihoods in the Amazon; in this case, the beneficiaries of the project are assumed to be rural inhabitants committed to rural production. This may be the reality of extractivists in Western Amazonia, but does not reflect the reality of the majority of the Amazon rural population. Thirdly, the low importance given to urban dimension may indicate that Brazilian NGOs would tend to see rural producers as the peasantry described by Shanin (see chapter 1). In

fact, the extractivists of Amazonia would fit in this social category much more easily than would a rural producer in Eastern Amazonia.

Vaz de Lima was the only interviewee to recognise such urban dimensions. He mentioned that the GTA has "made a theoretical exercise of imagining a project directed to urban women. It would be an association of mothers that would process Brazil nuts . . . but for this type of activity it is difficult to get resources from the PD/A, only from the (sub-programme of) Environmental Education."

This thesis analyses just one project that has been funded by the PD/A. The urban dimension in the lives of this project's beneficiaries will be analysed in chapters 6, 7 and 8. However, in order to expand the possibility of making generalisations from the case study findings, the next section briefly analyses the rate of urbanisation in all the municipalities in which PD/A projects are located.

Rates of urbanisation in PD/A project municipalities

This section provides a concise examination of the rates of urbanisation in municipalities in which PD/A projects have been implemented. The analysis takes into account the list of approved projects as of February 1997. The aim here is to demonstrate the relative importance of urbanisation rates in relation to the areas in which PD/A projects have been created and developed.

Table 4.6 presents data for total rural and urban populations in municipalities in which there are PD/A projects. The analysis of the population shows that the majority of PD/A projects are located in municipalities in which the urban population is larger than the rural. The rural population of PD/A municipalities represents a larger share only in the case of the States of Amazonas (68,0%), Roraima (66,0%), and Tocantins (78,6%). On average, the sum of the populations of PD/A municipalities indicates that the urban population (69,6%) is more than twice the rural (30,4%).

Table 4.6 - Rural and urban populations in PD/A municipalities, 1996; and number of municipalities with PD/A projects, 1997

State	Population in Municipalities with PD/A Projects in Development (+)				Municipalities with PD/A Projects	
	Rural (N)	% Rural	Urban (N)	% Urban	N° Munic. With PD/A Projects	N° Munic. With Larger Urban Population
Acre (*)	85,977	25,5	264,894	75,5	9	6
Amazonas	23,072	68,0	10,846	32,0	3	0
Amapá (**)	19,788	4,5	231,078	95,5	2	2
Roraima	5,973	66,0	3,082	54,0	1	0
Pará (**)	267,954	27,1	469,934	72,9	9	5
Rondônia	154,602	25,6	449,807	74,4	8	6
Mato Grosso (*)	39,965	37,3	67,207	62,7	3	2
Maranhão	226,131	43,1	298,800	56,9	11	3
Tocantins	7,888	78,6	2,148	21,4	2	0
Total	831,350	30,4	1,797,796	69,6	48	24

Sources: IBGE (1996, networked data); Pilot Programme (1997)

(+) Excludes municipalities in which the PD/A beneficiaries are Amerindians.

(*) Excludes the projects PD/A numbers 149 (AC) and 107 (MT) for lack of information on the name of the municipalities.

(**) Excludes the municipalities of Pedra Branca do Amapari (AP) and Placas (PA) for lack of census data.

Data in table 4.6, however, are distorted by the fact that in some cases the project can be situated in a municipality with a very large urban population, and this distorts the analysis because the total number of projects per state is reduced. The second part of this table helps to understand this and balance the analysis. The last two columns on the right show the number of municipalities with a PD/A project. The case of Maranhão is indicative of the distortion in the percentages. The size of urban population in municipalities with PD/A projects in Maranhão is 298,800, comprising 56,9 per cent of the total population in PD/A localities. However, in that state there are projects in 11 municipalities, and only 3 of them have an urban population larger than the rural. This distortion is caused by the fact that two projects are located in Imperatriz, one of the largest cities in that state.

Nevertheless, the analysis of the number of municipalities with PD/A projects, and in which the urban population is larger, shows the importance of the urban dimension within the PD/A. It is shown that, of a total of 48 projects analysed, half (24) had urban populations larger than the rural. However, one should consider that the distribution of rural and urban populations in a given municipality is just one indicator of possible rural-urban linkages. Because some localities in the Amazon

may be quite isolated from other larger urban areas, these quite tiny settlements may perform the functions of quite sizeable urban centres (Sawyer, 1989).

Together, the percentage of population living in urban areas and the number of projects in municipality with larger urban populations, endorse the need for a careful examination of urban linkages in relation to PD/A projects. The next two chapters examine in detail the rural-urban linkages found in the municipality of Carolina, state of Maranhão, where one of the PD/A projects called *Frutos do Cerrado* has been developed.

Conclusion

This chapter has examined the origins of the Pilot Programme. It has shown how growing rates of deforestation in the Brazilian Amazon drew international attention, and resulted in the offer of help from foreign governments and international organisations. This resulted in the formulation of the PP-G7, whose constituent projects, characteristics, and objectives were summarised. The second and third sections of this chapter analysed in detail the structure and aims of the Demonstration Projects, the PP-G7 component directed at small-scale, pilot activities carried out by local communities.

It has been shown how the PP-G7 and the PD/A are marked by a concern for environmental conservation. Despite references to "sustainable development", the meaning of the term has not been spelled out in the PP-G7. In the main, both programme and project do not take into full account the livelihood strategies of those responsible for managing the environment. In other words, the PD/A does not focus on the livelihoods of those who are the beneficiaries of the project. Theoretical debates on people's livelihoods have been explored, and the concept of sustainable livelihoods introduced as an important tool that provides the bridge between a general notion of sustainability and individuals.

Analysis of key informants' interviews carried out during fieldwork reveals a polarisation of concerns between international organisation representatives, and

members of NGOs. Whilst the former group understands that the PD/A should support pilot, labour-intensive and income-generating activities executed by the most articulate communities in Amazonia, the latter advocates a change towards an welfarist approach, and the inclusion of linkages to national level public policies. A third position is that of the Brazilian official bureaucracy, whose main concerns are with administrative and technical matters. In general, the debate about the economic feasibility of PD/A projects has appeared as the central concern of all those interviewed.

There is a general lack of concern among interviewees with the possible influences of urban dimensions in people's livelihoods, and hence on project performance. This has been interpreted as a possible consequence of three main factors. One is the PP-G7 orientation towards nature conservation as an issue to some extent unarticulated with the life of those who manage the environment. A second reason could be the overlooking of rates of urbanisation in the Amazon. Finally, it could also reflect a view of the peasantry as being primarily oriented towards family-based rural production. If so, rural producers that benefit from the PD/A would be taken as a peasantry in the way the term was described by Shanin.

The chapter concluded with an analysis of the rates of urbanisation in municipalities in which PD/A projects have been developed. It has been shown that, contrary to the expectations of those involved in the project's conception, urban population rates are very high in PD/A municipalities for the majority of the states in which the project has been implemented. A detailed analysis of the characteristics of urban dimensions in a PD/A project is provided in the next two chapters. These will consider the extent to which the urban dimension in rural households that have benefited from the PD/A could represent a drawback for achieving project objectives.

CHAPTER 5 - DEVELOPMENT AND RURAL-URBAN LINKAGES IN CAROLINA

This chapter analyses the social and economic dimensions of the area in which the case study of this thesis is located. It first describes both the state of Maranhão and the region of Carolina municipality, where the project *Frutos do Cerrado* is located. The development of Carolina is examined in historical perspective, and the major social, economic and political forces at play at the local level stressed in the light of the theory discussed earlier in this thesis.

The text describes how economy activities of the natural social formation were replaced by cattle-ranching, and how the geographical isolation allowed for some capitalisation among the first local inhabitants. Once geographical isolation was overcome by river and air transport, the town experienced its boom period, and turned into a major regional trading centre. Commerce and some industry flourished, while land use was kept for extensive cattle-ranching.

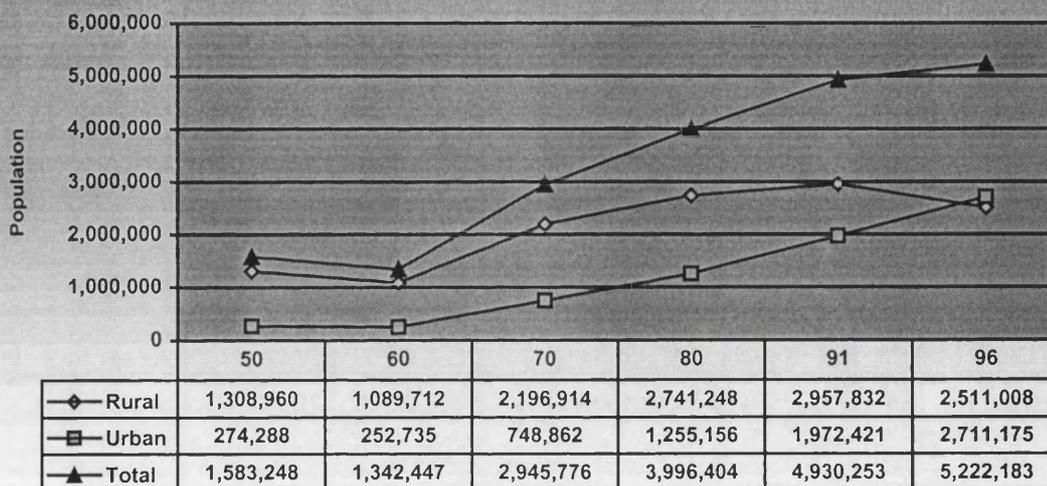
However, penetration of capitalism in the Amazon sidelined rather than developed Carolina's economy. The town fell into economic depression, and a process of concentration of land ownership began. A number of economic indicators are analysed, taking as a base the production levels of the heyday experienced during the 1950s. This shows how the local economy today revolves around its own subsistence, and how the state plays a key role in offering employment and turning a blind eye to the informal economy.

Special attention is dedicated to economic, social and political aspects of rural-urban linkages. This discussion, therefore, relates to the various theoretical perspectives discussed in chapters 1 and 2, which are related to the discussion in the last section of this chapter.

Development and urbanisation in Maranhão

The state of Maranhão has always been identified as one of the few within the Brazilian Federation in which the rural population is larger than the urban. However, as discussed in chapter 3 (see table 3.4), this relation had changed by 1996, when the urban population of Maranhão outgrew the rural. This is therefore a very recent phenomenon for the state, but it was predictable. Data-table 5.1 shows the trend of urbanisation in Maranhão, demonstrating that this was a course started in the 1960s.

Data-table 5.1 - Urbanisation Trends in Maranhão State, 1950-96



Source: IBGE, respective years

During the 1950s, there was a slight net reduction of the total population in Maranhão. This was a period of massive migration towards the industrialising Southeast, and the Centre-West, where the government was constructing the new capital, Brasília, and thus required large amounts of labour. These circumstances could certainly be used as an argument to endorse a dependency-world systems approach to core-periphery one way exploitation (transfer of labour, in this case). To be precise, however, such approach would have to evaluate possible benefits brought to the periphery by being linked to the metropolis.

From the 1960s, government policies conceived under the postulates of modernisation theory resulted in overall population growth due to migration, and a steady increase in total urban population. Amongst those policies, two had a particular effect in Maranhão state. The road building programme, points out *Bandeira-Tribuzi* (1981), was to change forever the developmental path of Maranhão. The paving of the Belém-Brasília (BR-010) highway, as mentioned in chapter 3, had clear consequences for the region: this road passes through Imperatriz, a city of western Maranhão which, after been reached by road links, experienced one of the highest population growth rates in all Legal Amazonia.

In addition to the road building programme, the federal government set up the POLAMAZÔNIA programme, based on the development pole theory of Perroux. As analysed in chapter 2, this theory envisaged distributional effects of investments concentrated at strategic points. One of them was located in a huge area that covers eastern Pará and western Maranhão, where the Carajás mineral pole was set up. While the distributional benefits imagined were hardly achieved, the urbanisation fostered by this development pole was evident in the boom towns that mushroomed in the region of which Parauapebas, Marabá, and Conceição do Araguaia are the most clear examples.

Regional development was also impacted by the opening of a huge wild-cat gold mining camp in Serra Pelada (South-eastern Pará), which attracted a large number of *maranhenses*. A substantial proportion of these gold-miners left their women in Imperatriz, the closest *maranhense* city to Serra Pelada. Gold-mining experienced a large increase in many areas of the Legal Amazon during the 1980s. Also during this decade, as previously analysed in this thesis, the Brazilian government promoted a bi-modal strategy for the agricultural sector, which had highly pervasive effects for small-scale farming in the Brazilian Centre-West, fostering rural-urban migration.

However, these three outcomes of modernisation-based policies -- road-building, the Carajás development pole, and gold-mining --, had a quite different impact in the municipality of Carolina, located 220 kilometres south of Imperatriz. The history of Carolina's development is analysed in the next section.

The economic and political foundations of Carolina.

The colonisation of the area that today is Maranhão state begun during the 18th. Century, when the Brazilian economy was largely dependent on the production and export of sugar. By this time, cattle-ranching was a complement to sugar production, providing the necessary animal power, meat, and leather for clothing and domestic needs. Sugar production was concentrated in the more fertile area of the North-east Brazilian coast, then covered by the Atlantic Rain Forest. While plantations were replacing almost all the forest ecosystem, which was finally totally fragmented, cattle were taken to the interior of the country.

The south of Maranhão, a region known as *Pastos Bons* (Good Pastures) became a major location for cattle-ranching. The region, however, does not justify its nickname because it is not, in fact, covered with good pastures. The landscape comprises savannahs, and the soil is sandy and generally poor. The region, however, has plenty of rivers and streams, and is dotted with humid valleys. This represented a much better location for cattle-ranching than other areas of the North-eastern countryside, where a semi-arid climate dominates. South Maranhão was then reached by cattle-ranchers at the very beginning of the 19th. Century. Within this area, the margins of the Tocantins river (see map 3.1), where Carolina is now located, were particularly attractive due to the possibility opened for river transport up to Belém and São Luís, the two major urban centres of the middle- and North of the country (Velho, 1972).

In 1810, a settlement called Carolina was created (Velho, 1972), and on 8 July 1859 it was elevated to the category of town (Medeiros-Rego, 1995). Together with other areas of Southern Maranhão, Carolina's growth was dependent upon its original linkages with the states of Pernambuco and (mostly) Bahia, in the North-east, for the commerce of cattle. However, due to the large distances from both areas, most of the landowners had to entrust the management of their properties to cowboys (*vaqueiros*). This was done in a system of cattle-sharing "that gave incentives for the enlargement of the herd and allowed cowboys to turn into landowners" (Cabral, 1992: 106). This was made possible due to the low price of the land. Depending on

the size of the herd, cowboys would have property rights over one quarter, or one fifth of all calves born.

This system of cattle-sharing is still extensively used in southern Maranhão, and has contributed to the maintenance of very low technological inputs into production. As Cabral states, "the cattle-ranchers did not absorb technological change, and have maintained until today traditional practices of extensive raising on large properties" (1992: 107). Cattle being the main source of income, both land-owners and *vaqueiros*, had no interest in developing agriculture, which was kept only for subsistence. Commerce of cattle was done through a system of *feiras* (regional markets) to which the herd was taken. It was in the localities of these *feiras* that new settlements developed. Some examples are the localities of Pastos Bons (created in 1820); Riachão (1835); Grajaú (1835); Passagem Franca (1838); Barra do Corda (1854); Porto Franco (1855); Imperatriz (1856); Loreto (1873); and Balsas (1892). All of them located in Southern Maranhão.

The replacement of the natural economy in Southern Maranhão was a bloody and hasty process. Cattle-ranching occupied land that was originally Amerindian land, whose property rights were completely ignored. The south of Maranhão was inhabited by various groups of Amerindians, and some of them waged battles with groups of mercenaries called *bandeirantes* ("men with a flag"), who were paid and sustained by local *fazendeiros* (farmers). The local élite in this area was therefore born out of violent conflicts. It is no coincidence that one of the main streets in Carolina town was named after Elias Barros, a leading *bandeirante*. The number of Amerindians living in this area at that time is quite imprecise, and estimates vary from 80 to 200 thousand. These aborigines, known under the generic name of Timbiras, were in fact composed by various groups, amongst them Krahó, Augutgez, Purekamekrá, and Cannaquetgê. The large majority of them, including women and children, were killed in battles whose description, found in Cabral (1992), is nothing but barbarian.

As cattle-owners moved in, a rural labour force came together, from the North-eastern states, constituting a local peasantry "by default". This was a circumstance that resembles the situation described by Nugent in relation to the area of Santarém

(Pará state), and analysed in chapter 1. Maria Coelho Cabral analyses how cattle-ranchers structured local politics in Southern Maranhão. She points out that the political power was organised in the beginning of the Century around the "major families ... (and that) the divisions amongst them did not correspond to differences in political orientation, but rather to clashes of personal interests. (...) Once in power, these farmers used the politics for their own benefit" (1992: 183).

This process of political, economic and social control has been called *coronelismo*; a name derived from *coronéis* (colonels), who were the officially designated representatives of the Brazilian Crown in the provinces. These were normally the most powerful landowners in a *município* (municipality). Later, the term was adopted by members of local élites. According to Hall (1978), *coronelismo* was "first established in the sugar plantation society of Pernambuco and Bahia", that is, the States from which came the migrants that colonised the south of Maranhão. *Coronelismo*, writes Hall, "is the name given to the system of political behaviour which allowed individual landowners or cliques of *fazendeiros* to control the vote in rural areas in exchange for favours from local, state and national élites" (1978: 37). Such control of votes would mainly be done through fraud, coercion, and the use of violence. By securing votes at the local level, the *coronel* was able to use his influence over the state legislature and the legal apparatus, and to gain access to credit.

At the end of the Brazilian monarchy (1822-1889), the political leaders of Southern Maranhão were profoundly dissatisfied with the provincial power located in São Luís. Two major revolts of this epoch, the Republic of Pastos Bons movement, and the *Balaçada* war, marked the attempts of local *coronéis* to declare independence from the central *Maranhense* government, and therefore from the Crown, located in Rio de Janeiro. It was not a coincidence, therefore, that these Southern Maranhão *coronéis*, and perhaps especially the political leaders from Carolina, established close links with the republican movement based in São Paulo (Cabral, 1992).

Despite the failure of both republican rebellions, the south of Maranhão developed its own political and cultural traditions, which since then have been more linked to the southern parts of Brazil than to the capital city of their own state. The Republican

movement based in Carolina exerted a major influence on local cultural life, and by the 1920s the town had the most developed educational system of the countryside of Maranhão state (Cabral, 1992). It was by this time that the most well-off families of the region started to send their children to study in major Brazilian centres, or alternatively to bring teachers from other states to give their children private lessons (Rocha, 1997).

People from Carolina

Located at the margins of the Tocantins river, the largest in central Brazil, Carolina town became during the first half of this Century a major trading centre for Southern Maranhão. It was also a centre of commerce on the routes from the Centre-West and lower Northeast of the country to São Luís and Belém. Other regional towns performed similar functions, and grew based on an extensive and complex, capillary reaching network of commerce. Under these circumstances, it is the mercantile modes of settlement theory, analysed in chapter 1, which better explains the process of development and urbanisation in Carolina's region.

The urbanisation of Carolina reflects the wealth of its golden period, and differentiates the town from others of the same region. Streets in Carolina town centre are paved and well tree-lined, some with centenary mango trees. The two main avenues are 40 meters wide. Four squares provide a pleasant environment for encounters. All of this is very different from other towns in Southern Maranhão, that despite being more than one hundred years old, still look like recently formed settlements. There is, however, a huge difference between Carolina's town centre and its six neighbourhoods (*bairros*): Aeroporto, Brejinho, Alto da Colina, Alto do Vitorino, Sucupira, and Ticoncá. Excluding Aeroporto, which is in fact a small residential area of Air Force employees, all the others have no paved roads, and sanitation is precarious. However, all urban residences are served by public water supplies.

In some cases, the division between urban and rural is not very clear. *Bairros* like Alto do Vitorino, Ticoncá, and Sucupira resemble more a rural than an urban area.

On the fringe of the town, most of the residences are as precarious as in the rural area. In such cases, walls are timber or bamboo-framed, and then covered with mud. There is no ceiling, and the roof is normally thatched. Animal raising has been prohibited in the urban area since the mid 1980s for sanitary reasons. Some houses would have chickens, and a few would plant some crops, especially manioc. However, animal raising and crop production is not widespread amongst urban residents.

The municipality has an area of 6.490 square km, with an average altitude of 72 meters above sea level, which is considered to be too low for good agricultural production. The landscape is mostly flat, with some hills serving as the main watersheds. The predominant vegetation is savannah, which grows to the point of taking the appearance of forests in the humid valleys. The municipality has plenty of water resources, and is crossed by the Tocantins, a major Brazilian river, and by the Manuel Alves Grande, a major regional river. Carolina also has plenty of waterfalls, cascades and some rapids that constitute a tourist attraction, mostly unexplored due to the difficulties of access. In most of its area, the soil is sandy, making intensive agriculture difficult. Most of the crop production, especially rice and beans, tends to be concentrated on the lower and swampy areas. The sandy soil also makes access difficult by car and in almost all of the rural area only off-road four-wheel drive small vans can penetrate. Local temperatures are high throughout the year, oscillating between 24 and 30 degrees. There is a well defined rainy season, between December and April, which the rural producers use to plant crops. Annual rain fall reaches 1.800 mm (Medeiros-Rego, 1995), indicating the occurrence of strong rains in short periods of time.

There are only two paved highways in the municipality. One links Carolina to the north, passing through Imperatriz (220 km), and heading towards the capital São Luís (833 km). The other crosses the municipality by the middle towards the east, towards Balsas, a region of higher altitude and large, soybean plantations. The condition of the highways is poor, and it gets worse during the rainy season when huge potholes make traffic dangerous. The two main road links are with the cities of Imperatriz (Maranhão state) and Araguaína (Tocantins state, 120 km by a dirty road). Both are located on the margins of the Belém-Brasília highway, and form the

most important centres with which Carolina trades. The direction of the trade, however, is unilateral: people from Carolina go to these cities to buy products (mainly small, individual consumer goods), not to sell. A daily coach service links Carolina to Imperatriz, and goes three times a week to Araguaína. Private vans complement the coach service with daily services to both cities.

The *carolinenses*, that is, those born in Carolina, are very proud of coming from a town that is considered to have one of the best urban infrastructures in southern Maranhão. Carolina also does not have the same violence found in Imperatriz, a city that suffered intervention by the state government after a former elected major was murdered in the streets in the early 1990s. The *carolinense* keeps more of the Northeast culture than other areas of Maranhão, as it is the case of the state's north, which is very influenced by the Caribbean. Local cuisine uses most of the dishes prepared in the Brazilian Northeast, in opposition to a more Amazonian cuisine, present in the North of the state. Every meal should have meat, rice, and beans. The quality of the beef, in particular, is extremely poor and reflects the fact that, to keep prices low, no local butcher has refrigeration, and meat must be consumed within two days of slaughter.

The *carolinense* does not see him or herself as an inhabitant of Brazilian Amazonia. A number of reasons explain this. First, the *nordestino* immigrant did not mix with local aborigines, and therefore did not form a *cabloco* society, which was the case in the states of the Brazilian North. Secondly, the once existing tropical forest vegetation in the centre-north of Maranhão was removed between the 1950s and the 1970s, and today the local landscape bears no similarity with the Amazonian rain forest. Finally, Maranhão has an ambiguous position between the Brazilian Northeast and North. It is considered to be part of the Northeast, in terms of the country's geographical division. However, Maranhão was included by the federal government as part of Legal Amazonia, to serve as a buffer zone for the protection of the nearby forest. This ambiguity has had pervasive effects. The state could theoretically qualify for development assistance directed to both the Northeast and Legal Amazonia, but such overlap results in administrative conflict and the state has been sidelined in most cases.

Despite its high importance in terms of biodiversity (WWF, 1995), savannahs have historically been neglected in terms of conservation efforts. The few remaining areas of natural savannahs in Maranhão are located in the south of the state (which includes Carolina municipality), and in the Amerindian reserves. There is no such reserve within the limits of the Carolina municipality, but some Amerindians eventually go to town, where the NGO Indigenous Working Centre (CTI), provides assistance and training. Once in town they do not frequent public places, and do not mix with the local population. In fact, even today the relationship between Amerindians and rural producers is very hostile, mostly in the municipalities of Montes Altos and Barra do Corda (in the centre-north of Maranhão), where armed conflicts are common.

Carolina is a very *macho* society. Women are expected to get married by their 20s, otherwise they are regarded as too old. It is not uncommon to find teenagers married. In fact, this is the age by which a rural girl should go to urban Carolina. Women are not prevented from working. In fact, they need to in order to supplement household income, but they should also be submissive, and in addition do all the housework. In the rural areas, women are clearly subordinated: after preparing the meal, they should wait for the men to eat first. If they eat at the same time, they cannot sit at the table together with them. In general, they are voiceless. Local society tries to cover up cases of physical aggression, but during fieldwork it became clear that they do exist as one of the research assistants revealed being beaten frequently. Male consumption of alcohol is very high in the urban area.

One "side effect" of local *machismo* is the inability of the locals to accept criticism, whichever the result of their work is. In general, there is the common acceptance that "half done is well done", and it is very difficult to get people committed to work. This appears to be a consequence of the local *coronelismo*, an issue that will be discussed further in this chapter. Suffice to say now that an outsider in Carolina has the strong impression that local people are quite passive in the sense that they do not believe in the possibility of making changes by their own initiative, through their participation in social and political life.

There is no major physical difference between rural and urban inhabitants. In general, the *Maranhense* has a low stature, brownish skin colour, and very frequently green eyes, a distinction inherited from the Dutch and the French, who invaded Maranhão state during the colonial period. The colour of the eyes also indicates the lack of mixture with Amerindians or with Brazilians from other regions. In fact, people from Carolina, from both urban and rural areas, have mainly a *Maranhense* background.

Only in urban Carolina can variety of different types be seen. They are called "*paulistas*", i.e. people from São Paulo state, but can be in fact from any state of the Brazilian Southeast or South, where people have not largely mixed with Afro-Brazilians. The presence of *paulistas* in Carolina reflects a second period of capitalist penetration, which will be analysed in the following sections.

The rise and fall of Carolina's economy

Between 1940 and 1960, Carolina experienced its economic peak. There was a growing river transport, and industries of babaçu oil, soap, and timber settled in the town (Medeiros-Rego, 1995). They were supplied by energy generated locally, in what was the first hydroelectric plant of Amazonia. In 1938 the Brazilian Air Force (FAB) started operating from a dirt air-strip (Medeiros-Rego, 1997), and during the 1950s a huge airstrip was built to serve, firstly, as a military base. In fact, Carolina's air strip is still operational, and remains under FAB control.

In 1958 the four national air companies were operating regularly from this air-strip. Carolina was a necessary stop-over for small planes on long flights from the Southeast and Centre-West towards the North. It is recognised in Carolina that air transport was a major factor responsible for the establishment of links between the city and Brasília. FAB used to provide free transport for the well-off in Carolina to move to Brasília. These people, after establishing themselves in the new capital, invited their next of kin to move. In other cases, they took the youngsters of Carolina to Brasília, mainly women, to work on their new properties as cheap domestic servants. Many of these employees managed to settle down in the peripheral areas

of Brasília, and therefore increased the possibilities of migration to their next of kin back in Carolina.

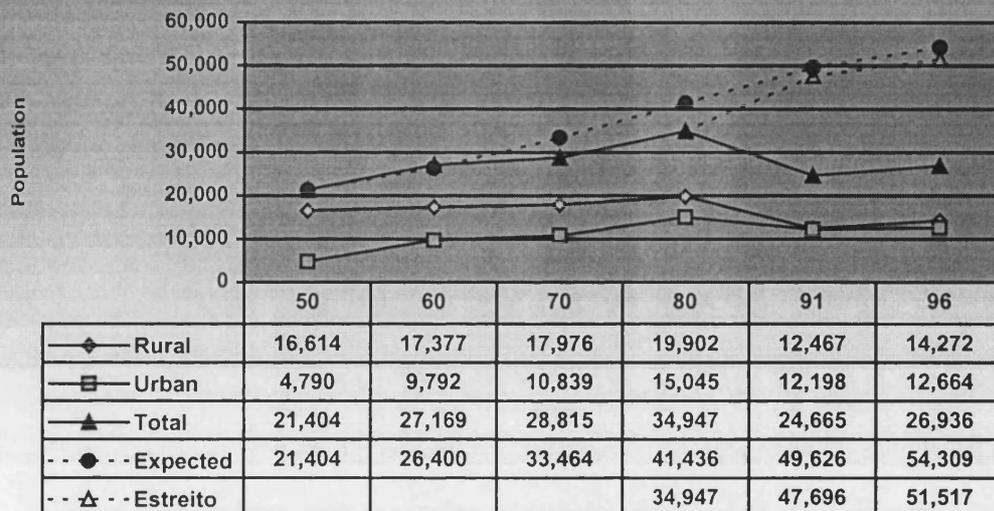
The critical turning point in local development came in the 1960s, and is directly linked with the establishment of the Belém-Brasília highway. This had major effects on industry, land markets, migration, and commerce. The change in the perspectives of local development also coincides with the period in which urbanisation took off in the state of Maranhão, as seen in data-table 5.1.

Industrial production in the municipality virtually disappeared when the existing factories moved to other towns and cities located at the margin of the Belém-Brasília highway. The only substantial industry to remain in Carolina is a small shipyard, which produces boats and ferry-boats for river transport. Called "Pipes", it is the largest private employer in town, with some 300 workers. Official data from the state government details the existence of a total of 45 "industries" in Carolina (IPES, 1995). It is hard to find them. Most of these "industries" are in fact small-scale half-artisan manufactures located in private houses. They almost all fall within the informal sector, which in this thesis is understood as economic activity not regularised for tax purposes.

Information about current local actual populational growth, and rural and urban proportions, are indicated in data-table 5.2. It also shows, on the dotted line with spheres, the projected total population if it had grown at the average annual geometric growth rate for the Brazilian Northeast. The sharp reduction in local population after the 1980s did not only reflect migration. It was also a consequence of the fact that an area of Carolina's municipality was emancipated, transformed in an independent municipality called Estreito. The dotted line (pointed with a triangle) shows the sum of the total populations for Carolina and Estreito. If considered together, the populations of the two municipalities are very similar to the expected total population. This suggests that the migration process in the region is not a generalised one, but rather selective. The factors that mostly contribute to migration are the level of household income, the existence of a kin network, and the person's level of education.

Another trend present in data-table 5.2 is the urbanisation of Carolina's population. After the emancipation of Estreito, the rural and urban population of Carolina municipality became virtually the same (see data for 1991). This indicates that the population of the area emancipated was mainly rural. Between 1991 and 1996 the rural population of Carolina grew by 14.5 per cent, while the urban remained almost the same. This expansion in rural population may however be deceptive. The IBGE considers as rural some areas of Carolina that have an urban dynamic; some, such as Alto do Souza and Sucupira, are in fact neighbourhoods within the town. So, the supposed growth in rural population is most probably a reflection of rural-urban migration to Carolina's urban fringe.

Data-table 5.2 - Populational Growth and Urbanisation Trends in Carolina, 1950-96



Source: IBGE, respective years

Finally, this table also suggests that the period of higher migration from Carolina started in 1960 and went until 1991. This can be seen by the difference between the lines that indicate total and the expected populations. The decline in migration can also be explained by the fact that job opportunities have been reduced elsewhere in Brazil, mainly after the economic crisis of the early 1980s.

Eight recorded focus-group interviews conducted with schoolchildren reveal that the major reason they expressed for migration is the lack of employment opportunities,

and not of further tertiary education. Additionally, the main reason students pointed out for Carolina's economic failure is the type of politics they face. The following sections analyse the economic performance of the municipality for selected indicators, rural-urban inequalities, and the sort of politics practised in the municipality. Together, these analyses contribute to a better understanding of the economic failure of Carolina, and the real dimension of what the students perceive as a lack of professional future.

Economic performance of the local rural sector

This section starts with an examination of the performance of agriculture and cattle-ranching in Carolina from the 1950s. Data-table 5.3 shows information about the harvested area for the four major food items that make up the basis of the small producers' diet in Carolina: rice, manioc, beans, and maize. It considers the performance of these crops in relation to their 1950 harvest, which has been set to equal 100¹.

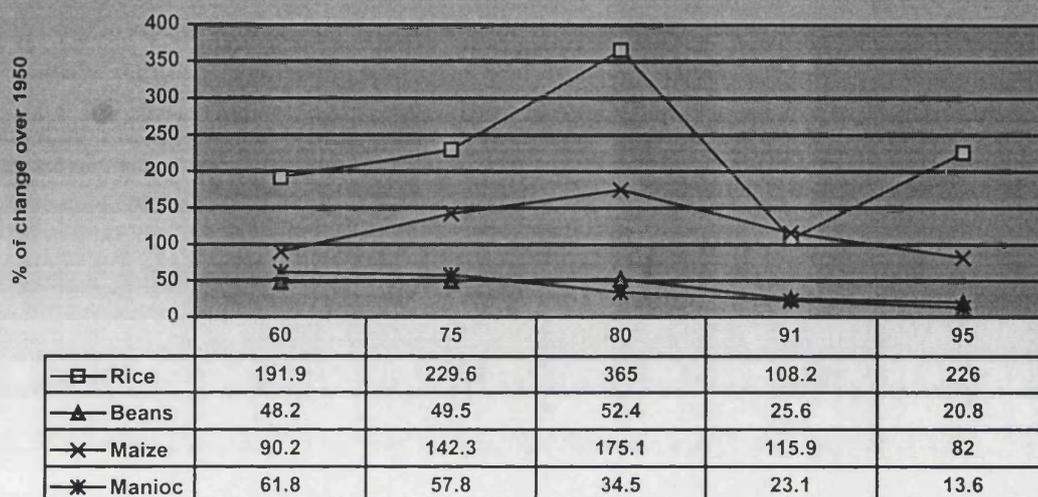
The fall in production after the 1980s clearly reflects the impact of the Estreito emancipation, take took place in 1983. However, what seems to be more significant is that, after the emancipation, production of all crops but rice is lower than the 1950 level. This suggests that the emancipation was not the only cause of the decrease in production. The only crop to experience an increase in production was rice, which in 1995 was 226 per cent above the production level registered in 1950. Amongst the other crops, the highest decrease has been that of the manioc, which today is a meagre 13,6 per cent of 1950 production.

The recovery in rice production after 1991, however, does not imply that rural producers, as a whole, have revived their yields. The rural questionnaire (N = 127) indicates that 24.4 per cent of the rural producers do not plant rice. Amongst rice producers, there is a very high standard deviation ($s = 18.38$), which indicates the median of 1 hectare of rice plantation as better measure of central tendency. This is

¹Annex "B" provides the source of data for this and the two following data-tables.

a very small cultivated area, and suggests that the majority of rice farms are producing mainly for subsistence, and marketing any surplus.

Data-table 5.3 - Harvested area (in hectares) for selected annual crops in Carolina, various years (1950 = 100)



Source: IBGE, respective years

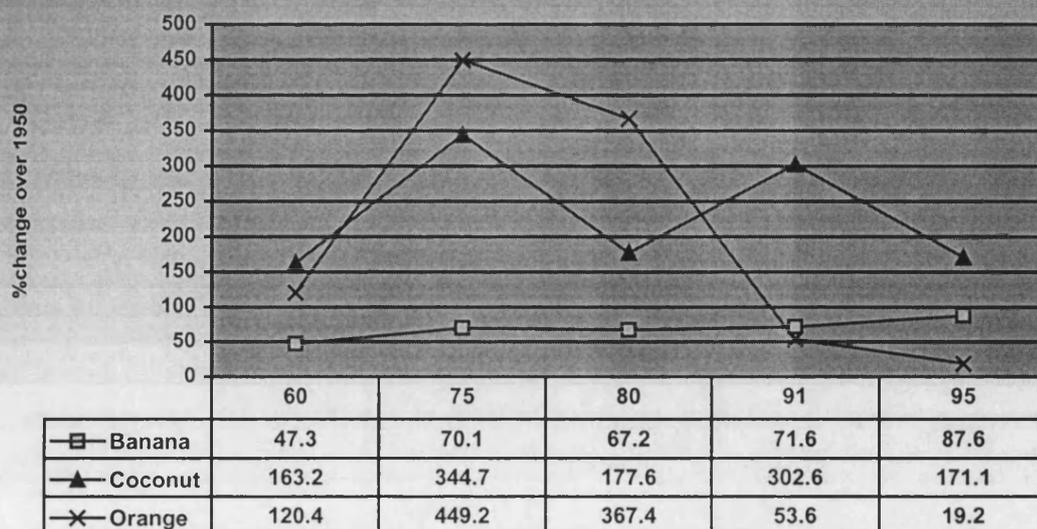
The analysis of frequencies also shows that there are few very large producers (kurtosis is 49.82). According to Luís Alípio Gonçalves de Carvalho (1997), a "paulista" who is in fact a retired economist from the Paraná State Development Bank, and currently a medium agricultural producer with rural properties both in Carolina (due to family links) and Paraná, the increase in rice output was a reflection of the establishment of few large plantations in the municipality, and not an increment in the productivity of small producers.

Despite the increase observed for rice, there was in Brazil, during the same period, an overall reduction in the production of annual crops. This reflects not only populational change, but also mirrors Brazilian agricultural policies adopted after the 1970s, which benefited cattle-ranching, land speculation, and agribusiness. This has been discussed in chapter 3, and illustrated in table 3.1. It has been shown that this was a period of economic crisis, and that the agricultural sector was targeted as a resource-transfer segment to help alleviate foreign debt. These policies, undertaken under the modernisation approach, affected not only annual crops, but also perennial

ones. The next data-table shows information on the harvested area for the perennial crops mostly cultivated in Carolina: bananas, coconut (*côco-da-bahia*), and oranges.

The three perennial crops shown in data-table 5.4 experienced different performances over the period. Banana, which is consumed locally as much as an annual crop, saw production slightly increased, but has not yet returned to the levels of 1950. The production of orange was simply devastated after 1980. The ups and downs in the performance of coconut suggest a seasonal production. Considering together the two previous data-tables, it is possible to argue that the poor performance of annual crops does not represent a shift in production from annual to perennial crops, as both experienced a sharp reduction. It also suggests a very low level of technological input into production, a fact that was confirmed by all rural producers interviewed locally, and by the fact that the consumption of electricity in the rural area is minimal.

Data-table 5.4 - Production of selected perennial crops in Carolina (in 1,000 units), various years (1950 = 100)



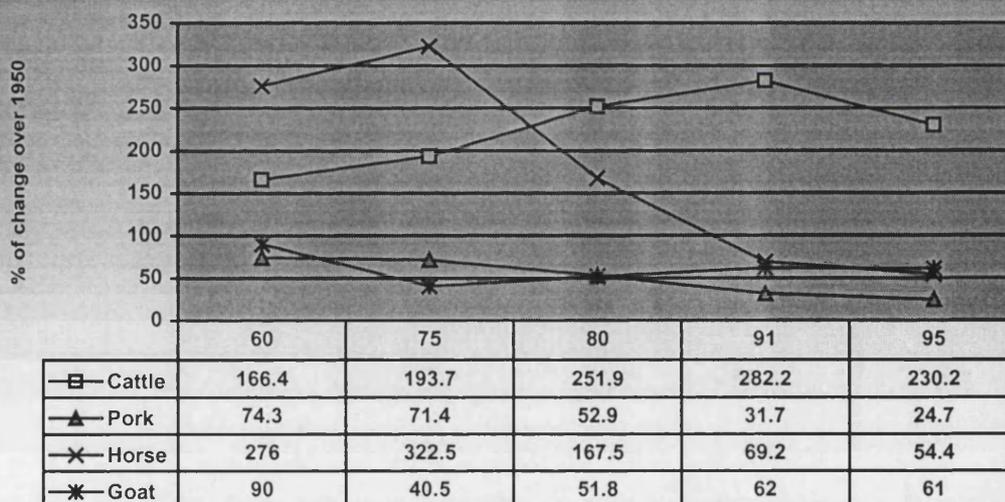
Source: IBGE, respective years

Next data-table analyses the performance of the main types of animals raised in the municipality. Unlike the pattern observed for crops, animal raising in Carolina started declining before the 1980s. The collapse in the number of horses could suggest a

mechanisation of production, what was not the case. Pig raising was in 1995 just 24.7 per cent of its 1950 level. The number of goats stabilised at some 50 per cent of the initial level.

The only animal raising that has improved in Carolina is cattle, livestock which, in 1995, numbered 78,393 head (IBGE, 1998). However, fieldwork data reveals that some 40 per cent of rural inhabitants do not have any cattle, despite the fact that the local economy has always been dependent on cattle-ranching. This suggests a high concentration of livestock in a few properties. This is confirmed by questionnaire data, as well as by the concentration of land ownership.

Data-table 5.5 - Animal raising (number of animals) in Carolina, various years (1950 = 100)



Source: IBGE, respective years

Amongst cattle owners, there is a median of 20, with a standard deviation of 79.40, which represents a greater dispersion than in the case of rice. Parallel to this concentration in rice and cattle, there has been, mainly after the mid-1970s, a trend towards concentration of land ownership. According to IBGE data, there were 932 rural properties in the municipality in 1950. This number rose to 1,405 in 1960 and to 2,810 in 1975 (IBGE, respective years). Data from IBGE are only available until 1980, when the number of properties had fallen to 2,277 (IBGE, 1998). The number of properties has been further reduced to 1,486 in 1997, according to Vanduir

Domingos Costa (1997), agronomist, and public servant representing in Carolina the Technical Assistance and Rural Extension Company (EMATER, a federal agency for agricultural extension). The new landowners were precisely the *paulistas*. If there was an even distribution of cattle ownership, the total number of 78,393 head of livestock would represent an average of 53 head per rural property, which is more than twice the current median.

Various factors contributed to the concentration of land ownership in Carolina. The opening-up of the Belém-Brasília highway is certainly a major one. It expanded the local land market by the end of the 1970s, when "one hectare was worth as much as a bottle of beer" (Gonçalves de Carvalho, 1997). Additionally, it is possible to suggest that the establishment of kin links with more developed parts of the country forced local élites to sell part of their properties to finance the study of their children. Moreover, it is likely that large farmers would have had to leave their rural properties under the supervision of *vaqueiros*, which might have helped them to form their own herd and buy land.

This section has described the decline of the economy in Carolina. Industry left the municipality, while production of major agricultural products and animal raising fell. Exceptions were verified only for rice and cattle. Overall reduction in production was accompanied by the concentration of land ownership. In this scenario, the increase in the municipality's rice and cattle production is explained by local farmers as a consequence of few large investments, rather than an expansion in small-scale properties' production, or the introduction of new technology. Therefore, just a few capitalised farmers are able to trade with other regions. They are some 60 individuals, and are at an economic level substantially higher than the average small producer.

Following this description of Carolina's economy, the next section provides an overview of the rural producers as opposed to urban inhabitants. It stresses the urban-biased characteristics of local development, and its impact on both rural and urban sources of livelihood.

Urbanisation and urban biased development

Despite the population loss caused by the emancipation of Estreito, Carolina municipality has faced a gradual process of urbanisation. The contribution of local rural-urban migration to urbanisation has been significant. Data from the urban questionnaire (N = 152) shows that 46.7 per cent (N = 71) of the heads of urban households have already lived for more than one year in rural areas in the past (rural past). Therefore, almost half of the total urban population is originally from the rural area. The fact that the urban population has not exceeded the rural one suggests not only a higher fertility rate for the rural area, but also that the major out-migration from Carolina takes place amongst urban inhabitants. This is not to say that rural inhabitants do not migrate, but rather that their migration process includes a stop-over in the local urban area.

The major period of migration is the winter school vacation (the dry season) of June and July, when former *carolinense* people return to town to visit their family, and enjoy the sandy beaches of the Tocantins river and the several beautiful waterfalls of the locality. Most of today's migrants are still young females, invited by former inhabitants to do cheap housework in other parts of the country. The male strategy is to find a private job, or try to be accepted for military service.

Migration from Carolina is not only desired by the youth, but is also supported by parents. Amongst the families from which children have migrated, there is no significant statistical difference between the confidence intervals (ci) of the percentages of parents that supported their children to migrate, for both urban parents ($ci = 0.79 - 0.97$), and rural parents ($ci = 0.89 - 0.99$). In both cases, therefore, percentages are extremely high, reaching virtually 100 per cent of support for migration, with a percentage marginally higher for rural inhabitants. As noted above, the main reason given by the youth to migrate is the lack of "professional perspective". As they perceive it, such a deficiency is not only manifested in few employment opportunities, but also in the status of current employment conditions, relating to both income levels and labour rights.

The value of a day's work is only R\$ 5,00 (£ 2.50) for almost all activities, in both urban and rural areas. This value is calculated by dividing the minimum national monthly income of R\$ 112,00 (£ 56.00) by 22 working days per calendar month. So, in theory, rural and urban workers would have the same income. This, obviously, does not happen. Additionally, rural income depends mostly on the selling of some eventual agricultural surplus, and not on paid labour, which is quite seasonal, when available. As discussed above, the number of large rural producers in the municipality is reduced (some 60), representing only about 4 per cent of the total number of rural properties. Therefore, the rural sector itself provides few conditions for the semi-proletarianisation of small rural land-owners.

Seasonal tourism represents a substantial source of income for both urban and rural inhabitants. From mid-June to the end of July, when the period of school vacation coincides with the dry season, Carolina is crowded with tourist and the local population almost doubles. The large majority of tourists are former inhabitants that have migrated. During this period a large number of rural producers come to town to provide tourist guidance, road and river transport, and to work in the 50 bars or so that are constructed with local raw materials, mainly on the Tocantins river bank. These temporary barmen are urban and rural inhabitants that can afford to pay a deposit for the alcoholic drinks and hire of a refrigerator. Each bar would employ some four or five people to serve and look after the property at night. Additionally, a large number of women can get income from washing clothes. During these 45 days, local inhabitants involved in tourism can get an income equivalent to some four months of normal work.

The analysis of income with an urban-rural logic can be performed in a twofold way. One can obviously compare disparities in income between rural and urban areas. However, it may also be interesting to compare the income levels of those who have always lived in urban Carolina with the income of former rural inhabitants that have moved to the urban area. Here the level of household income is a measure based on the declared monthly expenditure for the household, therefore, using expenditure as a proxy.

Urban heads of household (N = 148) have a mean income of R\$ 269.46, with a median of R\$ 210.00, a standard deviation $s = 189.76$, and a skewness of 3.806. The rural ones (N = 119) have a mean of R\$ 203.22, with a median of R\$ 100.00, $s = 354.89$, and skewness of 4.699. The long right tail of the two distributions, indicated by the elevated skewness, suggests a high income inequality in both cases, but even stronger within the rural area. Because the standard deviation is quite large for both groups, the median is the better measure of central tendency. The comparison of the two income levels can be done with the Mann-Whitney test of non-parametric statistics. In this case, the shape of the population(s) distribution is not taken into account². The Mann-Whitney test is adequate to study whether two independent groups (with number of cases represented by m and n) have been drawn from the same population (N). Therefore this test constitutes an alternative to the t parametric test (Siegel and Castellan, 1988).

The logic of the Mann-Whitney test is to rank the scores of the frequency distribution of both groups (W_x and W_y), and compare the two average ranks. If the null hypothesis (H_0) of non-association is true, then "we would expect the average ranks in each of the two groups to be about equal" (Siegel and Castellan, 1988: 130). The comparison of the two ranks produces a z value, which is then analysed in terms of its position in a table of probability associated under H_0 . In this thesis, the significance level α is .05 (probability with the occurrence of the z score when H_0 is true). The formula for the z score is:

$$z = \frac{W_x \pm .5 - m(N+1)/2}{\sqrt{mn(N+1)/12}}$$

The Mann-Whitney test for rural and urban income results that rural heads of the household have a mean rank income of 91.09, and urban heads of the household have a mean rank income of 168.50. The value of z is -8.175, which corresponds to $p = .000$. There is therefore very strong statistical evidence of the difference in incomes, and that the urban is larger than the rural. Additionally, an urban household is privileged by its members' possibility of getting income from different sources,

²See the annex "A" for a discussion of the use of non-parametric statistics.

therefore spreading the risk attached to just one or a couple of sources, what is the case for most rural households.

A large number of rural producers come to town once a week to sell their products in the local municipal market. Although one would find these producers there on a daily basis, it is on Sundays that a large number of them visit Carolina. Their strategy is to try selling their products directly to the consumer for the same price charged by shopkeepers that own a cubicle inside the market building. Any product not sold in the streets is then sold to the shopkeeper, who pays 20 per cent less than the street price.

The price rural producers get for their non processed goods is much less than that charged in the local supermarket for manufactured goods. Direct comparison, however is difficult since local production is traded using local forms of measurement that do not take into account weight, but quantity. The basic measurements are *litro* (roughly 1 kg), *prato* (2 kg), and *quarta* (40 *litros*). A rough comparison is provided in the table below.

Table 5.6 - Prices in Brazilian Reais of local and manufactured goods of annual production, in kg, Carolina, 1997

	Local product (1)	Manufactured (2)	% Difference (2/1)
Rice	0.50	0.83	66
Beans	1.00	1.10	10
Maize	0.20	0.40	100
Manioc flour	0.50	1.00	50

Source: Fieldwork data

The comparison of prices gives a very rough idea of the transfer of surplus labour contained in the above products. According to Dias dos Santos (1997), the average size of plantation for each annual crop is 0.25 hectares. Therefore, the four items together would form an area of one hectare, which in the rural questionnaire is exactly the mode for planted area amongst rural producers. This area produces maize, which average harvest of 300 kg (7.5 *quartas*) per year, which equals R\$ 60.00. The same area planted with rice equals a production value of R\$ 250.00 for rice (average of 12.5 *quartas*), R\$140.00 for beans (average of 3.5 *quartas*), and R\$ 900.00 for manioc flour (average of 45 *quartas*), considering one harvest per year. This represents a total of R\$ 1,350.00, which equals R\$ 112.50 per month. This is a

value quite close to the monthly median income of R\$ 100.00 found in the rural questionnaire of rural producers. Considering some production sold to shopkeepers, and that people tend to round numbers, the questionnaire data on median rural income seems to be quite precise for those small producers that have one harvest per year of the above products.

Another comparison made possible by the application of the Mann-Whitney test is the difference in income amongst urban heads of household. The total number of heads of household in the urban questionnaire (N = 148) can be divided into two groups: those that have lived in the rural area in the past (m = 70), and those who do not (n = 78). In this case, the result is a mean rank for those with rural past of 62.77, and a mean rank for permanently urban residents of 85.03. The z score is -3.191, which gives a *p* value of .001. Therefore, there is also strong statistical evidence to reject *H*₀ at $\alpha = .05$, and to conclude that former rural residents have an income lower than those that have always lived in urban Carolina.

As well as the difference in income, the nature of the income source is also different. Table 5.7 below shows a sketch of the occupational structure in Carolina, taken into account only those heads of household whose incomes do not include a retirement pension.

Table 5.7 - Nature of current most important urban occupation of non-retired heads of the household, according to past rural experience, Carolina, 1997

Type of current occupations	With rural past (40.7%)		Without rural past (59.3%)		Total	
	N	%	N	%	N	%
Own business	12	34.3	7	13.7	19	22.1
Employee in private firm	4	11.5	19	37.3	23	26.7
Public servant	1	2.8	7	13.7	8	9.3
Occasional work	11	31.4	12	23.5	23	26.7
Housekeeping / other	7	20.0	6	11.8	13	15.2
Total	35	100	51	100	86	100

Source: Fieldwork, urban questionnaire

Three major relations emerge from this table. Occasional work (31.4%) constitutes a major source of income to former rural residents and an important source for urban permanent residents (23.5%). Amongst those urban residents without rural experience, employment in private firms is the major occupation (37.3%). Secondly,

urban employment is reduced for rural migrants in both private and public spheres. Their participation in private employment (11.5%) is only higher than their presence amongst public servants (2.8%).

The third important relation is that past rural dwellers, probably those who sold their land to *paulistas*, constitute the majority of urban small-scale businessmen (34.3%). They own small general stores, which sell foodstuffs (manufactured or not) medicines, cloths, beverages, and many other items. These data, together with the absence of local modern capitalist relations (virtually no industrial capital), indicate that the option of proletarianisation of the peasantry is not available.

These ex-rural producers could then be seen as both petty-commodity traders or micro-entrepreneurs. Within the former, Neo-Marxist approach, they would be seen as subsumed to capitalism via the articulation formula, and their capacity to accumulate seriously restricted. In addition, they would also play their role in the blockage of further capitalist expansion, because they are able to operate at low costs that can not be met by capitalist firms. Therefore, their activities can not be classified as capitalism. Within the latter approach, they would be described as micro-entrepreneurs, therefore micro-capitalists operating in the informal sector. Their activities do not constitute a blockage to further capitalist expansion, but rather the very start of a capitalist enterprise.

Therefore, it is possible to argue that those urban inhabitants with a rural past not only have a lower income as opposed to those that have always lived in the urban area, but also that they face more risks. This is because they depend more for getting an income on their own business, or on their capacity to find occasional work. The latter refers mainly to civil construction, general house and infrastructure maintenance. The local élite is the main contractor of occasional labour. However, the prefecture also makes use of occasional labour, mainly for repairs in infrastructure, such as road works.

According to Salomão Cardoso, local manager of the Bank of Brazil, there are only 15 commercial establishments in Carolina with a "significant financial movement" (1997). Virtually all commercial establishments, large and small, operate in the

informal sector. From those nineteen businessmen found in the urban questionnaire, just one declared having all the official documents. The fact that businessmen have no difficulty in openly declaring the illegality of their business shows the extent to which the informal economy is institutionalised in Carolina. This will be further discussed in the next section.

As posed above, a second reason for migration is the fact that labour rights are not respected. In Carolina, most of the workers do not have a signed employment card. Data on members of urban households indicates that 63.0 per cent of them (N = 346) have never worked with such card. An even larger proportion is found amongst schoolchildren with past working experience: 89.7 per cent (N = 174) have worked without the working card being signed.

According to Gonçalves de Carvalho (1997), most local urban employers sign the card of just one employee, normally a member of their own family. They do so because in most cases it is not possible to have a firm without any officially registered employee. Without a signed working card, urban workers cannot claim retirement pension or labour rights. Therefore, by not signing cards, employers avoid paying social security, worth about 40 per cent of the value of the salary. This problem of tax avoidance "is more a question of culture than lack of resources", says Júlio César Barbosa Bezeirra, regional manager of SEBRAE, the federal government agency for micro and small enterprise development. In other areas of Brazil, employers tend to pay social security because, if they do not, employers can easily take the case to the Labour Court, which acts very expeditiously. In Carolina, however, there is no known case of a legal dispute over social security payments.

For peasants, labour rights differ. As long as they are working on their own small family property, an statement from the Rural Workers' Trade Union (STR) declaring that the person works or has worked as a rural producer is enough to claim labour rights and a retirement pension. Therefore, one would expect a large number of rural workers to be members of the STR. However, amongst rural heads of household, only a meagre 29.5 per cent (N = 44) are members. According to Joaquim de Souza-Carvalho (1997), president of the local STR, peasants wait until their retirement age to become a member of the STR. By doing so, they avoid having to pay the monthly

contribution (one day of work, or R\$ 5,00), but also avoid any links with trade union politics. Amongst urban heads of the household trade unionism is virtually non-existent.

Retired people make up an important percentage of both rural and urban populations, with very similar confidence intervals (urban $ci = 0.26 - 0.41$) and (rural $ci = 0.24 - 0.40$). There is also no significant statistical difference between urban retired people with a rural past, and those who have none. The value of the retirement pension depends on the number of years worked, but in Carolina it is generally around one minimum salary per month (R\$ 112.00, at the time of this fieldwork), for both urban and rural inhabitants.

According to Cardoso (1997) there are just about 2,000 bank accounts in Carolina, of which only some 40 per cent ($N = 800$) include some form of financial investment. The Bank of Brazil manager calculates that the local *élite* (in economic terms) would be formed by no more than 300 people. They are largely responsible for the movement of the local economy. At a second economic level, there are the some 600 local public servants, and the 11 local political representatives, whose salaries, fixed by themselves, could not be disclosed. In terms of the social classification, the current *élite* is formed by members of some 60 traditional families (most of which can be identified with the local *coronéis*), and by the urban "well-paid" public servants and "large" entrepreneurs. At the bottom of the social scale lie, in decreasing order of importance, the small rural producer, the *vaqueiro*, and finally the landless sharecropper. Amerindians were never quoted by locals as members of the social scale at all.

Local tax collection is minimal. The two basic taxes for prefectures in Brazil are the ICMS (a VAT), and the IPTU (Council Tax). The value of the IPTU is fixed by the local Legislative (*Câmara dos Vereadores*), and charged by the prefecture. One of the best and largest residences in Carolina would pay an IPTU of only R\$ 20,00 (£ 10.00) per year. Even with such a small value, collection of local IPTU is very small. The majority of the residents does not pay it, or have it cancelled by the prefecture. The ICMS collection is very small due to the informality of the economy. Data from IPES (1995) estimates the local collection in the whole year of 1995 to be R\$

341.000,00 (£ 170,500,00), which represents a meagre R\$ 28.400,00 (£ 14,200.00) per month. The major financial source is the transfer of federal revenues (*Fundo de Participação dos Municípios* - FPM). Data from the Brazilian Ministry of Finance (1998) indicates that the median value of the FPM received by Carolina's prefecture, from January to August 1998, was R\$ 253.168,00 (£ 126,584.00) per month.

Therefore, the resources of the local administration total some R\$ 282.000,00 (£ 141,000.00) per month. According to Medeiros-Rego (1995), half of this budget goes for the payment of the public servants -- one third of which are teachers. Additionally, 12 per cent of this collection (some R\$ 34.000,00 or £ 17,000.00) goes to the local Legislative. Therefore, the prefecture has a non committed monthly budget of about R\$ 107,000.00 (£ 53,500.00), which represents only some R\$ 4,50 (£ 2.23) *per capita*. In addition to these resources the prefecture gets some extra, earmarked money, from investments included in the annual budget of the federal government. However, the resources it can use freely are very limited. In such circumstances, local administrators tend to spend where the result of the investment can be seen, that is, in the urban area. This is not to say that the investment *per se* is based on any real social need. One of the major expenditures of the Carolina's prefecture at the time of this fieldwork was the construction of a fountain in the public square located just in front of the local administrative building.

Another source of urban-bias refers to the structure of the educational system. It is not ideal, but it is quite impressive in comparison with other Brazilian towns of the same standard. The municipality has nineteen schools for the first two levels of education in the Brazilian system. The primary level has four years for children aged from 7 to 10 years old. The secondary level also has four years for children aged from 11 to 14. Finally, there is the third level, also called medium, which has three years for children aged 15 to 19. The latter level, however, has only two schools and lacks places to meet demand. Table 5.8 shows the distribution of schools, teachers, and students among the schools, for the primary and secondary levels, both in rural and urban areas.

Table 5.8 - Carolina educational system, primary, secondary and tertiary levels, 1995

LEVEL OF EDUCATION		URBAN	%	RURAL	%	TOTAL
Primary and secondary levels	Schools	17	15.2	95	84.8	112
	Teachers primary level	98	45.2	119	54.8	217
	Students primary (*)	2,280	45.0	3,514	55.0	6,394
	Teachers secondary level	78	92.9	6	7.1	84
	Students secondary (*)	1,613	96.6	56	3.4	1,669
Tertiary level	Schools	2	100	0	0	2
	Teachers	40	100	0	0	40
	Students all series (*)	625	100	0	0	625

Source: Secretaria de Estado da Educação/Maranhão (1997)

(*) Data refers to enrolment.

The table above shows an urban-biased distribution of educational facilities. People from rural areas are assisted only up to the fourth year of the primary level, which is a very basic level of education. Within this level, virtually all rural students study between the first and the fourth year of education. By completing this level, a student is barely literate and just able to calculate basic mathematical operations. If the student wants to study any further, he or she will have to go to urban Carolina. The quality of education in rural areas is also far lower than in the urban. Of the 119 rural teachers, 118 are not qualified (Dias, 1997).

Additionally, the high number of rural "schools" (95) obscures the fact that the majority of them are in fact the teachers' own house, with no adequate infrastructure. This, however, was not a local policy: the promotion of in-house schools was a strategy of the federal government during the 1970s and 1980s. A minority of proper rural schools is located in what supposedly is a large farm with a large number of rural labour residents, or in villages close to large farms. The construction of these permanent rural schools in Carolina was done as part of a federal programme supported by the World Bank.

Table 5.8 also shows an extreme reduction in the number of students, for both urban and rural areas, from the primary and secondary to the tertiary levels. From a total of 8,063 students in the former level, the number is reduced to only 625 in the tertiary. This represents that 92.2 per cent of the students that enrolled in the primary level of education do not reach the following stage, or continue the education in another municipality. According to Maria Aglair Dias, Carolina's Secretary of Education, most

of the evasion occurs amongst students that left the rural school to study in the urban area. "The student that comes from rural areas is normally asked to repeat one series because of the fragility of the instruction previously received. Moreover, urban teachers are not prepared to make use of the rich life experience of those former rural students, that feel out of place and finally drop out of studies" (Dias, 1997).

Facing such difficulties, many former rural students go to the "fast track" official educational system called *supletivo*. In this system, students can study the equivalent of two years of normal education in just one. The quality of *supletivo* teaching, however, is low and the students' possibilities to go to further stages in their education is consequently very limited.

This uneven distribution of educational facilities, associated with household income levels, has direct consequences for the average educational level of rural people as opposed to the urban. Table 5.9 shows the distribution of rural and urban heads of household, according to their education.

Table 5.9 - Last year of education, if any, of the head of household, according to place of residence (rural or urban), Carolina, 1997

Educational Level	Rural		Urban		Total	
	N	%	N	%	N	%
Illiterate	48	37.8	7	4.6	55	19.8
Primary	70	55.1	76	50.3	146	52.5
Secondary	6	4.7	51	33.8	57	20.5
Tertiary	3	2.4	17	11.3	20	7.2
Total	127	100.0	151	100.0	278	100.0

Source: Fieldwork data, rural and urban questionnaires

The *chi square* test for this table has a $p = .000$, which represents a strong association between place of residence and educational level. There is a high rate of illiteracy amongst rural people (37.8%), and the majority of them with any education tend to study only up to the primary level (55.1%). Urban heads of household, on the opposite, have a very low rate of illiteracy (4.6%), and a significant proportion above the primary level. Together, the percentages for secondary and tertiary levels make up 45.1 per cent of the urban heads of household. Levels of education are just similar to the primary level: 55.1 per cent (rural), and 50.3 per cent (urban). However,

it is interesting to note that amongst the urban heads that have studied just up to the primary level (N = 76), 59.2 per cent (N = 45) are former rural inhabitants. Therefore, there is an enormous difference in the educational level of rural area's heads of household, or those with a rural past, as opposed to urban heads of household.

By the time of fieldwork, all school buildings that belong to the municipality were being refurbished. The cost of that was paid through a World Bank loan for the state government of Maranhão, which transfer the money for the prefecture. The cost of each refurbishment was stated in plaques outside the schools. Values were clearly overrated to the point that it would equal the total cost of building a new school. The refurbishment carried out would cost in reality just some 10 to 20 per cent of the stated cost (Rocha, 1997).

The local health system is precarious and almost totally urban-based. The two "hospitals" located in the municipality are in fact precarious health centres. One is public and the other private. Both are in urban Carolina, and there is no health centre in the rural communities. These two "hospitals" together have 25 beds, which gives a rate of one bed for 1,077 inhabitants. These health centres can only provide very basic services, and lack even the most common medicines and materials. The private "hospital" is owned by a well known politician, which also has a pharmacy. This doctor-politician sees patients for free, but would only give then a prescription if the medicine is bought at his own pharmacy. As is common in Brazil, any person can buy even controlled medicines without a prescription.

Until 1996 there was no medical assistance in the rural area. In that year the state government introduced a system of health agents, and each of them is responsible for visiting an average of 80 houses. Their work is mainly to prevent diseases by giving basic health and sanitary information. They do not prescribe medicines. By the time of the fieldwork there were 55 health agents working in the municipality, 25 in the rural area, and 30 in the urban. The difference in the number of agents does not correspond to the actual population levels between the two areas, nor the difficulties involved in carrying out this work in the countryside.

Finally, a few indicators reinforce the picture of an urban-biased type of development in Carolina. There are 3,390 households with electricity in the municipality. Of them, 3,252 (95.9%) in the urban area, and just 138 (4.1%) in the rural. All the 672 existing private telephone lines are in town. The quality of housing is also quite differentiated. Table 5.10 shows a strong difference ($p = .000$) in the quality of the building material of rural and urban houses.

Table 5.10 - Wall material of the head of household residence, according to rural and urban areas, Carolina, 1997

Wall Material	Rural		Urban		Total	
	N	%	N	%	N	%
Wattle and daub (<i>taipa</i>)	59	46.5	9	5.9	68	24.4
Mud bricks (<i>adobe</i>)	17	13.4	17	11.2	34	12.2
Industrial bricks	36	28.3	122	80.3	158	56.6
Other	15	11.8	4	2.6	19	6.8
Total	127	100.0	152	100.0	279	100.0

Source: Fieldwork data, rural and urban questionnaires

While the majority of rural houses (46.5%) are built with wattle and daub or bamboo (*taipa*), the urban ones are largely made of industrial bricks (80.3%). *Taipa* construction is not permanent, and is normally done by the landowner, while the urban one requires some skilled labour.

This section has therefore discussed a number of inequalities between the rural and urban areas of Carolina. It has been shown how the municipality has a far better development in the urban areas, as opposed to the rural. It has initially been noted that students justify their intention of migration due to the scarcity of employment alternatives. These are students of the urban area. While income levels and employment conditions play their role, one should also consider diverse forms of inequality which exist between rural and urban areas acting as "push factors", firstly expelling people from the land, and afterwards expelling them from the urban area towards larger urban centres.

The next section describes the way of doing politics in Carolina, and examines the contribution of this to both local development and migration.

Political struggle in Carolina

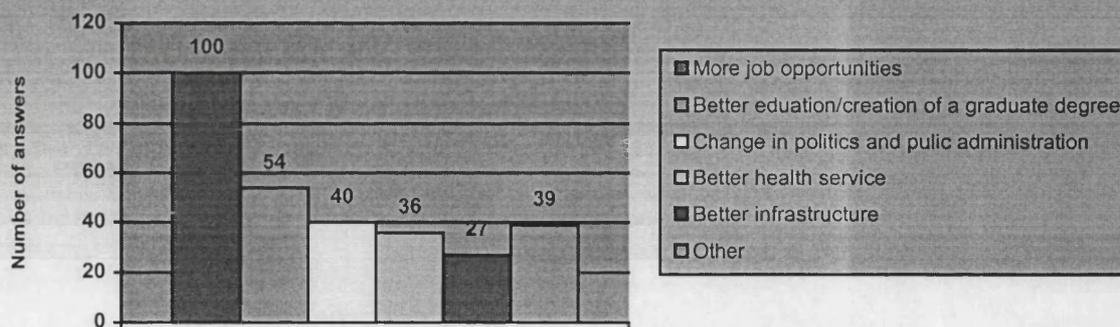
As discussed previously in this chapter, the origin of local politics goes back to the *coronelismo* institution imposed by the rural élite. With the development of the municipality, large farmers gradually transferred their residence to the urban area, and their political interests became more urban-based. During the 1930s, a division amongst local politicians took place. Those with interests in rural areas became known as *pé rachado* (cracked foot), while those urban-based were called *pé liso* (smooth foot). Since then, local political life has been divided between these two groups of interests, which are in fact political umbrellas under which politicians of different political affiliations cluster. However, as Olegário de Souza-Carvalho puts it, "there is no difference in the way they conduct public administration, it is just a fight for power" (1997). This view confirms the description Cabral (1992) has made about politics in south Maranhão. In other words, there is clear division between rural and urban interests, although both groups are, in fact, urban-based.

Their way of doing politics is also quite similar. Their practice is to repress with intimidation or blackmail any form of protest, and to block access to political and civil rights institutions. As noted above, despite labour rights not being respected, there was no case of any appeal to the local Labour Relations Board. Moreover, during fieldwork two cases of political repression became evident. During the state governor Roseana Sarney's visit to Carolina (26 May), members of the Rural Workers' Trade Union were forced to lower the protest posters they had taken to the rally. A group of teachers that were booing the Governor were forced by the chief of the governor's security to keep quiet. Moreover, during the festivities of Carolina's foundation (8 July), all protest posters affixed by the local Workers' Party during the night were removed before dawn. Therefore, local people face repression by both state and local governments. They are voiceless and partially disenfranchised.

Repression, however, does not only occur on special occasions. Those who booed the state governor were harassed on a daily basis for a fortnight after the rally. Iracema César, teacher and member of the PT, was told a number of times that her

name had been sent to the governor in São Luís, and that she would lose her job in the local state school. The same logic of harassment applies to the relation between politics and rural producers. The latter are told that they can lose their employment if they join the Rural Workers Trade Union or the PT, which are the only organisations that effectively oppose the local élite. This harassment explains the low membership of the STR, and the schoolchildren's perception of the lack of any future in Carolina, as discussed earlier. In the schoolchildren's questionnaire, an open question asked: "what is it necessary to change in Carolina that would make life here better?" The multiple answers given by the schoolchildren (N = 259) of all existing series in the municipality were coded in the six categories shown in graph 5.11.

Graph 5.11 - Schoolchildren's opinion about changes needed to improve life conditions in Carolina, 1997 (multiple answers)



Source: Fieldwork data - schoolchildren questionnaire

The graph above shows that concerns over employment are the major preoccupation of youths in Carolina. This is followed by education, which is a prerequisite to find a good job. The third concern is with changes in the way of doing politics and in the management of public administration. This latter question is, in fact, linked to job opportunities. After filling in the questionnaire, the most articulate students were asked to stay and participate in a focus group recorded interview. The facilitator of the interview would ask four questions and mediate the debate that followed each. The questions were:

- 1) "Why is there a lack of development in Carolina?"
- 2) "Why is there a lack of employment in Carolina?"
- 3) "Who wants to leave Carolina (migrate), and why?"
- 4) "Who has heard about the *Frutos do Cerrado* project? Can you explain what this project consists of?"

In these debates, it became clear that schoolchildren blame local politicians for both lack of employment and the general conditions of poor development in the municipality. However, they are not concerned with political harassment, which the majority of them do not face directly, or with disenfranchisement. They are concerned with the way in which both interest groups, the *pé liso* and the *pé rachado*, conduct the public administration. Once in power, they only give job and other benefits to their supporters. The prefecture, for example, would only buy goods in the shops of those who helped with their election. This explains why both groups have historically alternated in power: the local population can not afford two administrations of the same group in a row.

Coronelismo does not mean in practice only repression. It is also linked with *clientelismo*, that is, the concession of favours using public or private capital in order to keep the beneficiary's allegiance. In Carolina, historically, the prefecture pays the electricity and water bills of some residents; pays for medicines; does not charge the IPTU; does not enforce public tax collection; and provides occasional work. All for those of their same group. In other cases, the prefecture has built public³ schools on private farms. Some local residents would comment that it is a common practice of politicians to pay for votes, which would cost R\$ 30,00 (£ 15.00) each. In the last local elections, there were 11,014 valid votes, and Carolina's *pé liso* major was elected with 5,994 votes (54.42%). To be elected a local representative, a politician would need some 380 votes.

The only group in opposition is the local PT, which is basically formed by a small number of rural producers, and three or four urban inhabitants. Their capacity for political action is very reduced, and the party depends on funds transferred by the

³In Brazil, "public" school means public, and not private, as it can be considered in some countries.

party's state office. The local PT is linked to the STR, and to some extent to the local Catholic Base Communities movement and the association of producers that benefits from the G-7 Pilot Programme's Demonstration Project, the focus of this research. A close examination of all these organisations will be provided in the next chapter.

Local development in theoretical perspective

This chapter has discussed the development and the urbanisation of both Maranhão state and Carolina municipality. The latter was examined in relation to indicators of rural production, and to the characteristics of the urban economy. Finally, the role of local politicians in the promotion of rural and urban development was discussed. This analysis provides some insights into the theoretical discussion set out in chapters 1 and 2, which relate to Marxist and modernisation approaches.

Marxist theories presented in chapter 1 differ in detail, but not in essence. What is common is the view of a natural social formation being transformed into a peasantry through the commoditisation of production. In this process, the peasantry is subsumed under capitalist relations which extract surplus labour. Such extraction can take place at the level of production or exchange. In any case, there is a trend towards agricultural transition to capitalism. This process can be blocked by the persistence on non-capitalist forms of production. Their endurance can be explained by the articulated relations they establish with mature capitalism, or by the dominance of mercantile relations of production. Only the latter view would grant the peasantry some autonomy in relation to capitalist development. The general view is of a subsumed peasantry.

Modernisation-based approaches emphasise the progressive and "good for all" nature of capitalist relations. The attainment of full capitalist development starts from the overthrow of rural traditionalism, which should be replaced by an achievement orientation, and entrepreneurship, characteristics of urban areas. The general proposition is that, instead of a conflictive process, development is about sharing the benefits of the more advanced in a trickle down process. Both modernisation and

Marxist approaches interpret rural-urban imbalances as being, to some extent, a necessary outcome of the expansion of capital into rural areas.

When comparing the data from Maranhão and Carolina using the general frameworks of Marxist and modernisation accounts of development, one can find a number of limitations in the power of both to explain current circumstances. This section explores these contradictions, starting with the modernisation approach.

The Brazilian Amazon has been the stage of many modernisation-based governmental policies. Some of them directly affected the area being analysed, as in the case of the Belém-Brasília highway. Others, like the manipulation of agricultural prices, had an indirect impact. The sum of these policies, associated with specific circumstances derived from the colonisation period, had mixed results. In general, the predicted benefits of a trickle-down effect did not occur. The Carajás mineral pole, located in the vicinity of the area under study, for example, established few if any links with this region.

Carolina, however, was seriously impacted by macro-economic policies of a modernisation background that established the rural sector as being a resource-transfer segment. Under this rationale, rural prices for "traditional" commodities were depressed, while a "modern", capitalised agricultural sector expanded. For Carolina this process meant a decline in land prices, which paved the way for land speculation and concentration. Additionally, the consequences of this macro-economic strategy can be seen in the very low performance of local agricultural production and cattle-ranching. So, in general terms, one can argue that the negative effects of the "conservative modernisation" of the Brazilian agricultural sector can be easily identified in Carolina. The positive ones, however, were reserved for other areas of the country that were targeted for specific development efforts.

The example of Carolina illustrates the very limited capacity of modernisation policies to trickle down benefits for peripheral areas that are not directly targeted. Furthermore, the example of Carolina also calls into question the very basis of modernisation thinking, which sees in the traditionalism of the rural sector a major constraint upon capitalist development. The analysis of local political behaviour

shows that the backwardness of rural areas is to a large extent a result of deliberate policies of an "irrational" nature, adopted in the urban setting, for the urban privilege.

This rural-urban imbalance leads into the urban-biased development approach reviewed earlier. This was advanced by Michael Lipton, for whom the joint effect of government policies and local élite practices is an urban-biased form of development. The case of Carolina supports many of Lipton's views. The urban area pays a low price for food, and secures for itself much of the social welfare provision, as in the case of educational and health facilities. Moreover, one can agree with the author in that urban institutions, and the powerful influence of local politicians, set up conditions for establishing and preserving urban primacy. Local strategies of political reproduction are a clear example of the urban-bias mechanisms.

The limitations of Lipton's approach were also discussed earlier. They refer to the author's view of urban-bias as a necessary and sufficient condition to explain rural-urban imbalances, and to the placement of the level of analysis in both sectors, and not in social classes. The focus on sectors rather than classes conceals the diversity of possibilities opened to both rural and urban people by the mutual interaction of the two areas. This point will be further explored in chapter 7, in relation to the analysis of the *Frutos do Cerrado* project.

Contrary to Lipton, Rondinelli's approach sees the urban area as an engine of growth. For this to take place there should be an even geographical distribution of urban settlements. Maranhão state, and its southern region in particular, have never had a particularly uneven distribution of human settlements. On the contrary, until recently the rural population was larger than the urban. Additionally, their spatial distribution is also quite balanced. Moreover, the list of ten conditions for cities to have a developmental influence over their regions, as proposed by Rondinelli, sounds like pure fiction in the case of Carolina.

This case-study serves to show how the argument of Rondinelli does not capture much of the way in which politics are carried out in the real world. In Carolina, underdevelopment plays a positive role for the reproduction of the local élite, which has few interests in spreading development and reducing rural-urban imbalances.

Finally, Rondinelli's argument that urban marketing facilities benefit rural areas is very controversial. A telephone line is essential for marketing purposes, but in Carolina the few available are in the hands of the élite, and the poor, being urban or rural, do not have access to it.

Most of the theoretical analyses of a Marxist pedigree recognise the incomplete nature of the agricultural transition, but assert the validity of the articulation of modes of production approach. Within it, two lines of inquiry prevail. One focuses on the extraction of surplus labour, both at the level of production or exchange. The other focuses on the direct expropriation of the means of production, and was maintained by scholars of a political economy tradition, like Souza-Martins and Foweraker. The latter circumstance was found in Carolina. When the municipality was sidelined by modernisation policies, the price of land fell sharply, and a process of land concentration took place, leading to increasing urbanisation.

A similar process had occurred in the past, when the natural economy was destroyed by cattle-ranching and a peasantry created by default. The very introduction of the cattle economy in Carolina could also be explained using a dependency framework, due to the clear economic links of the area with the Brazilian Northeast, which was at that time the core of the national economy. Once the centre of economic gravity moved to the industrialised Southeast, the local cattle economy lost its power, and the core-periphery link became less clear. Today, exports from Carolina are so minimal that it is difficult to firmly apply a dependency approach, although one could see core-periphery relations everywhere. Additionally, the bounded autonomy of the local economy, given by its isolation and partial reliance on the transfer of public funds, makes it difficult to distinguish a clear chain of dependency.

Within the articulation of modes of production approach, extraction of surplus labour can be interpreted at both levels of production and exchange. What is essential for the analysis is that most of the relations of production are mediated by the form of capital that prevails in the private sphere, that is, merchant capital. As pointed out by Nugent, local merchant capital does not expropriate the means of production, but rather tries to improve production levels. In Carolina, however, the capacity of the

merchant capital (which is mostly urban) to improve rural production is very limited because local external links were cut when the local economy was sidelined. Production is therefore largely limited by the local capacity of consumption. By the logic of modern capital, the local economy is in fact stagnant.

However, private merchant capital is just one of the two more important forms of capital operating locally. The other is public money, which fuels much of the local economy. As Cleary has noted, the economy of the Amazon region is to some extent autarchic. That is, government funds are fundamental to the movement of the local economy. The money available for the local prefecture to invest can be peanuts in real terms, but for an economy that operates at, or just above subsistence level, it really makes a difference. As discussed above, municipal power in Carolina injects money into the economic activities of its political supporters, both rural and urban, but mostly the latter. Additionally, the public administration is also responsible for contracting temporary wage workers, and for buying agricultural products directly from the local rural producers for the free school meal (which is earmarked money). One can argue the case for a articulated relationship in this case, because for articulation what counts is not in which hands (public or private) the money is at a given time, but the system that controls its circulation, that is, capitalism. In other words, local peasants are formally subordinated to a capitalist rationale. So, in this case the argument of the laws of motion could be used, but it would conceal local dynamics highly influenced by political, and not economic, factors.

The question of the subordination of the peasantry is also contradictory in Carolina's economic environment. As has been discussed, local agricultural production is very low. The production obtained should at the same time feed the householders, and be sold to allow the purchase of manufactured goods needed. As Nugent has argued, for peasants there is no clear separation between the subsistence and the market bundles of their production. Therefore, if Kay's position is maintained, i.e. productive labour is the one that produces surplus-value, then peasants are subsumed only to the extent that their production gets into the market, and therefore some surplus can be released.

The case of tax collection enforcement described above is particularly relevant, not only to illustrate the role of the public administration in the economy, but also to analyse the local informal sector in terms of its conditions of existence, and its alleged subordinated role to capitalism. The renunciation to revenues seems to be contradictory to the very functioning of a public body. It cannot be answered by modernisation theories, but one can find an explanation using a rational choice framework. The rationality is that politicians consider it more important to receive the support of few members of the local élite for the electoral campaign, than to improve tax revenues and make a better administration. In this case, Bates' argument prevails about the rationality of apparently irrational economic decisions. This logic is made possible due to the very low education of the local population, associated with the practices of political intimidation and *clientelismo* described above. Together, these circumstances imply that the poor will vote against their own interests, electing those who in fact are committed to use the public office for their own interests.

The lack of tax collection enforcement also allows for a discussion relating to the conditions of the informal sector, and its position in relation to capital. There are many possible definitions of the informal sector. This thesis describes it in a legal way: it is the sector that is not legalised in face of the existing legislation. While this definition helps to identify those businesses which fall inside and outside the category, it lacks the political dimension provided by the petty commodity production approach, discussed in chapter 1.

Nevertheless, such a dimension can be exposed: in the case of Carolina, the informality of the economy is instrumental to local politicians, and functional to the local élite. It is instrumental because, once in power, the politician will charge taxes only on those that belong to the opposition group. Moreover, because informal activities depend on local, or state markets (products cannot, at least in theory, be sold locally without a receipt, and circulate without an invoice), the conditions of entry and permanence in this sector are highly influenced by political allegiance. In other words, the informal sector has a great deal of dependence on the public sector. For politicians, it may be easier to politically control the rural sector, but it is easier to keep in touch with urban people, who are better placed to give cash support for elections. In this sense, the larger the informal sector the better for the politicians.

The conditions of existence of this sector, therefore, are mediated by a set of factors that does not fit easily into the petty commodity production category. This is because these factors, as apparently irrational economic decisions, have a rationality that does not match the rationale of capitalism.

The role of the informal sector, and the analysis of its significance for the Amazon, presented by Cleary, have been discussed in chapter 2. The two main arguments presented by Cleary are that the informal sector represents an enlargement of livelihood opportunities, and that it is to some extent autonomous from what one would expect if capitalism would follow its normal path. In the case of Carolina, the informal sector's contribution for the expansion of a livelihood is contradictory. While it may represent an optional source of income, and therefore an expansion in cash earnings and other assets, it also represents a constraint over one's possible claims, due to political control.

Cleary also claims that the informal sector in the Amazon is so big that capitalism is subordinated to it, and not the opposite. Under a neo-Marxist approach, Carolina's informal sector would be regarded as functional because it keeps prices, and salaries at artificially low levels. In this sense, subordination is clear, but there are other conditions that point to some contradictions that support Cleary's view. Because almost the entire local economy is informal, any formalised business (that therefore pays taxes and social contributions) would not be able to compete with an informal activity (that does not pay), within the same branch of commerce or production, unless it is highly capitalised. In this sense, informal activities block the expansion of (formal) capitalism, and to some extent subordinate it to its functioning.

This chapter has shown that to a large extent urban informal activities are carried out by former rural producers. If so, the political economy logic of a capitalist penetration expropriating the means of production of rural producers cannot be kept without cracks. In some cases, rural means of production were transformed into urban ones. While the analysis pursued here recognises that there are elements for claiming the subordination of the peasantry and the informal sector, it also stresses that these are clear circumstances that point to a partial autonomy from the strictures of "typical" capitalist development. Moreover, as argued in chapter 2, the debate on resource

extraction and subordination is highly influenced by an economic point of view, one in which other factors affecting people's livelihoods are missed. Such an economic view tends to generalise about the conditions of reproduction of both rural and urban dwellers. The next two chapters will examine the grey-scale in local social and economic relations, and explore other dimensions of livelihoods that help to understand grassroots development and sustainability in the Amazonian case.

Conclusion

This chapter has provided an analysis of the historical and current circumstances that have affected the development and urbanisation of both Maranhão state and the municipality of Carolina. Impacts of modernisation policies have been briefly analysed in relation to Maranhão state. This served as an introduction to the remaining of the chapter, in which a detailed analysis local circumstances in Carolina has been provided.

Analysis of local level processes began with the identification of economic, social and political aspects that provided the basis for local development. This analysis has shown how the cattle-ranching economy was formed by replacing the existing natural economy. The new economic basis of Carolina was created by migrants from the Brazilian Northeast that brought with them the political practice of *coronelismo*. The mechanisms and effects of this institution of political control and coercion were examined and how they impacted the local society. Additionally, geographical and physic environment information complete the portrait of the local setting, which were then analysed in terms of its economic performance over time.

Such analysis argues that Carolina faced an economic boom between the 1940s and 1960s, but was sidelined after that by modernisation policies that had direct and indirect impacts on the local economy. While the construction of the Belém-Brasília highway is an example of the latter, the conservative modernisation of Brazilian agriculture, as discussed in chapter 2, is an example of indirect impacts over the local economy. Both negative impacts have direct consequences on substantial rates of migration between the 1960s and the 1980s.

Statistic parametric and non-parametric methods were used to analyse the economic performance of the municipality once the boom came to an end. It was shown that for almost all indicators selected, production fell below levels of the 1950s. The growth in production observed for cattle, rice and coconut, however, were a reflection of a process of land concentration, rather than an improvement in general productivity. This analysis than shows how the municipality developed its rural and urban areas.

A whole section is dedicated to the examination of rural-urban imbalances, using quantitative and qualitative indicators. It was shown that former peasants make up almost half of the urban population today, and that urban and rural heads of household show large differences in terms of income levels and access to welfare provision, like education, and health services. Despite differences, both groups largely support their children's out-migration. This is a consequence of their lack of hope for the future, both materially and non-materially, that is, in relation to the non-material components of a livelihoods, which refers to claims.

There are, therefore, barriers to local economic, social and political development, which are erected by the élite, which exert its control with oppression and harassment. The élite is politically divided into two groups that make use of the same practices of *coronelismo*. Political opposition is restricted to a small group politically affiliated to the Brazilian Workers Party. Their composition and practices will be further analysed in the next chapter.

The chapter finished by linking these findings from fieldwork to the theory discussed in chapters 1 and 2. Policies based on the modernisation approach failed in their aim to provide widespread development. It may have occurred in some places, but in areas like Carolina the benefits of development were highly concentrated. Some evidence, however, supported Lipton's urban-bias approach, but this view cannot explain local diversity, which will be analysed in the next two chapters. Rondinelli's approach, in its turn, seems just as inappropriate in the face of local political interests. At the end, modernisation approaches are called into question in relation to

their very essence: that is the view of a rural-traditional society being inevitably replaced by the urban-modern and entrepreneurial one.

Marxist-based approaches, however, also presented shortcomings when set against fieldwork data. The specificities of capitalist penetration challenge the articulation of modes of production formula. It was shown that local merchant capital plays an essential role in granting small rural producers a certain degree of autonomy in relation to subsumption. However, in contrast to Nugent's findings discussed in chapter 2, Carolina's merchant capital cannot support increasing production. When analysing the economy of Santarém, a city far larger than Carolina, Nugent identified that local merchant capital needed an increased peasant production to accumulate. In the case of Carolina, the fragility of the merchant network results in a greater importance for the public administration in the local economy. Confirming Cleary's analysis, the prefecture plays a fundamental role in fuelling the economy. However, this political-economic link limits the autonomy of the informal sector, which contrasts to Cleary's general observations on its importance in terms of its supposedly dominant position compared with modern capital.

A general conclusion for this chapter is that there are elements which suggest a partial autonomy for small rural producers facing capitalism, which implies partial subsumption. What makes possible such a hybrid position is the uneven way that capitalism has penetrated the region, together with political vested interests that cannot be explained by modernisation or Marxist postulates, but rather require a rational choice framework. The next two chapters further explore political dimensions of local development, introduce the project *Frutos do Cerrado*, and emphasise urban dimensions in rural livelihoods.

CHAPTER 6 - THE *FRUTOS DO CERRADO* PROJECT

This chapter analyses the *Frutos do Cerrado* project in the light of its connection with national and local organisations involved with the promotion of rural development. It firstly examines the political background of the intermediary NGOs that act as project co-ordinators. This background is further explored to show the existing interfaces between NGOs, the Catholic Church, the Workers' Party, the rural workers' trade unionism, and the beneficiaries of the *Frutos do Cerrado*. A second line of inquiry provided in this chapter analyses the central characteristics of the project in relation to the theoretical discussion of this thesis. It first examines the *Frutos do Cerrado* project proposal, and relates it to the theme of sustainability and urban dimensions in rural livelihoods. The same strategy of inquiry is applied to the three monitoring and evaluation documents so far produced on the PD/A.

The final part of this chapter relates these two approaches to the theoretical discussion. It is argued that a PD/A social and commercial agroforestry project needs to apply the framework of sustainable livelihoods if it is to capture the total dimensions involved in the way project beneficiaries make a living. These dimensions relate to urban linkages, which are analysed in connection with all organisations in which rural producers are involved. These are the Christian Base Communities (CEBs), the Rural Workers' Trade Union (STR), the Workers' Party (PT), and the Agroextractivist Association of Small Producers of Carolina (AAPPC). It is not possible to dissociate the AAPPC from the other organisations, which in fact granted the rural producers the necessary conditions to apply for project funding. Given that, the social and political implications of the producers' involvement in these organisations are analysed in relation to the discussion involving Marxist and modernisation paradigms. The chapter concludes that to counter-balance an urban-bias type of development, rural producers need to establish urban links through which they can make their claims, which form an essential part of their livelihoods.

Intermediary NGOs and origins of the project

The idea of using native trees to reconcile income-generation and environmental conservation was born out of the contacts maintained by the anthropologist Gilberto Azanha with Amerindian groups from Maranhão state, where he has been working since 1973. According to Azanha (1997), the Amerindians were trying to find a source of income, and they suggested the use of fruits, their only plentiful asset. Parallel with this, Azanha was concerned with the process of concentration in land ownership that was taking place in Maranhão. The anthropologist was particularly preoccupied with the effects that the substitution of the natural savannahs (*cerrado*) by pasture had on local weather conditions, which were changing rapidly.

According to Azanha, a central objective was to find a strategy of action that could unite Amerindians and local rural producers in a common objective, and in addition create a buffer zone around Amerindians reserves with the aim of avoiding their being converted to grassland or pasture. In other words, the core idea was to create economic incentives to fix the small rural producers on their land. An additional benefit foreseen was the reduction in forest fires in the buffer zone, therefore posing less threats to the Amerindians reserves, and resulting in better conservation of the fauna (hunted by Amerindians) and local flora.

Since 1979 Azanha has worked for the CTI, the NGO which came to be the responsible for the *Frutos do Cerrado* project formulation. Jaime Siqueira, another anthropologist working as co-ordinator of CTI's office in Carolina, relates that the first step for the implementation of a project along such lines was taken in 1993. In that year, the CTI obtained a grant from the European Union office in Brazil to carry out a study of the economic feasibility of tree fruits. "Between 1993 and 1994, we visited more than 70 localities in this region to have an idea of the possible supply of fruits", says Siqueira (1997). According to him, this survey was concluded in advance of the original deadline, and the funds not employed were used, with the consent of the EU, to build a small factory to process *cerrado* fruit pulp in Carolina. This town was chosen not only for its proximity to the most preserved areas of *cerrado* of southern

Maranhão, but also because it has the best urban infrastructure amongst the localities in that region.

The CTI is one of the most traditional Brazilian NGOs working with Amerindians. The organisation has had about eighteen years of working experience with aboriginal groups in different regions of the country, for which they provide welfare-type assistance. In the Maranhão region, the CTI works with the aboriginal group called Timbira, which is in fact an umbrella name for different Amerindian tribes. Only recently, the NGO expanded its activities to include income-generating projects.

The CTI was created in São Paulo by a group of anthropologists that had been seriously concerned about the negative effects of modernisation policies applied by the military governments of the period (1964-1985) in the Brazilian Centre-West and the Amazon. The creation of Brasília in 1960, and the opening of the Belém-Brasília highway (paved in 1973 under SPVA directives; see chapter 3) brought large impacts for Amerindians in Centre-West Brazil. So it was not a coincidence that Azanha first went to Maranhão in the early 1970s to conduct fieldwork for his (unfinished) Master's degree.

Another architect of the CTI was Virgínia Valadão, an anthropologist arrested in 1970 (at 17, before starting her Graduate Degree), for being a member of a student group that supported the guerrilla group VAR-Palmares (Armed Revolutionary Vanguard -- Palmares) (Ricardo, 1998). While there have never been institutional links between the CTI and guerrillas, their members have always been in the forefront of the defence of social causes in Brazil. One could say with confidence that the majority of its members support left-wing parties, mainly the Brazilian Workers' Party.

The CTI has worked very closely with another NGO, the Ecumenical Centre for Documentation and Information (CEDI - now the Socioambiental Institute - ISA). It was on the premises now occupied by CEDI, in the Sion Catholic school of São Paulo, that the proposal for the creation of the PT was issued (Meneguello, 1989). In the municipal elections of 1996, Siqueira and other personnel from the CTI in Carolina co-operated with the political campaign of the local Workers' Party. So,

while there is no formal link between the CTI and PT, there are clear indications of the support given by the NGO to the party.

Having set up the processing unit in Carolina, the CTI donated it to the Vyty Cati Association, an organisation of the Timbira Amerindian group, and latter started to look for partners amongst rural producers to supply fruits for processing. Siqueira (1997) points out that during the fruits' economic feasibility survey period it became clear that small farmers in the region had a very poor level of social organisation. However, in a number of localities they found co-operatives of rural producers that were linked to another NGO called the Cultural and Educational Centre for Rural Labour (*Centro de Educação e Cultura para o Trabalhador Rural* - CENTRU), which has an office in Imperatriz. According to Manuel Conceição dos Santos (1997), co-ordinator of CENTRU's office, this organisation was already giving incentives to small farmers to introduce perennial crops like caju, as a way of improving income and reducing the workload associated with annual crop production.

In fact, since 1955, when Manuel started his activity with rural workers, he has been trying to reduce inequalities in the terms of trade faced by small rural producers, and to defend their area against cattle intrusion. In Maranhão as in other areas of the Northeast, cattle is raised extensively on large properties which do not have barbed wire fences, so the animals of the large, powerful landowner are free to get into others areas and eat the crops. The planting of perennial crops would reduce this risk and create an alternative source of income to the annual crops.

Therefore, the "new" idea of processing fruits brought by the CTI coincided with historical claims of rural producers in the region. Together, CTI and CENTRU formulated a project proposal that was subsequently approved for the Pilot Programme's PD/A. Their possibility of getting the project approved was certainly enhanced by the fact that Azanha knew the mechanisms of the programme quite well. He had been one of the architects of the GTA, which is the NGO umbrella organisation involved in the Pilot Programme since its inception (see chapter 3).

CENTRU is a traditional organisation from the state of Pernambuco, in Northeast Brazil. As noted in the previous chapter, it was from Pernambuco (as well as from

Bahia) that the cattle-ranching economy and the institution of *coronelismo* were brought into Carolina and to southern Maranhão. The cattle economy was initially linked to the sugar plantations of both Pernambuco and Bahia, a type of economic activity largely dependent on slave labour. In both areas, the exploitation of labour has a long history of conflict and repression by government forces and private landlords, which in most of cases acted together. Suffice to say now that the rural labour movement in the Brazilian Northeast was born of an apparently unlikely mixture of communism and Catholicism faith, and that Pernambuco was a central place in this chapter of Brazilian history. This issue will be further explored in the next section.

CENTRU, which has its central office in Pernambuco, is a product of this struggle. The NGO is a member of the National Confederation of Agricultural Workers (CONTAG), an organisation that was largely an outcome of rural labour movements in Pernambuco (Maybury-Lewis, 1994). Both Manuel Conceição dos Santos and his wife Denise, a lawyer from Pernambuco specialised in labour rights, have a long history of work in defence of the peasantry. The activity they carry out in CENTRU differs from that of the CTI since it is not welfarist, but rather aims at mobilising rural producers and landless people to claim their rights.

During the 1960s, Manuel created some 30 literacy school in rural Maranhão. They constituted a strategy to give people a critical consciousness and allow them to have a employment card, since only literate people could vote at that time in Brazil. In 1968, the military seized and closed the schools. The next year, all the 48 rural workers' trade unions of Maranhão were closed, and people arrested and tortured (Conceição dos Santos, 1985). At that time, Manuel did not see himself as a "communist" or a "subversive". "I was an evangelist of the Evangelic church (*Assembléia de Deus*) in Brazil. I was preaching the Gospel in the countryside", says Conceição dos Santos (1985: 11). At the time of this fieldwork, Manuel had entered politics, and was organising his candidacy for a seat in the Chamber of the Deputies, as a representative for the Workers' Party. This link with the PT, however, is not only a personal one. CENTRU is also a member of the Central Trade Union Organisation (CUT), an organisation which is closely aligned with the Workers' Party.

Therefore, to fully understand the origins of the project *Frutos do Cerrado*, and the political background of the organisations involved, it is necessary to firstly analyse the roles of the Catholic church, the CONTAG, the Workers' Party and the CUT. The next section provides a summary view of these actors' history. The subsequent section shows how they converged for the creation of the Agroextractivist Association of the Small Producers of Carolina (*Associação Agroextrativista dos Pequenos Produtores de Carolina - AAPPC*), the beneficiary of the *Frutos do Cerrado* project surveyed in this thesis.

Religion, trade unionism, politics and the rural producers of Carolina

The formation of the *Associação Agroextrativista dos Pequenos Produtores de Carolina* can be traced to the influence exerted by the Catholic church through its Christian Base Communities (*Comunidades Eclesiais de Base - CEBs*). CEBs are "the grassroots expression of the Catholic church's progressive movement" (Maybury-Lewis, 1994: 185), which has been defined as both a "philosophy" (Maybury-Lewis, 1994: 254) and a "movement" (Zimbelman, 1991: 221). Its core proposition, defined at its inception in the 1968 Medellín (Colombia) meeting of Latin American Bishops, is to reconcile the Catholic faith with concrete action to benefit the poor (Zimbelman, 1991).

The central strategy of Liberation Theology is to make a "preferential option for the poor". In doing so, it adopts Marxist social analysis for understanding that "it is most successful at uncovering the nature and causes of social alienation, oppression, class differences, and poverty in the continent" (Zimbelman, 1991: 225). In its linking of religious faith and Marxism, Liberation Theology understands that "the Christian must be aligned with the oppressed, the marginalised, and the poor in opposition to the oppressor, the holders of power, and those who control the means of production in society. The moral acceptability of a specific programme of development is a function of whether such programme advances the liberation of the Latin American people" (Zimbelman, 1991: 226). If so, the poor must be able to make a judgement of value, must be able to analyse their reality in a critical way. For this purpose, the Liberation Theology encourages the formation of CEBs.

These communities, both rural and urban, firstly appeared in the 1960s, and are called "base" because their members are primarily working class individuals. Its method of action is proactive in the sense that its work is based on the action of a pastoral agent, who is responsible for encouraging people to claim their rights. The work of pastoral agents is therefore not one of co-ordination, but rather of encouraging participation in discussions and the formation of a critical view of reality. As Friar Betto¹ (largely responsible for the expansion of CEBs in Brazil) writes, "the word 'liberation' stands out in CEBs vocabulary ... It (this word) helps the community ... to be conscious of (the process of) social change, of the change of the capitalist mode of production" (Friar Betto, 1985: 24). It is in the rural areas, points out Friar Betto, in which the CEBs have expanded most. According to Friar Betto, this has happened because "the peasantry, which has no government support, no access to official credit, and is a victim of the middlemen who buys cheap and sell dear², has no other way to protect itself other than through the rural workers' trade union and the CEBs" (1985: 26).

In the vocabulary of Liberation Theology "liberation" has special political meaning. It refers to achieving social, economic and political freedom. In its broader approach, Liberation Theology makes use of the dependency framework to analyse development (Zimbelman, 1991). Differences between Marxism and dependency are not explored, given that the main aim of Liberation Theology is to stress the inequality derived from unequal conditions of development. Additionally, Liberation Theology offers no clear programme for economic and political development. However, the fact that it provides believers "with the reasons they require for empowerment³ to action, (it) may be supporting a most effective tool that will indirectly advance revolutionary changes in the continent" (Zimbelman, 1991: 234).

This view, apparently exaggerated, was justified by the author with the argument that "there is strong empirical evidence that this theological vision was instrumental in

¹Religious name of Carlos Alberto Libânio Christo, son of an engineer that in the late 1950s moved to Brasília to work in the construction of the new capital.

²These are the same words used by Nugent to describe the operation of merchant capital.

³The author does not elucidate in which context he uses the word "empowerment".

empowering the Sandinista revolution in Nicaragua⁴, and the forced moderate settlement in El Salvador" (Zimbelman, 1991: 234). This point is worth stressing because in the Imperatriz CENTRU's office there are a number of posters commemorating of the Sandinista revolution. Furthermore, one of CENTRU's permanent advisors is the former Father Enoque, called only by his first name. He was once priest in Carolina, a period in which he was responsible for the creation of the local CEBs, and a patron the rural workers' trade union (*Sindicato dos Trabalhadores Rurais* - STR).

One of the most important social mobilisations that resulted in the creation of Brazilian rural trade unionism can be traced to two concomitant movements that took place in the state of Pernambuco⁵. One was the creation of the peasant leagues (*ligas camponesas*) by Francisco Julião, in the late 1950s and early 1960s. The leagues were a sort of mutual-aid society, whose legal status was not very clear under the authoritarian regime of the time, and were supported by the Communist Party. Parallel to the formation of leagues, Catholic organisers of left- and right-wing political tendencies introduced rural unions to compete with the Communist, peasant league. The growing rural labour movement resulted in the creation, in January 1964, of the National Confederation of Agricultural Workers (*Confederação Nacional dos Trabalhadores na Agricultura* - CONTAG). Initially, the organisation was dominated by "the Brazilian Communist party, Catholic organisers of reformist tendencies, and Catholics in Popular Action (*Ação Popular*) who defended a radical transformation of the social structure" (Maybury-Lewis, 1994: 7).

Two political tendencies have historically disputed power within the CONTAG. One, that could be called "moderate", defends a legalist approach and the stress on law enforcement, which would have the benefit of avoiding an open conflict with the rural élite and their allies. The other, "progressive" line, supports a more combative position in defence of extensive land reform and strong governmental support for small-scale, family-based rural production. This latter line has prevailed within CONTAG, mainly in recent years, as a way to try to modify agricultural policies under

⁴Which took place in July 1979

⁵Rural and political movements in the state of Rio Grande do Sul also played a central role in this process, alongside other initiatives in various Brazilian states.

the current government of President Fernando Henrique Cardoso. This organisation's current political priorities can be explained in terms of the reforms being implemented under Cardoso's administration, but also because of the president's past political life.

In 1996, the Labour Ministry stopped collecting the union levy (*contribuição sindical*⁶) from rural workers who were active members of a trade union. Instead, it transferred this activity to the two national organisations of rural trade unionism, which will receive funds directly from the workers' payments, and no longer from Ministry transfers. One organisation is the CONTAG, which acts in the name of the workers, and the other the National Confederation of Agriculture (*Confederação Nacional da Agricultura* - CNA). The CNA mostly represents the agribusiness sector (i.e. the rural élite), as well as supports a web of rural trade unions (SRs, which politically opposes the STRs), and has as members most of the medium and large landowners in the country, but also some small ones.

Today, rural workers are free to choose if they want to pay union contributions to CONTAG or to CNA. In practice, this new procedure has already resulted in a dispute over union contribution payment, and in the launching of new membership campaigns by both organisations. If this is followed by other policies that can effectively deliver social development to the Brazilian countryside, then rural trade unionism is likely to grow substantially, particularly in areas where workers have historically faced *coronelismo*. In these areas, workers could find in the trade union the support they need to expand their sources of livelihood.

Brazilian left-wing parties have labelled President Cardoso's administration as "neo-liberal", "right-wing", "subservient to globalisation", etc. The President prefers to identify himself with the so-called "third way" of political action, put forward by the British Prime Minister Tony Blair. This is a mixture of conservative macro-economic policies with government withdrawal from the economy, and investments in areas that are considered to be essential for State activity and intervention, like education,

⁶*Contribuição sindical* is paid by rural workers waged or not. Money is used to fund local unions, state federations, and the national confederations. The value is about the same for both groups, and equals some R\$ 5,00 (£ 2,50) per year.

health, environment, consumer rights', military, diplomacy, and others. Cardoso, a sociologist who helped develop dependency theory (see chapter 1), was self-exiled in Mexico, United States, France and UK, during the military regime. Returning to Brazil at the end of the 1970s, Cardoso played a central role in the formulation of a new political system. This system replaced the one in which only two parties were allowed to exist: the ARENA, that supported the military, and the MDB, which included a wide range of politicians, from the extreme left to the centre-right. At this time Cardoso was actively participating in discussions for the creation of the Brazilian Workers' Party (Meneguello, 1989). However, in August 1979, Cardoso eventually declined the party's membership after pondering that a radical political strategy, with few electoral chances, would prevail within the new party structure (Kerck, 1992).

The urban labour movements and strikes of 1978 and 1979 in the metropolitan area of São Paulo clearly gave origin to the PT. However, as Meneguello points out, "behind the PT was the creation of a new left-wing party which would assimilate the popular base of the Catholic church, and the labour movements involved in the crisis of the ABC metropolitan area of São Paulo" (1989: 56). The author also emphasises that the specific idea of a workers' party with a Christian base "reflected the views of the church's progressive sector, and was based on Liberation Theology" (Meneguello, 1989: 64). The PT's political programme for agriculture has always been strongly based on support for peasant farming and agrarian reform. These are in fact the two main propositions of the social movements that years earlier had begun the rural labour movements in Brazil and created the CONTAG. The latter entity is also a member of the CUT, the PT trade union arm, created in August 1983 whose purpose was to break the tutelage of the State over the trade union movement. The CUT's position on agriculture is not well developed: the organisation gives more attention to urban labour movements than rural. To some extent, the CONTAG is the "official" voice of the PT for the rural sector.

For both rural and urban areas, the political programme of the Brazilian Workers' Party has largely stressed its support for grassroots movements as a strategy for development. It obviously reflects concerns with the reduction of inequality in the country, but it also reflects a priority for poor people's "conscientisation"

(*conscientização*). This is a strategy based on Liberation Theology, which is also linked to Marxist-based approaches that favour workers as opposed to the owners of the means of production.

As an instrument for action, *conscientização* derives from the educational philosophy proposed in the work of the former Brazilian educator Paulo Freire. Born in Pernambuco state in 1921, Freire developed his critical pedagogy based on the idea that adult education was essential to help people to overcome their sense of powerlessness, and release their potential. This would enable them to act on their own behalf. Imprisoned by the military regime in 1964 and exiled afterwards, Freire was sponsored by the World Council of Churches (based in Geneva), and became a lecturer in Harvard.

In his main work, "Pedagogy of the Oppressed" (Freire, 1972) proposes a "liberating education", that is, a strategy that encourages learners to challenge and change the world, and not merely uncritically adapt themselves. This would take place in two states. The first involves people becoming aware (i.e. being *conscientizado*). *Conscientização* is understood as an ongoing process by which a learner moves toward critical consciousness of his/her (often oppressed) position within the world. The second stage refers to the person's practice in transforming that state in which he/she is found. In Freire's approach, "liberating education" leads to empowerment, which is understood by the author as the power obtained in the process of becoming critically conscious. The best way to achieve empowerment is through collective action on behalf of mutually agreed goals.

This programme of education was adopted by the Brazilian PT, to which Freire became a major contributor. In 1988, Paulo Freire accepted an invitation to be Secretary of Education for the city of São Paulo, then under PT administration. Freire's ideas have been particularly influential amongst NGOs that see "grassroots movements as confronting oppressive social forces" (Edwards and Hulme, 1992). In more general terms, Freire's ideas served as a baseline for many small-scale rural development projects and NGO action in Brazil and elsewhere. The assumptions of the "liberating education" have been particularly influential amongst Brazilian NGOs that have attempted to counter the effects of military-led modernisation-based

policies. This influence is clear in the choice of action and vocabulary used by NGOs and grassroots groups, as will be pointed out in the next section.

AAPPC background and local politics

The previous section gave a summary view of the main tendencies found in leftist trade unionism, politics, and religion in Brazil. By doing so, it has shown the links that exist amongst rural trade unionism, CONTAG, Liberation Theology, CEBs, and the Workers' Party. The present section analyses the political foundations of the Agroextractivist Association of the Small Producers of Carolina, showing how it derives from and relates to the tendencies mentioned above. An appropriate understanding of the AAPPC's origins, functioning, and expectations requires a comprehension of the economic, social and political aspects involved in all organisations of which small producers are members.

The social and political organisation of local producers started in the early 1970s with the creation of CEBs in the municipality. The contact of Father Enoque in Carolina was with Olegário de Souza-Carvalho, then a young rural producer, member of a family of strong Catholic faith. He was offered the chance to live in urban Carolina without paying rent in a house that belonged to the local parish, so he could help structure the local rural CEBs. Olegário sold half of his land and, with this capital and the help of his wife, started an informal activity: a food kiosk placed in front of the inter-municipal bus stop. During the five years he stayed in the parish house, Olegário progressed financially, and helped not only with the organisation of the CEBs in the countryside, but also with the foundation of the rural workers' trade union (STR) and the PT in the municipality. Today, Olegário is the president of the Agroextractivist Association of the Small Producers of Carolina. He still keeps his 55 hectare plot of rural land, where there is a small production of annual crops, but he does not regret having moved to urban Carolina: "Only in town one can have a better life", says Olegário de Souza-Carvalho (1997).

From the work of the local CEBs there emerged a small group of rural producers committed to carrying out the work involved in all these organisations. At the time of

fieldwork, the number of heads of household who were members of each organisation was approximately 130 for CEBs, 100 for the STR, 68 for the PT, and 26 for the AAPPC. The most active group is that which got involved in the association of producers. One could say that these 26 people captured the benefits associated to the *Frutos do Cerrado* project for themselves. However, they are the only ones who maintain a group dynamic of participatory decision-making. They are self-defined as *conscientizados*. In other words, their CEB membership induced them into a group dynamic that helped develop a critical consciousness, in the terms proposed by Freire.

Participation of women is greater in the CEBs, where the majority of active members are female. Secondly, their participation is more representative in the Workers' Party. In the last local elections for the Prefecture, the PT put forward two females candidates (principal and vice). Females, mostly rural producers' wives, attend party meetings, and in most of cases, conduct them. Women attend STR meetings if they are at retirement age. Their participation in AAPPC discussions, however, is minimal. Even if they are present, in most the cases they have no voice.

The group of rural workers involved in the triad CEBs-STR-PT has permanent contact with CENTRU's office in Imperatriz since 1986, when Carolina's STR was founded. They did not have, however, any contact with the CTI office in Carolina, which had always maintained a very low profile in relation to the local urban community, and rural producers. Due to their links with CENTRU, the Carolina rural producers had been examining the possibility of forming an association or a co-operative since the end of the 1980s. It was the possibility of obtaining a grant from the Pilot Programme's PD/A that gave the incentive they needed for the establishment of the association. However, they did not have any capital to invest. The solution came from a project financed by the Global Environment Facility/Small Grants Programme (GEF/SGP), which granted the AAPPC US\$ 30,000.00 in 1995. This money was used to build the association's house, and start small-scale production of sweets from local fruits.

The introduction of the AAPPC in the lives of these small producers has meant a sizeable increase in their off-farm, non-productive activities. They meet once a

month to discuss problems related to the AAPPC. They also meet once a month to discuss party politics, and once a month for trade union arrangements. They try to have the first two meetings on the same day, which is not possible with STR meetings due to the large-scale attendance of rural workers. For small producers, these memberships also imply payment of some cash contributions, set at one day of work for both the STR and the AAPPC. For the PT, members contribute only occasionally, and it is generally in kind, such as two chickens or half a pig. There are some extra expenses, like preparing protest banners.

To keep all these activities, together with rural production, one needs a great deal of entrepreneurship. Presence at the meetings also has an economic cost associated with the loss of one working day, and any transport costs. This is a deterrent to others getting involved in these organisations, although probably not the most important one. There are also political reasons that prevent people participating.

According to Olegário de Souza-Carvalho, AAPPC membership is not closed, "it is just the people that are too slow" (to get in) he says (1997). However, AAPPC members demand that one should be *conscientizado* in order to be allowed membership. For them, this means being an active member of the STR. According to Siqueira (1997a), small producers wanted to include in the *Frutos do Cerrado* project proposal a clause stating that only members of the STR could be members of the AAPPC. This clause was not included due to CTI opposition, but in fact remains as an unwritten rule. Amongst the current AAPPC members, all are members of the STR, and just one is not a member of the PT. This person's links to *pé rachado* politicians are clearly not welcomed by the members of the party. In relation to religious links, this group seems to be flexible enough not to impose Catholicism as a precondition for entry to the AAPPC. CEBs may have originated from the Catholic church, but they are ecumenical.

Members of the AAPPC are very proud of not being totally dependent on the local elite (or the *coronéis*). They have managed to a large extent to bypass the major mechanisms of local control associated with transport, employment, education (mostly for the youth), and occasional payment of expenses, mainly for medicines and health treatment. This was possible due to the triad CEBs-STR-PT, which

permits collective action on behalf of mutually agreed goals, as proposed by Freire's "liberating education" approach. Liberation, however, has its costs.

The only membership that in fact does not imply a clear risk of political harassment is that of CEBs. Local people are very religious, and the vast majority is Catholic. Politicians or members of the local *élite* would not openly oppose membership of such organisations. What they do is try to attract some of these 25 rural base communities under their influence by giving local people free transport and other benefits. However, opposition to the STR, as well as to the PT, says Olegário (1997), is very open, and involves direct harassment of non-members. Says Olegário:

"Small producers are told by the politicians that trade unions and the PT want to seize other people's land, and promote conflict and commotion. One that is told this pass the same information to other people. In Carolina, the capitalist system is very strong. *People believe that one cannot go against the government*, that what the government does is the correct thing. The small producers, but mainly the tenant and the cowboys (people with no land) fear they may lose their jobs. So these people just go to the STR when it is time to get their retirement pension and they need a letter from the trade union to do so."

Souza-Carvalho, O. (1997; emphasis added)

Olegário was then asked: how could this state of affairs be changed? He answered:

"I do not know, because this tradition is very old. They (the politicians) only show off when the election is approaching, only at this time *pé liso* and *pé rachado* start to fight each other. *While they are still alive I do not think that things will change.*"

Souza-Carvalho, O. (1997; emphasis added)

Finally, he was asked: "Do the members of the STR suffer pressure or intimidation?"

"To a certain extent there is no persecution. Sometimes there is a threat, but nothing has happened so far. The difference between capitalism and socialism is this... the powerful control the small and prevents him from growing. *Only is frightened the one who is not aware* (i.e. *conscientizado*), *then he is afraid to express his opinions.*"

Souza-Carvalho, O. (1997; emphasis added)

From the three quotations above emerges a profile of the *conscientizado* rural producer: he has a critical attitude towards his life circumstances, so he is not afraid

of expressing his opinions against the government. The organisations of collective action and mutual support guarantee some room for manoeuvre under local harassment, but they cannot see any concrete way out of the conditions of oppression. The opinions manifested by Olegário were confirmed during fieldwork: the mechanisms of control established by the urban-based local élite imply that people must not make any criticism of the local élite. Fieldwork observation revealed that rural producers were able to make some criticisms in relation to the federal government, or, rarely, against the state government. However, both rural producers and urban people would never openly criticise local politicians, even if they are able to make a judgement regarding the conduct of local authorities. In many cases, however, most local inhabitants are unable to articulate such judgements. According to Iracema César, president of the local PT, "the economically disadvantaged ... do not know even their rights" (1997).

During fieldwork, members of the PT prepared protest banners for two occasions: the town's birthday, and the beginning of the summer vacation, when Carolina town has plenty of tourists. They fixed the banners on urban posts late at night, in order not to be seen. In both cases, at dusk, all but one had already been removed. The only banner allowed was one asking tourists not to throw rubbish around. After the second episode, this researcher commented on the fact with some acquaintances. A few days later he was stopped in a local square by the director of the middle level public school who said "you are a threat to this town", and left quickly. This is harassment in practice, and if it is linked with lack of education or poverty, it has the effect predicted by Olegário when he said that people believe that it is not possible to oppose the government, in other words, the local élite.

The banner that was allowed to stay is also representative of the way in which the élite approaches the AAPPC. While opposing the STR and the PT, the local Prefecture has probably been the major consumer of the fruit pulp produced by the small processing unit installed by the CTI. Additionally, it has helped to refurbish the building in which the processing unit is placed (Siqueira, 1997). This is a paradox, because by consuming pulp production, the Prefecture is indirectly strengthening the AAPPC, and therefore the STR and the PT. One possible explanation would be that

the current *pé liso* administration has decided to challenge the historical practice of *coronelismo* in the town.

Another possible explanation is that it is not convenient for the Prefecture to oppose an initiative that involves the federal government, as well as international governments and agencies. This second possibility is reinforced by the opinion of Gonçalves de Carvalho, a large farmer, according to whom "it would be bad for the local politicians if an outsider was successful in his production in Carolina, because it would show that it is possible to be different. If one is successful here he will create a problem." (1997). Teo Marcolino Teodoro, the largest rural producer based in Carolina, adds: "I came with money (from São Paulo) to invest here, and I had all the 'doors' closed to me" (1997). Teodoro is referring to support from the local public administration.

Finally, the Prefecture's co-operation may also reflect the non-existence of other business activities from which it receives support and that could be negatively affected by *Frutos do Cerrado* competition. In the case of Carolina there is a small producer of cerrado fruits -- Aauto Teodoro --, but his production is minimal and can only supply the local market. Additionally, this producer is the brother of Teo Marcolino Teodoro, probably the richest farmer in town, who balances his political support amongst the two main political groups. It is difficult to see who the Prefecture would support in the case of fierce competition between Aauto and the *Frutos do Cerrado*.

This section has therefore placed the *Associação Agroextrativista dos Pequenos Produtores de Carolina* in the context of local politics, related to both their own activities, and to the formal political life of the municipality. It has been shown that the beneficiaries of the *Frutos do Cerrado* project have about 20 years of experience in collective and participatory work, associated with the CEBs. Additionally, they have 10 years experience with the STR, and some eight years of activities with the Workers' Party. The origins of these organisations and their mutual relations have also been analysed in the beginning of this chapter. The following sections will examine the *Frutos do Cerrado* project proposal, and the way in which the project

has developed. This discussion will be complemented by fieldwork observations and analysis.

The *Frutos do Cerrado* project proposal

At the end of 1994 and the beginning of 1995, members of CENTRU and CTI scheduled a number of meetings with rural producers from all nine municipalities in which the former NGO already had some work involving the organisation of rural producers. In addition, one municipality in the state of Tocantins, which was in the interest of the CTI as it was close to an Amerindian area, was included. At the end, ten organisations of rural producers became involved in the project, which officially started in 1 April 1996. As became clear later (Verdum and Antonious Jr., 1997: 18) rural producers and Amerindians were informed of the project outline, but they did not participate in its design. The producers, located in ten different municipalities, some very distant from Imperatriz and Carolina, were CENTRU and CTI respectively, established two technical secretariats responsible for the administration and technical assistance involved in the project.

Each secretariat became responsible for assisting five organisations of rural producers, which were divided geographically between "north" and "south". Map 6.1 provides a view of these organisations according to the name of the municipality in which they are located. A sketch of Carolina's municipality, indicating the location of the farms where questionnaires were applied, is provided in map A-2, in annex "A". Those organisations of rural producers in the "north", under CENTRU's responsibility, are the co-operatives of Imperatriz, João Lisboa, Montes Altos, Amarante do Maranhão, and Estreito. In this area, the natural environment (once a tropical forest) has been virtually totally replaced by pasture, and the production of fruits would come from plantations financed by the project. The organisations in the "south", under CTI responsibility, are the co-operatives of Loreto, São Raimundo das Mangabeiras, and Riachão, and the associations of producers of Carolina and Santa Maria do Tocantins. The project established that the processing unit located in Carolina should receive all the production of all co-operatives and associations of producers.

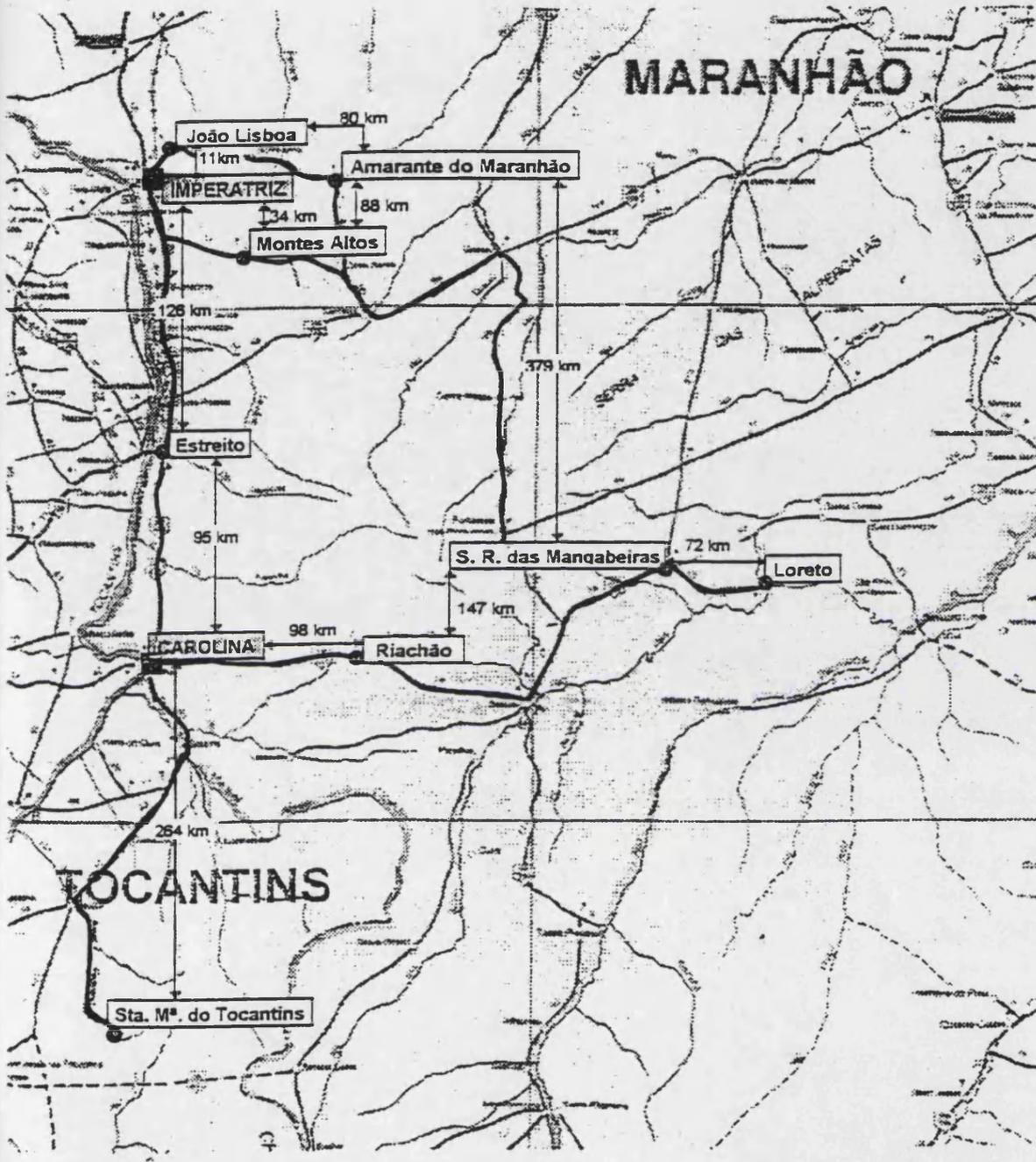
The proposal also established that a central aim of the project was to make the processing unit economically feasible. For this purpose it was established that 40 per cent of the net profit would go to the Vyty Cati Association (the unit's owner), which would reinvest 10 per cent in the factory and keep 30 per cent as profit. The remaining 60 per cent would be divided amongst the 10 co-operatives and associations of producers involved. The CTI also created a brand for the fruits' pulp called Fruta Sã (Healthy Fruit), and donated it to the Vyty Cati Association. The processing unit was meant to produce only Fruta Sã products.

Therefore the commercial relation foreseen for the project, in the words of Azanha, was that "the Amerindians own the Fruta Sã company, and the peasants own the raw materials. This is the (commercial) relation that we want to maintain... I do not want to see the Amerindians working too much with this issue of extraction, we had a bad experience with this in the past" (1997). The Amerindians, therefore, got into the project via the CTI, which acts as an intermediary NGO on their behalf. Although some Amerindians were taken to some meetings, which other representatives of organisations involved in the *Frutos do Cerrado*, most of the time they would be represented by the CTI.

A project was then formulated for each organisation of rural producers involved. Additionally, CENTRU and CTI also formulated a project for monitoring and technical assistance. In the first proposal submitted to the PD/A Technical Secretariat, located in Brasília, the cost of each rural organisation's project was estimated at US\$ 300,000.00. This value, however, was considered to be too high by the Projects' Evaluation Commission of the PD/A, and each project cost was reduced to some US\$ 100,000.00.

The PD/A directives establish that projects' beneficiaries (amongst whom are also intermediary NGOs) should contribute about 20 per cent of the project value. Having no working capital to invest, the beneficiaries included their own labour power as counterpart funds. This means that they committed themselves to work for the project without a salary. In the case of Carolina, the value of the grant required from the PD/A was US\$ 79.692,02, and the counterpart funds offered value US\$ 19.999,98. Therefore, the total value of the Carolina project is US\$ 99.692,00.

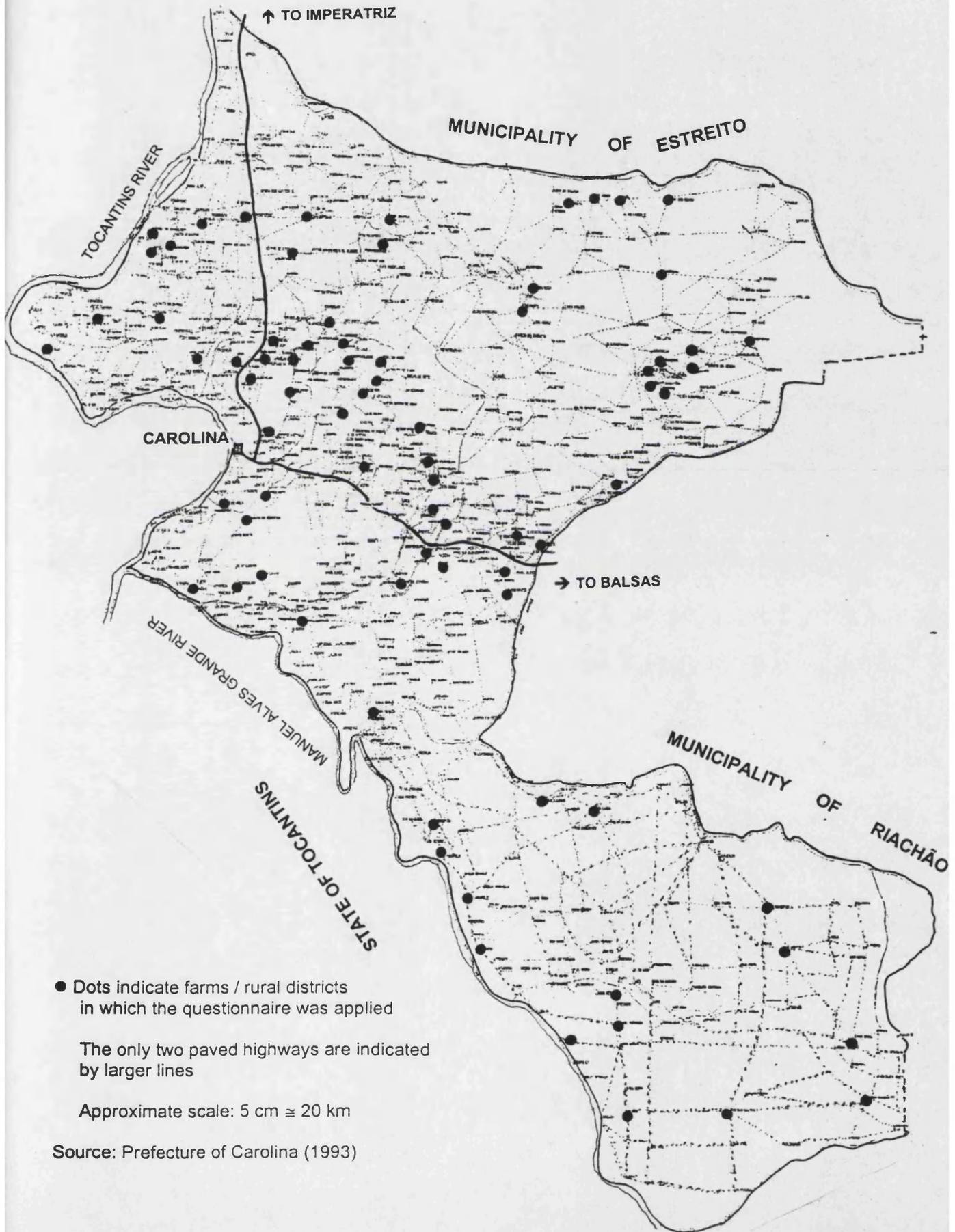
MAP 6.1 - LOCATION OF MUNICIPALITIES WITH *FRUTOS DO CERRADO* PROJECTS



(major road links are highlighted, and distances indicated in kilometres)

Source: Silveira and Amaral (1996)

MAP 6.2 - CAROLINA MUNICIPALITY



As mentioned above, CENTRU and CTI organised meetings to discuss the project proposal with rural producers, but the latter did not participate in its final drafting. One of the reasons for this is that the form conceived by the PD/A asks for a detailed plan of expenditure, which is too complicated for the rural producers or Amerindians to undertake. Other reasons are the lack of a participatory approach by the intermediary NGOs involved.

Additionally to the financial information, PD/A forms ask for information on three areas that are relevant for the analysis pursued here: the project contextual background; its general and specific objectives, and the internal and external favourable and non favourable conditions for project implementation. The strategy of CENTRU and CTI was to present basically the same text for these three requirements, under the justification that they were proposing a network of co-operatives and associations, broadly located in the same region. The following three sub-sections will present the proposal as submitted for the AAPPC.

- *Project contextual background*

In this requirement, the project states that "it is necessary to make use of and to value the experiences derived from the ground work and discussions, while formation and capacity-building advance, in order to get fair and durable changes in the context of a group's economic, social and cultural poverty" (*Frutos do Cerrado*, 1995: 2). In addition, the proposal alleges that a short-term feasible alternative to avoid environmental degradation of the *cerrado* would be the implementation of a programme that could add value to the region's raw materials (fruits). This should be done "in such a way that the rural producers' which have land adjacent to Amerindians' areas would not sell their properties or transform them into pasture" (*Frutos do Cerrado*, 1995). Finally, the text asserts that the proposed project can be justified by its intention of being "totally self-sustainable in the medium term, given that the processing and commercialisation of fruits will create conditions for the beneficiaries to carry on the activities planned" (*Frutos do Cerrado*, 1995).

A number of relevant points for analysis emerges from the contextual presentation of the project described above. First, both CENTRU and CTI place strong importance

on their own working experience ("on the ground work"), but make no reference to the working experience of the beneficiaries and their (economic, cultural, aesthetic) relationship with the environment. It is assumed that the two organisations' working experience will be sufficient to produce durable changes in the rural producers' condition of poverty, which are not properly analysed and related to broad economic, environmental, social, cultural and political circumstances. Second, central concepts such as "formation" and "capacity-building" are not qualified in relation to specific activities. Third, the condition of sustainability is predicted, but in an imprecise "medium term". Furthermore, sustainability is related to the implementation of planned activities resulting from the project economic performance, and not to people's livelihood needs.

What seems more relevant for investigation is the emphasis on the foreseen capacity of and results from the two intermediary organisations' working experience. While some importance is placed on a generic "formation" and "capacity-building", the rural producers 20 years of experience with social organisation around CEBs is ignored. Moreover, the two NGOs exclude from the background context their own political background, analysed previously in this chapter. Further points can be raised from other sub-sections of the project proposal.

- *General and specific objectives*

The general objective, as presented in the proposal, states that "the central idea of the project is to make feasible the full operation of the fruit processing unit", which would be donated to the Amerindians' association. This unit has capacity to process up to 200 kg per hour. After processing in Carolina, the fruits "would return to their (municipality of) origin for storage and marketing" (*Frutos do Cerrado*, 1995: 2). Additional general objectives mentioned are (a) providing beneficiaries the opportunity to make proper use of the environment; (b) avoiding and repairing soil degradation; (c) strengthening the organisation of the groups involved in the project; (d) encouraging recuperation of degraded land via the replanting of perennial trees; (e) diversifying rural production based on annual crops; (f) conserving and valuing the *cerrado* and the people that live in this region. Other project proposals also

include within the general objectives the aims of generating income and stabilising the producer in the rural area, with a view to avoiding rural-urban migration.

The specific stated objectives are: (a) to grant about 30 families, which the proposal says have plots of land of quite different sizes, some as low as 20 hectares, the majority about 50/60 hectares, and others more than 100 hectares; (b) encouraging participation by and empowerment of the existing organisations, especially the AAPPC and the STR; (c) Environmental recuperation through planting of fruit trees.

A number of points germane to this discussion can be raised from the general and specific objectives mentioned above. First, there is a clear confusion about the dividing line between what should be generic or specific objectives. In both cases, a central fault is the lack of a focus on the beneficiaries' livelihoods. The central aim, for example, is not to generate sustainable livelihoods by making profitable use of managed fruit plantations that will help recover cleared land. Rather, the principal aim, as one may deduce, is environmental protection associated with generation of cash income.

In addition, there is some inaccuracy in terms of the number of beneficiaries ("some 30 families"), and the size of their plots. This information was obviously available, and its absence suggests that the project has been formulated without adequate participation of the beneficiaries, a fact later confirmed. This is also reflected in the absence of an objective that matches project aims with the needs of the members of the family. The specific form presented for the Carolina project does not include the aim of stabilising the producer in the rural area, therefore avoiding rural-urban migration. This aim, anyway, appears in other documents.

What the project does not consider is that producers who are members of an association or a co-op are already less prone to migrating than non-members and what they really need is to build up conditions to secure their children a stable future, if possible in the same municipality. This question became clear on the very first meeting with project beneficiaries in the rural community of São Bento: when asked what should be improved in the *Frutos do Cerrado*, the heads of household were unanimous in asking for technical training for their children.

- *Internal and external, favourable and unfavourable conditions for project implementation*

The project proposal also included a section that was meant to identify the circumstances that could affect project implementation both in positive and negative ways. This is a key section because it not only reveals whether those who presented the proposal understood the project insertion in the local and national scale, but also shows the extent to which they were truthful.

The project proposal identifies as "favourable internal conditions" the fact that "a number of meetings" had taken place since 1993 to discuss the direction of the project, and that the group of small producers is "well organised" (*Frutos do Cerrado*, 1995). The unfavourable conditions mentioned were two: the "lack of experience of participation in development projects, and the fact that the association of producers was legally formalised recently" (*Frutos do Cerrado*, 1995: 3)

Amongst favourable external conditions, the project visualised the large supply of raw-materials (i.e. fruits) in the region, a growing market for fruit pulp in the region, and the fact that "the local population was receptive to the project" (*Frutos do Cerrado*, 1995: 3). Unfavourable conditions predicted were some possible problems with the fruit harvest and "interference with the local élite" (*Frutos do Cerrado*, 1995: 3).

The set of conditions above bypass a number of relevant issues, some of which have already been discussed in this thesis. This chapter, for example, has analysed the work of CEBs and their overlapping methods and aims with Freire's "liberation education". The AAPPC is a result of 20 years of the *conscientização* of a group of local producers. They are not simply an "organised" group of rural producers that have recently created an association, as the proposal suggests. The formal organisation of the AAPPC is just a step, and not the end of the ladder. Moreover, these producers have emerged locally as the only organisation that has managed to establish itself by its own means, grow, and be strong and confident enough to criticise the local élite, despite *coronelismo* practices.

The producers' social and political organisation is probably the major strength of the *Frutos do Cerrado*, but the failure to mention this reinforces the suggestion that the project proposal was elaborated without full participation of the final beneficiaries, including the Amerindians. It is relevant that no condition attached to the Amerindians appears as favourable or unfavourable. This is probably because their participation has been conceived as a group benefiting from the profits of an activity in which they are not really involved.

A second point worth mentioning, is the background of the two NGOs involved in the *Frutos do Cerrado*, which constitute both positive and negative factors that were not included. While the practical experience with direct work with communities of both NGOs could be considered a favourable internal factor, their different organisational cultures and praxis have led to clashes that should have been anticipated. This applies to both organisations' lack of knowledge about accounting, finance, technology, marketing, and general management techniques involved in an income-generating project. Moreover, local circumstances of people's rural-urban relations have been omitted. As will be discussed in the next chapter, the urban linkages of project beneficiaries are far stronger than those linkages of non-beneficiaries. In the project proposal all members of the AAPPC appear as small-scale rural producers. Some, however, do not even own land.

A major problem within each municipality is that local producer organisation was based on religious and political links, not only on geographical location. In Carolina, beneficiaries' plots are located in different parts of the municipality, some 100 kilometres from another via dirt roads. This has a largely unfavourable impact on project development due to problems associated with technical assistance, communication, flow of raw materials into production, analysis of cost, etc. Moreover, some producers have land located on sandy soil, while others are on clay. In practice, it represents two projects in one in terms of technical assistance and tree yields.

The set of external conditions, in its turn, bypasses an absolutely necessary evaluation of the project economic feasibility, which is directly linked with marketing

capacity. In this regard, the project omits to mention the existence of Aduino Teodoro, a small-scale producer of cerrado fruit pulp in Carolina, who competes with the *Frutos do Cerrado* in supplying the local market. Its processing capacity is much lower than the project (120 kg/day against 1 ton.), but he is able to sell all his production.

On the other hand, the *Frutos do Cerrado* processing unit was selling only some 50 kg per week at the time of fieldwork according its manager, João Martins (1997), who is also a member of the AAPPC. Teodoro produces on his own land, which is only two kilometres from the town centre, and is partially irrigated with a system donated by the Prefecture. Additionally, Aduino Teodoro's production is totally informal, and pays no taxes, while the *Frutos do Cerrado*, is obliged by the PP-G7 to declare all commercial transactions and pay taxes (Teodoro, 1997a). Finally, the evaluation of possible external unfavourable conditions also bypasses a closer appreciation of the local élite's possible influences. As analysed previously in this chapter, the economic success of the project may represent a political affront to local *coronelismo*.

In summary the project, as presented and approved, does not relate clearly to the real conditions faced by all the stakeholders, especially the current beneficiaries whose livelihood dimensions are not referred to. Additionally, rural producers appear as rural people entirely committed to their production and no evaluation of their broader needs and expectations is provided. It seems that the version presented to the PD/A was conceived to show the project as easy to implement, and free from political interference. While the PD/A cannot provide welfare-type assistance, including education and health services, the correct appraisal of this sort of problem would certainly help to design the project in a better way. In this regard, technical training associated with a strategy of involving other members of the household in the project would certainly improve *Frutos do Cerrado's* impacts and outcomes.

For this to be accomplished, however, it would be necessary for those who in fact presented the project (i.e. the intermediary NGOs), to have a comprehensive view of people's livelihood needs. The same would clearly be applicable to those who approved the project. In the absence of either, a number of drawbacks and areas of

friction appeared. Some were identified in the activities of monitoring and evaluation carried out upon PD/A request. The result of these activities is the theme of the next section.

Monitoring and evaluating the *Frutos do Cerrado*

This section describes and analysis three efforts of the PD/A to monitor and analyse the *Frutos do Cerrado*. It has probably been the project that has received closest attention from both government and donors due to its size, complexity, and innovation in terms of bringing together Amerindians and rural small producers, two groups that historically have lived at odds with each other. Each of these studies raises questions about the economic, environmental and social sustainability of the project. The latter issue, which will be highlighted in the following text for being the central issue of this thesis, was not developed in all monitoring and evaluation efforts. They paid far more attention to the project's financial and environment impacts.

The financial analysis clearly demonstrated the very poor performance of the project in terms of marketing, and a relatively poor performance in terms of production. These two problems reveal that the project was conceived without a marketing plan, and that the intermediary NGOs had only a vague notion of the work involved in the process of commercialisation, and of the market potential of their products. While this is a substantial fault on the part of the NGOs, it is also a fault on the part of the PD/A bureaucratic structure, which approved a project based strongly on income-generating aims without an adequate appraisal of the procedures involved.

The issue of environmental sustainability received a more favourable evaluation in the report. Planting of trees has proceeded slowly, but advances have been achieved. Rural producers have started to realise the economic value and the ecological functions of their natural environment, and the reasons why it should be preserved for sustainable use. However, the reports also stress that producers still maintain the practice of using fire to prepare the land for cultivation, and that some areas which were not totally degraded have been burned for planting trees.

None of the documents generated under monitoring and evaluation analysis has made a deep investigation of social issues. In addition to this pitfall, the analysis, when carried out, presented the evaluator's own view, and not that of the beneficiaries. At this point, it is worthwhile specifying the concept of social analysis adopted in this thesis.

"Social analysis is concerned with how people and groups understand, order and value their social relationships and systems of social organisation. The purpose of such analysis is to help ensure that the human and financial commitments, which make up development projects, do actually bring the intended benefits. Development projects are concerned with change; a social analysis draws out the implications of change *from the perspective of the people involved in that process.*"

Overseas Development Administration (1995: 4; emphasis added)

The key issue to be noted from the above quotation is that beneficiaries should be the central focus of development projects since they are concerned with change. Additionally, this definition also stresses the linkages between human and financial commitments, which is necessary for success. Finally, it makes clear that a proper social analysis should capture the perspective of the people involved in the project. This is a central question, but in cases like the *Frutos do Cerrado*, in which the project started without proper participation, a later evaluation of beneficiaries' views will be hindered because it would not be possible to make comparisons with the views they had at the time the project started.

Moreover, if the beneficiaries are not properly involved in project execution, they will not have much to say about it. In the case of Carolina there was, and there has been, a lack of *ex-ante* and *ex-post* participation. As a consequence, the so-called beneficiaries do not have control over the project. According to Joaquim de Souza-Carvalho, one of the project co-ordinators for the rural producers, "after the fruit gets into the factory we do not know what happens" (1997).

The following will therefore present the most relevant issues raised in each of the three monitoring and evaluation documents. Special attention will be given to the

reports' focus on social issues, and to the way in which they approach people's sources of livelihood.

- *First Monitoring and Evaluation - August 1996*

The first monitoring and evaluation study was undertaken only four months after the beginning of the project, and was called "Diagnosis of the Initial Phase Implementation". The report was produced by two external consultants, Caio Márcio Silveira and Carlos Amaral. Their work involved not only the AAPPC, but also six other municipalities in which projects had started to be implemented. Therefore the information available can only be related to the Carolina project in its more generic context. The report does not state how many days were spent on the field.

This report identified at an early stage of the project implementation a number of pitfalls related to its economic feasibility. The document raises questions about the need for working capital for the processing unit and the co-operatives and associations of producers; the lack of economic advice to the project technical secretariats; the lack of funds for advertising; the inadequacy or lack of some equipment for production and storage; and the non-inclusion of social benefits regulated by law in the analysis of labour costs, amongst other subjects. It concludes with a series of recommendations for the improvement of production, trading, and inter-institutional relations between project intermediaries and the government bureaucracy. As a whole, the report gives strong support to the *Frutos do Cerrado*, so much so that the large amount of praise for it is surprising.

Some arguments presented in this report relate more closely to this thesis' analysis and deserve elaboration. First it is worthwhile pointing out how the authors have identified local producers involved in the *Frutos do Cerrado* project.

"The small producers' land is a unit of production and consumption: from it the producer extracts the essential (products) to feed the family, without going into monetary or market relations ... This is subsistence cultivation ... (and) it is common the raising of animals on a very small scale ... The priority, anyway, is domestic supply, which orients the routine and the logic of the small family units."
Silveira and Amaral (1996: 6)

The view of the beneficiaries presented in this report seems to be very close to the approaches of Shanin and Friedmann. The former portrays the peasantry as small agricultural producers who produce for their own consumption with the help of simple equipment and the labour of their families. The latter establishes a difference between subsistence and commoditised production. If the approach taken in the report is this, then local peasants would be considered subsumed to capital. The authors, however, do not get into this debate.

The theoretical bases that support the views presented in this report have been discussed in chapter 1. If the production units of the *Frutos do Cerrado* rural producers are characterised as subsistence-driven, marketing occasional surpluses, then production should be divided between subsistence and commoditised portions. Such a division would therefore imply that the same production unit would be under two concomitant sets of economic rationality: the capitalist and the pre- or non-capitalist subsistence load, with some degree of autonomy from capitalism. However, in chapter 1 it has been argued that, from the point-of-view of peasants, it makes little sense to divide production between subsistence and the market. For the peasant, all production can go to the market if the terms of trade are favourable.

An inspection of the actual livelihood strategies of AAPPC rural producers shows that the image as subsistence-driven peasants is not correct. They have diverse sources of income, some of which are not linked to farm production. These members of the project organised a street market to sell their agricultural production directly to the consumer, something they already do individually, anyway. This street market, however, had to stop when the *Frutos do Cerrado* begun, and the producers did not have enough time for both activities. As an additional complication to a classification of the producers as merely peasants is the fact that some rural producers of the AAPPC are also businessmen in urban Carolina.

Moreover, amongst local rural producers, cattle-raising has always been the central activity. The fact that the report dismisses its importance is relevant in that it overlooks the logic of local reproduction forms. Their cattle can be minimal if

compared to a *coronel's* herd, but for them the few cattle heads they own have a fundamental economic and social meaning. In that economy, cattle ownership signifies savings, and it was the most difficult information to get with accuracy in the rural questionnaire. This is because cattle ownership is not only a reserve of capital, but also an indicator of social status. The larger the herd, the more strongly the proprietor can impose his claims on local society.

Finally, the portrayal of local rural producers as tied to the land has a political benefit and a shortcoming. It is beneficial for those whose work involves the economic and, mostly, political organisation of the peasantry. If peasants are not exclusively peasants, i.e. if they have other livelihood strategies that involve strong urban dimensions, those individuals and NGOs working politically with rural producers would lose much of their discourse power and capacity to organise producers around a common objective. However, the portrayal of these farmers as subsistence producers ignores a large variety of livelihood strategies, and most of them involve some links with urban areas, as discussed by Cleary in chapter 2.

Urban linkages are high amongst Carolina's project beneficiaries, as will be discussed in the next chapter. This may also be the case in other municipalities where the *Frutos do Cerrado* has been implemented. According to Azanha (1997), in the municipalities of Imperatriz, João Lisboa, Amarante, Montes Altos, and Estreito, most rural producers live in town, which is not the case in Carolina. One could therefore suppose that the urban linkages found would be even stronger in these other localities than in Carolina.

The consultants' report also points out, in relation to the beneficiaries' workload, that "[a]s is widely recognised by the technical staff and co-ordinators of the project, it is necessary to identify the actual availability of labour for these activities. Especially because of the time required for preparing the land for planting, and the care needed with the plantation over the next three years" (Silveira and Amaral, 1996: 13). In the first version of the project presented to the PD/A, the producers' work on their own plantations was to be paid at the rate of R\$ 5,00 a day.

Therefore, it was assumed that, by being paid, the producers would dedicate themselves to their new fruit plantations instead of to their normal crop production and cattle-raising. When the scope of the project had to be reduced, this value was taken as a counterpart contribution. Therefore, in the end the beneficiaries just added a new activity to their normal workload. This means that their ability to commit themselves to the new plantations is probably inadequate.

Table 6.3 presents a graphical view of the overlapping activities between normal crop production and the period of the extraction of the three most important fruits for the project so far: caju, cajá, and bacuri⁷. The table, which is based on interviews with three rural producer members of AAPPC, does not include other possible types of work associated with fruit planting, like normal care (*tratos culturais*). This is because this type of work has not become a routine activity yet.

It is clear from table 6.3 that the period of most intense activity for rural producers lasts from October to February, when the crop planting takes place. Planting is also more difficult and laborious than harvesting. During these months, but especially between November and December, rural producers' children are called back from urban schools to their parents' property to help planting, says Maria Aglair Ferreira Dias (1997), Carolina's secretary of Education. This explains why, according to José Carlos da Costa-Rodrigues, agricultural and cattle-ranching adviser of the *Frutos do Cerrado* in Carolina, "the producers have not given priority to the project so far, but to their crop production" (1997).

In fact, the overlapping of these activities implies that intensive fruit production will not be compatible with normal crop production, unless one of the activities receives sizeable technical or labour inputs so that both could be carried out at the same time. If such inputs are not available, then the *Frutos do Cerrado* would lead to a substantial, if not complete, change in the beneficiaries' production base, because they will hardly be able to keep both activities at the same time. The

⁷Caju is known in English as cashew fruit. "Eurodicatom", the Terminology Office of the European Commission (<http://www2.echo.lu/edic>) translates cajá as "otaheite apple, ambarella, or jew plum". There is no translation for bacuri.

passage from one stage to another is delicate, but the *Frutos do Cerrado* has not foreseen mechanisms (such as safety-nets) to deal with this problem.

A second important point in the consultants' report refers to the way in which the project was being implemented. According to them, "the quality of the technical staff is one strength of the project ... It should be highlighted their fieldwork experience and specially their capacity to communicate with the local population" (Silveira and Amaral, 1996: 13). This is certainly exaggerated, as problems with beneficiaries' participation in programme design suggest. Furthermore, the next chapter will discuss the producers' difficulty to understand the technical assistance provided. This refers to problems of communication for development, and reflects differences in urban and rural forms of mental articulation and expression.

- *Second Monitoring and Evaluation - May 1997*

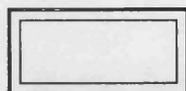
The second monitoring and evaluation was carried out by PD/A internal staff, and produced separate reports for each municipality visited. The consultants Ricardo Verdum and Gert Wolfgang Antonious Jr. visited Carolina between 9 and 10 of May 1997, and produced a report that follows a pre-set form with fixed fields to be filled. The result is a report that is more attuned to the practical conditions of implementation, and less concerned with classifications, as was the previous report. In practice, it is a "check-list" of planned activities.

Amongst the most important items identified by Verdum and Antonious Jr. (1997) is the commitment of rural producers to project administration. The report first notes that a course on "management, accountancy, and marketing" that should have been provided by the CTI and CENTRU for the rural producers was not carried out. This course was meant to enable rural producers to complete project progress reports, currently done by CTI staff. Costa-Rodrigues (1997), one of the advisors responsible for the progress reports, estimates that this activity is consuming about 60 per cent of his time. Therefore, once transferred to the AAPPCC, this activity will require that at least one rural producer dedicates almost his entire time to producing reports and following the project administration.

Table 6.3 - Beneficiaries of the *Frutos do Cerrado* project annual calendar of activities, Carolina, 1997

Activity		January	February	March	April	May	June	July	August	September	October	November	December
Crop, Timber and Others	Land clearing												
	Burning												
	Timber extraction												
	Beans Planting												
	Manioc Planting												
	Rice Planting												
	Corn Planting												
	Others Planting												
	Maintenance												
	Beans Harvest												
	Manioc Harvest												
	Rice Harvest												
	Corn Harvest												
	Others Harvest												
Fruit	Caju Harvest												
	Bacuri Harvest												
	Cajá Harvest												

Source: Fieldwork data, interviews with Olegário de Souza-Carvalho (1997), and José Francisco de Moura (1997), Carolina, July 1997



Indicates the period of fieldwork in Carolina

Additionally, the consultants' document also notes that each of the six rural producers involved in the project administration as co-ordinator or driver, with permanent salaries for this function, should expend to work 80 hours per month on the activities required. This means a commitment of some 10 days per month, which certainly has a large impact on the producers' capacity to carry out his agricultural production. In fact, during the first year of project implementation, producers involved in administrative functions were unable to meet their rural production needs. Rosi Oliveira da Silva, and Arão Dias dos Santos, AAPPC co-ordinators, together with Joaquim de Souza-Carvalho and José Francisco de Moura, the drivers, had to ask other members to organise a collective effort (*mutirão*) to help harvest their production. Even so, the yield was lower than normal and they had to use savings to buy food for their families.

Therefore, the administrative functions of the project, eminently urban activities, may put at risk the AAPPC members' production levels. This has a significant impact on their livelihoods, but has not been analysed in any report so far. It also implies that activities leading to the expansion of capabilities may have a cost that counter-balances the benefits acquired. If aim of the *Frutos do Cerrado* is to improve total livelihoods then it should create a system of compensation for transitory circumstances.

Finally, the report makes clear the very poor commercial performance of the Vyty Cati Association in managing sales. According to the consultants' information, the processing unit had produced 4,600 kilos of fruit pulp, of which only 41 kilos would had been effectively sold. This information contrasts with Martin's, the factory manager, according to whom some 50 kilos were being sold every week. The major problem, however, relates to the economic feasibility of producing fruit pulp in a relatively isolated area of the country. One kilo of *Frutos do Cerrado* cajá pulp, for example, is sold in Carolina for R\$ 3.50 (£ 1,75). However, in the sophisticated northern shoreline of the São Paulo state, where purchasing power is amongst the highest in the country, the same cajá pulp is sold for only R\$ 4.50 (£ 2,25) (Frutamania, 1997). It is very difficult, if not impossible, for small producers from Maranhão to take their cajá pulp to São Paulo (some 2,500 kilometres distant) and beat this price.

This problem suggests that the PD/A should play a more proactive role in helping to define project aims. When faced with questions about the economic feasibility of PD/A projects, all members of the Brazilian government and international organisations interviewed answered that this was a problem for those who developed the proposal. The interviewers argued that project beneficiaries should be able to accomplish what is feasible under their economic and social circumstances. However, as will be discussed below, neither NGOs nor beneficiaries have the capacity to engage in income-generating activities without strong technical and financial support. This should be provided by the PD/A, in a closer relationship with beneficiaries, who should be involved as genuine partners in promoting sustainable development.

- *Third Monitoring and Evaluation - July 1997*

The last evaluation carried out was in fact a mid term review of the entire PD/A, and therefore it does not focus particularly on the *Frutos do Cerrado* project. Four consultants were involved in this effort: Márcio Santilli, Mário José de Lima, Valter Carvalho, and Virgílio Viana. They produced a report based on terms of reference that oriented the consultancy to provide recommendations in the following areas: (a) interactions amongst organisations (including those working with the Mata Atlântica ecosystem); (b) quality of the project; (c) management, monitoring and capacity-building; (d) interfaces and articulations (considered within the PD/A as well as the PD/A with other programmes); and (e) administrative procedures.

The general tone of the report is that the PD/A needs to be institutionalised within the government, that the PD/A should have a sound interaction with other Pilot Programme areas, and that local government (Prefectures) should be involved in PD/A project implementation. For the success of PD/A projects, the report recommends full participation of the beneficiaries; better analysis of their economic feasibility; greater attention to technical and managerial assistance and capacity-building; better performance of the people involved in intermediary organisations; and improvement of monitoring activities (Santilli *et al.*, 1997).

While all these items are relevant to this research, a detailed analysis of them is beyond the scope of this work. So, this section will concentrate on the issues that are more directly relevant for the discussion pursued here. The following items, extracted from the report, represent areas of major debate.

1. The concept of "sustainability"

One of the main areas of contention in development projects is the very notion of sustainability. Chapters 2 and 4 have provided a discussion of the different approaches to the concept. In the latter chapter, it was examined how the concept, within the PP-G7, is loosely defined. In the consultants' document, the concept of sustainability is used to refer to economic, social and environmental dimension. The consultant Valter Carvalho also include what he calls "institutional sustainability", which is actually a reference to the strength of the *organisations* involved in the PD/A. The way social sustainability is introduced deserves some comment.

"Social sustainability ... refers to the effective participation of the local populations, which is a consequence of their 'conscientisation' and commitment with the objectives of the Pilot Programme, and of their organisation to create the collective power needed for the realisation and permanence of common interests."

Santilli *et al.* (1997: 31)

The concepts used in this definition are loosely tied and would require some theoretical strengthening if they were to be made operational. However, what is more important is the perception of social sustainability as an outcome of people's participation. In its turn, participation is a consequence of 'conscientisation', commitment to PP-G7 objectives and organisation. The idea of social sustainability as participation also appears in other parts of the consultants' report. This view brings about two major areas of conflict.

First, participation is not defined, but one could assume from the above quotation that it is understood as "contribution" and "organisation". While these two dimensions form part of any process of participation, they would not be complete if participation did not bring about empowerment, in the sense of a transfer of power (Oakley,

1991), therefore resulting in an expansion of people's capabilities. The definition states that participation is a consequence of "conscientisation", which is true, but participation is not complete if it does not generate "conscientisation" as well. In other words, participation implies a two-way process.

Second, by splitting the concept of sustainability into different dimensions -- social, economic, ecological, and institutional --, the author misses the mutual links amongst them. Additionally, one could include other dimensions and speak in terms of the political sustainability of PD/A projects. The segmentation of the sustainable development concept seems more appropriate to projects that stress one specific factor, such as forest management, for example. Because the large majority of PD/A projects involves productive conservation of natural resources by small-scale users who are not isolated in the forest but, rather, under strong urban influences (as discussed in chapter 4), the concept of sustainable livelihoods is more appropriate. The implications associated with its non-use will be analysed in the final section of this chapter.

2. Quality of project implementation

The report judged that, overall, the implementation of PD/A projects is good, but with "variable quality" (Santilli *et al.*, 1997: 6). The relationship between implementation and quality is not spelled out, and therefore the apparent disparity is not clarified. An important point in relation to the implementation/quality of the projects, not mentioned in any report, is the urban bias of those intermediaries involved in PD/A projects, mainly NGOs. The lack of full participation of beneficiaries in PD/A programmes could be seen as an indicator of urban bias in the sense that it reflects the fact that the project was formulated in the urban area without active participation of the beneficiaries. This occurred in the case of the *Frutos do Cerrado*, as it became clear during fieldwork, and was made explicit in the second monitoring and evaluation (Verdum and Antonious Jr., 1997: 18). One could interpret such bias as a professional bias (see Chambers, 1983), but there is an urban dimension within professional bias.

One possible indicator of this urban-bias is whether project beneficiaries are able to understand the activities of capacity-building and technical assistance. In development projects, communication is a key element. If those who should transmit a message do not make themselves understandable, then the whole implementation/quality is called into question. Additionally, participation is restricted, and very soon conflicts appear.

3. The project manual

The consultants' point out that the first version of the manual was simplified in order to be more accessible to beneficiaries, but asks for further reformulation to make it still more intelligible. This recommendation is accurate, but should be extended. If the PD/A is not to have an institutional communication that is urban-biased (i.e. does not care for conceptual and lexical equivalence), and is to foster people's participation, than the project manual, as well as other communications, should consider the beneficiaries' level of formal education, and capacity of comprehension. Manuals should be designed and written in such a way that they could be understood by people with the fourth year of primary education. If it is not feasible, than at least some sort of support should be provided to help the direct beneficiaries have greater control over the project aims and strategies. The next chapter will discuss their level of education.

However, a fair perception of the beneficiaries' profile is not enough to guarantee their access to project documents. In Carolina, the AAPPC received grants from the PD/A and the GEF/SGP. The latter programme project proposal comprises only two sides of one sheet of paper, and was conceived in terms of design and language to allow people with education as primary as the fourth year of the basic level to fill it in. However, the GEF/SGP project granted to the AAPPC was in fact formulated by the CTI, as it was reported by AAPPC members during fieldwork. Therefore, PD/A should guarantee that its manuals and documents are not only adequate for beneficiaries (mostly rural people), but are made accessible to them.

4. Replication

Central to a development project of the PD/A nature is replicability. The consultants' report calls for a closer relationship between PD/A projects and local or state level organisations, such as Prefectures, state environmental agencies, and others. While justified, this recommendation does not consider possible political differences between project members and local or state politicians. Furthermore, it also neglects the influence of institutions such as *coronelismo*, previously analysed in this chapter. It has been shown that in Carolina the local administration acts with a bias towards the urban area, a circumstance that is quite likely to be found elsewhere in PD/A municipalities. Moreover, in Carolina, all the 11 local representatives oppose PT politics.

Linkages between project beneficiaries and the PT are clear in the case of the *Frutos do Cerrado*. Additionally, in the municipalities of Santa Maria das Mangabeiras and Loreto, the presidents of the co-operatives that benefit from the project are also local representatives elected by the Workers' Party. If the type of CEB-STR-PT linkage found within members of the *Frutos do Cerrado* is observed in other PD/A projects, then its replication capacity may face general political opposition.

Because replication is a requirement for long term sustainability, then the PD/A should consider including in its manual some information about political linkages and possible conflicts with local institutions. While this should not be taken as a requirement for project approval, it could help guide a sound political strategy that the PD/A still lacks. It is advisable that the PD/A considers the nature of urban-bias in local development. As it has been discussed for the municipality of Carolina, local development strategies, controlled by the élite, are in fact urban-biased.

5. Capacity-building

This report, along the same lines as the previous ones, shows a strong overall concern with the poor design to improve capacity-building. The consultants' report states that both rural producers' organisations and intermediary NGOs should improve their capacity to implement projects, "especially in relation to issues of

administration, social control and economic feasibility" (Santilli *et al.*, 1997: 9). What has been missed in terms of capacity-building is a better understanding of the nature and scope of NGOs.

Farrington *et al.* (1993), provide a detailed analysis of the positive and negative scope of NGOs in sustainable agricultural development projects. In general terms, the problems faced by NGOs in this regard could be summarised in the following terms: (a) most of the projects supported are not economically feasible; (b) a few NGOs work with employment generation; (c) a great deal of NGOs' work is not linked to public policies; (d) they normally confront, and do not support the State⁸, in the better cases, they establish reluctant partnerships; (e) there is a general lack of *ex-ante* planning and *ex-ante* definition of the sort of relationship to be established with the State; (f) NGOs have a limited capacity to undertake income-generating activities; and (g) they lack formal and systematic mechanisms of accountability.

Most, if not all of these points could be related to the development of the *Frutos do Cerrado* project. Moreover, in the case of the *Frutos do Cerrado*, both CTI and CENTRU are overstretched by the project they conceived themselves. A number of mistakes in the implementation of the project were clear, but perhaps because of their lack of experience with accountability they (especially the CTI) tried to obstruct the access of this researcher to the information available in the NGO's office in Carolina. Therefore, to really improve capacity-building, the PD/A should consider supporting projects of a more "down-to-earth", realistic marketing strategy. In other words, the PD/A should carefully consider the intermediary NGOs' and beneficiaries' capacity to accept and adopt technological changes and establish and perform sound administrative controls and commercialisation practices with accountability.

Furthermore, the PD/A should make an *ex-ante* careful evaluation of the training needed to meet the above requirements. In this sense, the PD/A should have foreseen and executed an internal training programme to prepare its staff in both the theory and practice of sustainable rural development project management. Finally, it should consider, as suggested by Leroy (1997) and Zimmermann (1997) in chapter

⁸Understood as both local and national public authorities.

4, backing projects for a longer period than the three years currently stipulated for financial support.

This section has presented the three efforts for monitoring and evaluation, pointed out strengths and deficiencies in them that refer both to theory and practice. Further comments on the *Frutos do Cerrado* project in relation to its insertion in the local political and economic context will be provided in the next section, which will bridge the discussion for the urban dimensions in rural livelihoods, to be further developed in the last chapter of this thesis.

The *Frutos do Cerrado* in theoretical perspective

The arguments presented so far in this chapter could be divided along two main lines of inquiry. The first refers to the analysis of similarities in the backgrounds of both intermediary NGOs and local rural producers. The discussion suggests that all actors involved in the *Frutos do Cerrado* have ideological and political linkages with left-wing politics, especially with the Workers' Party. This argument was further developed to show how religion, trade unionism, and left-wing politics have merged in Brazil. Their action has been channelled through CEBs, STRs, and the PT, and has been particularly influential in the countryside. The second line of inquiry concerns an examination of the three monitoring and evaluation documents produced on the PD/A. One of these documents refers specifically to the *Frutos do Cerrado* project. This section will relate both lines to the theoretical debate in this thesis.

It is interesting to note that what is at stake in the PD/A is the transition of the peasantry, but under special circumstances in which capital exercises patronage. The essential conflict foreseen in Marxist thought between labour and capital involving concentration of land ownership and proletarianisation is contradicted by this model, which by injecting capital in the form of grants supports small-scale rural producers in the process of transition. One could, nevertheless, see the PD/A as an instrument for articulation. It could be argued that capital needs to take producers out of subsistence levels so to transform them into productive labour and then extract

larger amounts of surplus. In the case of the *Frutos do Cerrado*, this would take the form of processed fruit pulp.

However, in the case of PD/A projects, the role of capital is not only to increase commoditised production, but to do so in a way that allows rural producers to have a greater control over their own labour. If they will be releasing more surplus than they currently do as the project develops, they will do so under better conditions than otherwise would be experienced if the relationship between labour and capital were not to include an interest-free grant associated with technical assistance and social concerns.

Such type of peasant transition with patronage has further theoretical implications. It calls into question the Leninist view of a middle peasantry being squeezed out towards proletarianisation. What the *Frutos do Cerrado* is making available is an option for expanded reproduction of the peasantry. As Nugent (1993) poses it, development aid changes the conditions for peasant transition. However, as it will be seen in the next chapter, rural producers who benefit from the project already had enlarged their scale of production and sources of livelihoods. Therefore, their portrayal as simply peasants is difficult. Moreover, the use of environmental and social concerns as a central reason for backing rural development projects also demonstrates how the articulation of modes of production approach should include in its analysis other dimensions rather than just the economic.

The commoditisation of production involved in the marketing of fruits represents a potential source of income that trade in basic food crops cannot match due to the small size of the market, and the local merchant capital's lack of external national or international linkages. In many cases around the Amazon region, a central question for rural development projects is how to replace existing trading links based on the middleman. In Carolina, there is no major agricultural merchant capital or middleman dealing with crop or fruit production to be replaced. The really strong middlemen are those dealing in the cattle trade. The *Frutos do Cerrado* will not have to replace any fruit merchant, since the only local producer of fruit pulp is barely supplying the local market. However, the project will have to create local and external links to establish its own merchant network. This is an absolutely fundamental question for projects

that aim to generate income in the Amazon region, but it has not received proper attention from the PD/A, which assumed the NGOs' capacity to create those links.

Creation of merchant links, however, may be at least as complicated as replacing ones. There are commercial/administrative, and political problems. PD/A and monitoring and evaluation documents have perceived the poor business capacity of those involved in the *Frutos do Cerrado*. Yet, they have not considered how difficult it is to produce and get acceptance in the market for perishable products from the Amazon, especially if it involves an Amerindian group. Fruits may be the most evident product available to rural inhabitants, but may not be the easiest to trade. Furthermore, if commercial links of the project develop, then it will give to those producers who are associated with the PT, greater power to face local *coronelismo*, and will serve as an example to that society. This is a situation that the local *coronéis* will do their best to avoid. Therefore, the expansion of production involved in PD/A projects is not only an economic, but also a political question.

Another major area of contention refers to the capacity of organisations with a strong Marxist background to manage the process of intra-group differentiation that may result from the transition to capitalist relations promoted by development projects. This is already a difficult issue within AAPPC members: when asked about this, Joaquim de Souza-Carvalho (1997) pondered that some differentiation already exists and is accepted, and what is important is that "the group is 'walking' together". However, as internal differentiation increases, group cohesion may be undermined.

Monitoring and evaluation documents have also not tackled issues related to intra-household differentiation in the process of transition, with special reference to gender issues. Women's participation in project decision-making is still minimal. However, they have been called to help with the extraction of fruits, and their pre-processing. The second monitoring and evaluation document presented this type of women's work as "participation" (Verdum and Antonious Jr., 1997: 19), while this is in fact an extra burden in their workload. The sexual division of labour in agricultural backed projects is a major issue that the PD/A has so far overlooked.

The questions raised so far in this section show that the *Frutos do Cerrado* project is a tangible example of conflicting circumstances: it mobilises a group of small-scale rural producers that have been influenced by a Marxist approach through Liberation Theology ideas, but a group that is supported by national and foreign capital. The support given to agroforestry schemes adopted by the PD/A resembles more of the hard-nosed market-based approach (described in chapter 2) than any welfarist model, due to the fact that in three years time projects are meant to be totally self-sustainable.

Strategies to bring rural producers to the market in a process that account for social needs are not new. During the 1970s and 1980s, approaches like Integrated Rural Development, Basic Humans Needs, and Adjustment With a Human Face (reviewed in chapter 2) defended the provision of mixed economic incentives with welfare-type assistance combined with redistributionist aims. These strategies placed a central importance on the provision of welfare and safety-nets to help the poor in the process of development.

The promotion of small-scale commercial agroforestry via the injection of interest-free capital, combined with technical assistance, tries to reconcile welfare concerns with a "hard nosed" approach, i.e. the promotion of entrepreneurship. Such an approach parallels the modernisation ideas of T.W. Schultz (1964) who saw small farmers as efficient allocators of resources and essentially profit-oriented. It is a contradiction that Schultz's ideas are brought to the forefront of the development debate. His ideas served as the base for the "green revolution", which, as applied by the Brazilian government in the Centre-West and Northeast regions, resulted in a process of land ownership concentration and rural-urban drift of the labour force. This process affected Carolina seriously, as well as many other regions in which the PD/A supports projects. In fact, the AAPPC was ultimately created to help small producers to reverse the negative effects of the "green revolution". Therefore, the members of the AAPPC are now beneficiaries of the same development paradigm that in the past put them at risk.

A number of factors were identified as being responsible for the failure of "green revolution" type assistance experienced in certain places. Some worth mentioning are that farmers could not pay for the expensive inputs (like fertilisers) required, the technical assistance received was not adequate, farmers could not match interest on loans received, farmers organisations (like co-operatives) faced difficulties in balancing social expenditure and investments. An historically informed view of the PD/A, therefore, could have helped foresee and overcome these predictable problems. This will be particularly relevant when funding ends, and PD/A beneficiaries will have to face real market conditions. Because the grant period is relatively short, any PD/A project should begin with a *ex-ant* plan on how to scale-up real market conditions into project implementation. Otherwise, an abrupt change may be too hard to be faced.

Projects of small-scale commercial agroforestry also derive from rural development strategies that gained momentum in the 1990s. These new strategies highlighted the linkages between poverty dimensions and environmental concerns. More precise definitions of sustainable development were presented, and the concept was then applied to the household level. From this emerged the idea of sustainable livelihoods, as analysed in chapter 4. International organisations involved in the Pilot Programme, such as the World Bank and the UNDP, together with many experts, have tried to find concrete ways of applying the concept of sustainable livelihoods. This has implied broadening the concept of livelihoods, normally tied to the analysis of physical assets.

However, technical shortcomings of the personnel directly involved in the project have precluded their understanding of the PD/A as an instrument that may promote sustainable livelihoods, alongside environmental and economic sustainability. Furthermore the analysis of the monitoring and evaluation reports done in this chapter has shown that some key concepts have been inappropriately used. Moreover, the fact that none of the reports includes a proper social analysis, if it is understood as an instrument to capture the perspective of the people involved in the projects, shows the fragility of the treatment given to social issues by PD/A administrative staff.

From the consultants' reports, as well as from the fieldwork interviews with the PP-G7 bureaucracy, there clearly emerges a strong concern with more technical, day-to-day problems faced by PD/A projects, and overall programme administration. While technical problems involving project implementation are more obvious, a social analysis of rural development projects requires an examination of people livelihoods. This involves understanding what Chambers (1995) calls "fox strategies", that is, livelihood strategies pursued by rural producers to minimise exposure to shocks, stress and risk, as well as their defenceless in the face of circumstances than can represent a damaging loss. Therefore, what is at stake is an examination of all dimensions of a livelihood, as presented in chapter 4. In other words, it means including in the analysis "fox strategies" pursued by rural people in urban areas.

Carolina's rural producers started developing their fox strategies by organising a Christian Base Community. Under the protection of the Catholic church they could discuss their common and personal problems, and develop a critical consciousness, therefore becoming empowered, as proposed by Freire (1972). What resulted from this process, was not the creation of an association of producers, but rather the creation of a rural workers' trade union -- the STR. For them, this is the most important organisation of which they are members. This is because it is through the STR that they can legally exert their claims. In this sense, CEBs and the PT are organisations that reinforce the STR.

While CEBs and associations of producers can have rural headquarters, the same cannot happen with a trade union or a political party. They need to be located in the urban areas for reasons of membership and access, but also because it is in the urban area that their claims are made and defended. In other words, to face a urban-biased type of development, rural people tend to set-up urban organisations. While this may not be a rule, this certainly reflects most of the circumstances found in the Brazilian countryside where rural trade unionism is strong.

This political dimension has implications for the promotion of producers associations or co-operatives in other places of the Brazilian Amazon. These organisations can develop some dimensions of rural people's livelihoods, but cannot answer for the majority of claims, which are related to the forms of political control associated with *coronelismo*, and normally accompanied by coercion or physical violence. The stronger the *coronelismo* and the violence, the greater the need for an urban counter-action. Therefore, the promotion of associations of co-operatives without a careful examination of political influences may jeopardise a dimension of a livelihood that is intangible (therefore less obvious). This will occur because by posing their claims, rural producers will bring about a reaction from the local élite. When the support from the PD/A is phased out at the end of three years, political pressure is likely to mount upon rural producers.

The PD/A aims to improve conservation of the natural environment, but requires that its beneficiaries should be able to implement the project in a participatory way, and secure the benefits for themselves. The latter point implies that beneficiaries should be free of the type of political action that is urban-biased and undermines small-scale autonomous development. In other words, it should have a high degree of autonomy from *coronelismo* or other forms of political control established by the local élite. In the case of the *Frutos do Cerrado* these conditions were met because beneficiaries are members of the STR, and have 20 years of experience with critical consciousness development provided by their CEB membership. When analysing the AAPPC, one cannot separate it from the other organisations of which its members are part. The local Workers' Party, for example, was born out of CEBs-STR work. It has been so far rural-based. Today, the priority of the party is to "improve its presence in the urban area", says Iracema César, the PT president.

The central argument posed here is that it is not possible to take the project as a self-containing, independent entity, that can be dealt with disconnected from the other organisations that reinforce the AAPPC members' livelihoods. Moreover, the development of the work in these organisations may imply some sort of commitment in the urban area. In other words, to counter-balance an urban-biased type of development, rural producers need to establish urban linkages through

which they may be able to channel their claims. The establishment of these urban linkages in terms of organisations' membership may lead to, or even reinforce, other types of urban-linkages that may already have existed.

In addition, the functioning of the project itself may represent a commitment to an urban-type of work that may be representative for the total number of people involved in the project. In the *Frutos do Cerrado*, four rural producers need to be committed to project administration or transport, which represents 17 per cent of the total number of associates. As their participation in technical works grows, these rural producers will not be able to carry out both activities at the same time.

The next chapter will analyse quantitative data referent to project beneficiaries and other rural producers from Carolina. This data supports the arguments presented here, and reinforces the concern upon the importance of urban dimensions in the livelihood of the project beneficiaries.

Conclusion

This chapter has provided an overview of the *Frutos do Cerrado* project main characteristics. Rather than describing the project contents in detail, the discussion has aimed at relating its central characteristics to the main theoretical arguments of this thesis. This chapter has therefore looked at the way in which the *Frutos do Cerrado* has tackled the issue of sustainability, and the urban dimension in project beneficiaries' livelihoods. The latter question was raised in relation to the beneficiaries' strategy of making their claims.

Central to the comprehension of beneficiaries' livelihoods is the way they have organised their social and political forms of representation. The chapter starts this discussion showing how intermediary NGOs involved in the project have the same political background as project beneficiaries. Both the Indigenous Working Centre (*Centro de Trabalho Indigenista* - CTI), and the Cultural and Educational Centre for the Rural Labour (*Centro de Educação e Cultura para o Trabalhador Rural* - CENTRU) have links with left-wing politics. While the CTI is a NGO working with

Amerindian groups and has a welfare-type approach, the CENTRU works with small rural producers, and helps create and develop organisations such as co-operatives and associations of producers that have both economic and political aims.

The element of linkage between these NGOs and project beneficiaries is a form of action grounded on the theoretical and political assumptions that relate left-wing politics to Catholic faith and action. The latter is expressed by Christian Base Communities (CEBs), which are an expression of the Liberation Theology postulates. In practice, Liberation Theology advocates less unequal forms of development, which presumes the liberation of the oppressed from the social, economic and political control of the élites. In the case of rural Brazil, and of Carolina in particular, these élites are associated with the institution of *coronelismo*. The work provided by CEBs is one of "conscientisation" (*conscientização*), i.e. empowerment, which is taken as the expansion of one's critical conscious in relation to the oppression faced.

CEBs are, therefore, an organisation for empowerment. Their main instrument of action is rural workers' trade unions (*Sindicato dos Trabalhadores Rurais - STR*), and to a lesser extent the Brazilian Workers' Party (*Partido dos Trabalhadores - PT*). The second section of this chapter discussed in detail the linkages between the three organisations, showing how they interact in theoretical and practical terms towards the defence of small-scale family-based agriculture. This joint action has grown as an opposition to Modernisation-based policies that resulted in land concentration and rural-urban drift in the Brazilian countryside.

In Carolina, the group of rural producers that has been granted a PD/A project, has about 20 years of experience with the work of CEBs, and 10 years with the local STR. The origins of their organisation lay in the struggle against local *coronelismo* and official policies that resulted in land concentration. Today, they form the Agroextractivist Association of the Small Producers of Carolina (*Associação Agroextrativista dos Pequenos Produtores de Carolina - AAPPC*), which is the beneficiary of a Pilot Programme's PD/A project which is closely grounded in modernisation precepts. This is a paradox which, it is argued, those

responsible for the administration or the analysis of the *Frutos do Cerrado* project have still now overlooked.

Examination of official documents relative to the *Frutos to Cerrado*, and monitoring and evaluation reports, permit the conclusion that technical concerns have prevailed so far over a social analysis that would bring into the debate further theoretical issues. In fact, study of these documents shows that key concepts have not been properly clarified or even understood within the PD/A, such as participation and sustainability. This has implications for the attainment of objectives, which are not stated clearly, and the comprehension of all dimensions involved in the idea of sustainability -- in particular the concept of sustainable livelihoods.

By supporting rural producers' development, the project is actually promoting the transition of the peasantry into capitalism. However, this takes place within two particular circumstances. First, the concept of peasantry cannot be applied to project beneficiaries without problems. As the next chapter will show, the expansion of rural producers' sources of livelihoods into the urban area calls into question their relationship to the land. Secondly, this transition involves a raw form of patronage, in the form of a grant for an agroforestry project.

The latter question opened a theoretical discussion that related the *Frutos do Cerrado* project's social, economic, and political circumstances to Marxist and modernisation approaches. It has been shown that during the implementation of a development project, the conditions of transition analysed in the articulation of modes of production should consider the influence of non-economic factors. The Leninist view of a middle peasantry being squeezed out is also called into question. At the same time, the promotion of commercial agroforestry parallels much of the modernisation approach, seeing small farmers as profit-oriented and efficient allocators of resources.

Therefore, what is at stake is a development project with a modernisation background supporting organisations with a strong Marxist influence. This paradox, which has not been tackled by the PD/A, is made possible because the

promotion of sustainable development (and therefore sustainable livelihoods) implies that project beneficiaries can take decisions in a participatory way, and have larger control over their livelihoods. Such condition of participation implies that the beneficiaries are free of a type of political control that undermines both capacity of decision-making, and control over it. In the case of Carolina municipality, the rural group that is able to match both conditions is that linked to the triple membership CEBs-STR-PT.

The association of producers (the AAPPC) may have been officially formed to be able to participate in the project. However, its members have a long history of participatory action towards conscientisation. It is not possible to analyse the AAPPC separately from the other organisations in which its members are involved. For the rural producers, the most important of these organisations is the STR, because it is through trade unionism that they can make their claims. It has been argued in this chapter that to face an urban-bias type of politics, rural producers need to establish themselves in the urban area. In Carolina, this has taken the form of the STR and the PT. Because the STR is linked to the PT, a project that supports the AAPPC also strengthens the STR and the Workers' Party. It reinforces the rural workers' capacity of making claims, and therefore might generate reactions from an élite which has established its social control via *coronelismo*.

Another source of urban-linkage analysed in this chapter refers to the direct involvement of producers in administrative duties needed to implement the project. Activities such as co-ordination, paperwork, and transport may represent an urban-type commitment for a substantial number of rural producers. It has been argued that the functioning of the project itself may occupy a considerable part of the time of some rural producers. If so, some may not be able to accomplish their production targets. While these positions are remunerated and will not therefore compromise the producers' reproduction needs, they will drive them away from rural work.

Therefore, the analysis of rural livelihoods implies an understanding of the rural producers' broad strategies of making a living. In other words, the promotion of rural sustainable livelihoods depends on an understanding of the dynamics established by rural producers in the urban area. The above analysis has related the issue of urban dimensions in rural livelihoods to the question of claims, which are paramount for the development of capabilities. The next chapter shows other urban dimensions associated with rural livelihoods, and analysis their importance in terms of the *Frutos do Cerrado*.

CHAPTER 7 - RURAL PRODUCERS' LIVELIHOOD STRATEGIES

This chapter describes and analyses the linkages established by AAPPC members in urban Carolina, in comparison with other rural producers. Such analysis builds upon the focus on livelihoods strategies provided in chapters 4 and 6. The investigation of rural producers' livelihoods will be done by mixing qualitative and quantitative methodologies. It employs information from recorded interviews carried out with key informants, from recorded interviews with focus groups, from direct observation during almost six months of residence in Carolina, and from questionnaires applied in both rural and urban areas, with rural producers, urban inhabitants, and urban schoolchildren¹. These data will be related at the end of this chapter to the theoretical framework of this thesis.

The central objective pursued here is to scrutinise the livelihood strategies of *Frutos do Cerrado* members. These strategies will be compared with those of other rural producers, and then discussed to consider the implications for grassroots development and sustainability in the Brazilian Amazon region. It will be show that beneficiaries from the PD/A developed livelihood strategies in a different way compared with non-beneficiaries. Both strategies imply urban linkages, but they differ in quality and quantity. For the sake of clarity, members of project will be called "beneficiaries" or referred to as "FdC", and non-members will be called "rural others" or simply "non-members".

¹See annex "A" for a discussion of the methods used.

Rural producers, religion and organisation membership

This section provides a descriptive analysis of the AAPPC members who are beneficiaries of the *Frutos do Cerrado* project, in relation to other rural producers of the same municipality. It focuses on age, sex, marital status, religion, religious practice, and organisations' membership.

It was noticeable since the very beginning of the fieldwork that beneficiaries call themselves "old people". Members of the FdC perceive themselves as older than other farmers. However, an analysis of the age of heads of household reveals that this perception is not accurate. Beneficiaries have a median age of 48.5 years with a standard deviation $s = 9.15$, while rural others have a mean age of 50.0 with $s = 15.6$. A Mann-Whitney rank test indicates no statistical difference in the age of the two groups at a level of significance $\alpha = .05$.

There is a similar picture in relation to sex, marital status, and religion. Rural heads of household are predominantly male, and just one female-headed household was found in 151 interviews. She was not a member of the FdC. Amongst beneficiaries, 83.3 per cent are married ($N = 20$), while amongst rural others the married form 90.6 per cent ($N = 115$). As noted previously, Carolina is a mainly Catholic community. All members of the FdC are Catholic, as against 89.7 per cent of non-members, a small difference that indicates no association. For projects developed in rural areas, religious activity has two major implications. Firstly, the influence of Christian Base Communities (CEBs) on the way people organise their livelihoods should be considered. This issue has previously been analysed in this thesis, and will be further explored in this chapter. A second consequence refers to the possible exclusion of a non-Catholic minority from the benefits of a project such as the PD/A. CEBs have an ecumenical character, but it is not unlikely that this character would prevail within rural communities. If non-Catholic rural people, who are largely Evangelical, do not have mechanisms of participation, they may be left aside by development projects like the PD/A.

Despite similarity in religion, there is a significant statistical difference ($p = .000$) in rural households attendance at religious services. This does not refer to CEB meetings, but to actual mass service. Rather than trying to measure the behaviour of the head of household, this question asked how many times household members go to religious service. This is because the former option proved to be, in the pilot questionnaire, somehow offensive because either the head could not admit not going to church, or because it is understood in rural areas that all the members of the household must go the religious service together. Table 7.1 shows the relationship.

Table 7.1 - Members of household frequency of attendance to religious services², Carolina, 1997

Categories	Beneficiaries		Rural others		Total	
	N	%	N	%	N	%
When it is possible	3	12.5	67	57.3	70	49.6
One or twice a month	8	33.3	21	17.9	29	20.6
More than twice a month	13	54.2	29	24.8	42	29.8
Total	24	100	117	100	141	100

Source: Fieldwork data, rural questionnaire

Members of the FdC practice their religion with much more frequency than non-members. While the majority of beneficiaries' household members go to church more than twice a month (54.2%), the majority of rural others (57.3%) goes only when it is possible. This is particularly important not only because it indicates the religious character of beneficiaries and their families, but because attendance at mass has two further meanings. First, the church is located in Carolina town, so presence in services necessarily implies a journey to town. This is normally done on Sundays, the day of the largest movement in the local food market. After attending to service, rural producers go to sell their products in the food market. A second, and more important reason, is that it is in the weekly religious service that rural and urban people can meet, and develop their social networks. This has a direct influence on income, as will be seen latter in this chapter, because by creating urban linkages rural producers are also establishing potential consumers for their crop production.

²The comparison of proportions in this case is problematic because the sample size of beneficiaries is less than 50. However, the *chi square* test is valid once no cells have a minimum expected count less than 5, and in addition it does indicate clearly the existence of association between the two cases in the categories measured. The strong $p = .000$ gives confidence for the comparison of proportions.

Therefore, for religious and commercial reasons, Sunday is the most important day for the rural producer. In Carolina, meetings of the AAPPC, STR and PT are organised at weekends, mostly on Sundays. For development projects, it implies that, as long as it is necessary, project personnel should be available to work on Saturdays and Sundays. However, most NGOs, and the official bureaucracy, work with an urban agenda, that is, they function on the five "normal" working days. When duties are transferred from intermediary NGOs to project beneficiaries, who may be forced to adopt an urban time-table, such difference in the organisation of working days may require producers to change their scale of rural work, with negative impacts on their production and network of personal relationships.

In addition to their attendance at urban religious services, rural producers may also be present in the urban area to attend to meetings organised by mutual support organisations such as Christian Base Communities (CEBs), Rural Workers' Trade union (STR), and the Workers' Party (PT). Membership in these organisation, however, is quite uneven amongst rural producers. Table 7.2 shows the head of household participation in CEBs.

Table 7.2 - Head of household CEB membership, Carolina, 1997

Categories	Beneficiaries		Rural others		Total	
	N	%	N	%	N	%
No	6	25.0	105	85.4	111	75.5
Yes	18	75.0	18	14.6	36	24.5
Total	24	100	123	100	147	100

Source: Fieldwork data, rural questionnaire

There is a strong statistical association ($p = .000$ in the Fisher's Exact Test³) between being member of the *Frutos do Cerrado* project, and also member of a CEB (75.0%). Amongst non-members, only 14.6 per cent are CEB members. This relationship confirms the CEB linkages of beneficiaries, as examined in the previous chapter. It has also been argued in chapter 6 that their participation in Christian Base Communities has resulted in affiliation to the STR. This relationship considered in the next table.

³See annex "A" for a description of the test.

Table 7.3 - Head of household STR membership, Carolina, 1997

Categories	Beneficiaries		Rural others		Total	
	N	%	N	%	N	%
No	0	0	104	84.6	104	70.7
Yes	24	100	19	15.4	43	29.3
Total	24	100	123	100	147	100

Source: Fieldwork data, rural questionnaire

This table shows a strong ($p = .000$, in the Fisher's Exact Test) relationship: all members of the FdC are also affiliated to the STR, which has a low participation of rural others. Moreover, STR membership is stronger than CEBs' for members of the FdC. For rural others, the percentage of STR association is basically the same as the CEBs'. This table confirms the association between the members of the FdC and the Rural Workers' Trade Union, which follows the politics of the Brazilian Workers' Party. Unfortunately, the same sort of association could be done for party membership, since rural others producers were reluctant to declare their political affiliation. Amongst the beneficiaries, 87.5 per cent ($N = 21$) are members of the PT.

Amongst the beneficiaries 52.2 per cent ($N = 12$) are paid up for the AAPPC, while 47.8 per cent ($N = 11$) are not (there is one missing case). Within the same group, 43.5 per cent ($N = 10$) are up to date with contributions for the STR, and 56.5 per cent ($N = 13$) are not. There is an almost inverse relationship between the percentages in the two categories. This suggests that the AAPPC would be for those rural producers relatively more important than the STR. The higher percentage of contribution payment, however, could be a function of their expectations in the new organisation, the only one that can directly generate income for them. One should not, however, forget that these producers established that AAPPC membership should be conditional on previous STR membership, as described in chapter 6. For them, the STR is still the cornerstone for concrete defence of their most important source of livelihood, which is rural production.

It is through the STR, for example, that collective self-help (*mutirões*) is organised. By helping each other with planting, harvesting, animal raising, and other forms of work, such as house building, they can extend their entitlements and capabilities, and therefore develop strategies for livelihood expansion. Small producers' participation in *mutirões* is shown in the table below.

Table 7.4 - Head of household participation in *mutirões*, Carolina, 1997

Categories	Beneficiaries		Rural others		Total	
	N	%	N	%	N	%
No	4	16.7	69	56.1	73	49.7
Yes	20	83.3	54	43.9	74	50.3
Total	24	100	123	100.0	147	100

Source: Fieldwork data, rural questionnaire

Beneficiaries' experience with *mutirões* (83.3%) is almost twice that of rural others (43.9%). This represents a strong association with $p = .001$. The four members of the FdC that have no experience with collective work are those who live in areas that are very distant. One lives in the neighbour municipality of Goiatins. This producer is the only beneficiary who does not reside in Carolina municipality.

Beneficiaries' links with politics, as manifested in trade unionism and political affiliation, are also reflected in their information interests. In Carolina's rural area the number of households with a television set is minimal, so information comes from radio programmes. The Executive, Legislative and Judiciary powers of the Brazilian federal government have a daily radio programme about their activities. It is called "*Voz do Brasil*" ("The Voice of Brazil"), and is regarded as boring to listen to. Only those with strong political interests would follow the programme regularly. That is so with members of the FdC: 87.5 per cent (N = 21) who declared enjoying listen to the programme, while only 39.1 per cent (N = 45) of rural others follow "The Voice of Brazil". If this high audience level is also observed amongst other groups of PD/A beneficiaries, the radio programme would then constitute a major tool for distributing information on the PP-G7, as well as on other issues that interest small-scale producers in the Amazon.

This section has therefore shown that there is no major difference in terms of religion between beneficiaries and rural others, but that the former practice their Catholic faith more constantly than the latter. Beneficiaries are also more active in terms of joint action, being members of CEBs and STR, and affiliated to the PT. It has been suggested that through religious activities in urban Carolina they establish and maintain social networks that help to expand commercial opportunities. This, together with their membership of the STR allows for the expansion of their sources of income. While the STR serves as the basis for setting up and defending claims,

collective work represents an expansion of capabilities. *Mutirão* work functions as a forum for sharing professional experiences, and allows for the expansion of personal assets, mainly training and storage of food. If so, beneficiaries' production levels, and consequently their cash income, should be higher than the income of rural others. The next section investigates further small producers' economic situation, focusing on this contrast.

Land ownership and rural production

The structure of land ownership of beneficiaries and rural others is similar, with the exception of those who use family-owned land. In both groups, some 50 per cent own the land, and some 20 per cent are occupants (i.e. they have property rights, but no land title). The difference between the groups is that, 20.8 per cent of beneficiaries (N = 5) use the land that belongs to their parents, while there is no case like this amongst rural others. In the latter group, 27.2 per cent are *moradores* (N = 34), that is they are a type of caretaker (*morador*) who looks after the property, and have the right to plant just a small plot that is enough only for household consumption. Among the beneficiaries, 8.3 per cent are *moradores* (N = 2).

The *Frutos do Cerrado* project proposal, and monitoring and evaluation have both ignored information on land ownership. However, the fact that some 21 per cent of the members of the FdC do not own the land they cultivate is important. These five producers may not have total control over the future of that land, and therefore both production and conservation aims can be jeopardised. The omission of this information reflects a lack of attention to the social dimensions of the project, that is, peoples' livelihoods.

Because of the large number of *moradores* amongst rural others, a comparison of land sizes between the two groups is difficult. If one considers all cases in the two groups (excluding, however, those who use no land), project beneficiaries appear much better off than rural others. To make comparison possible, we shall consider "control over land", that is, the size of the land the head of household has use of. A

land owner and occupant would control the total land size. Table 7.5 compares "control over land" for both groups.

Table 7.5 - Size of rural land under the control (in hectares), of beneficiaries and rural others, Carolina, 1997 (*)

Categories	Median	Mode	Standard Deviation	Min.	Max.	Ranked Mean	Cases	
							N	%
Beneficiaries	68	55	142.43	1	550	88.4	24	16.3
Rural others	40	.50 ^a	370.94	.12	2,840	71.2	123	83.7
Total						p = .071	147	100

Source: Fieldwork data, rural questionnaire.

^a Multiple modes exist, the smallest value is shown.

Comparison of the medians (68 and 40) and modes (55 and .50) for beneficiaries and rural others respectively, suggests that the former group possesses, or has control over larger plots of land than rural others. However, the association tested by the Mann-Whitney (ranked mean) test shows that $p = .071$, which is just over the level of significance $\alpha = .05$. Therefore, there is no statistical association at the level of significance established for this thesis, although one could argue that in about 93 per cent of the cases beneficiaries have larger plots than rural others. From this table it is also worthwhile noting that the standard deviation for members of the FdC is more than three times that of rural others. Therefore there is fairer ownership/control of land amongst those who participate in the *Frutos do Cerrado*.

However, if one calculates the mean rank excluding from both groups all the cases of *moradores* and those using family land, the result is quite different. In this situation, beneficiaries who own or occupy land ($N = 17$) have a mean rank of 56.3. For the same circumstance, rural others ($N = 91$) have a mean rank of 54.2. There is clearly no association between the two, with $p = .797$. Yet, if one inverts the focus and selects just those who are *moradores* or use family land, then the mean rank is 35.7 for beneficiaries ($N = 7$), and 17.9 for rural others ($N = 34$), with a strong association at $p = .000$.

Therefore, the general picture one could draw of Carolina's rural producers is that project beneficiaries probably have more land than average of all rural producers in the municipality. However, when beneficiaries are compared with other land owners and occupants, no significant difference is found. There is, however, an important

difference in terms of those that are *moradores* and those who use family land. Members of the FdC (those who use family land) are in the fact able to use large amounts of land while rural others (those who are *moradores*) can only use around the minimum necessary for subsistence.

The analysis of assets raises some relevant points for debate. It has been shown in chapter 5 that the local economy was formed around cattle-ranching. Therefore, one would expect widespread ownership of cattle, even though in small quantities. However, amongst beneficiaries (N = 5), 29.4 per cent of those who own or occupy land have no cattle. Amongst rural others (N = 29) this percentage is about the same: 31.9 per cent. If one looks at differences between the two groups, it will not be found in cattle ownership.

Nevertheless it is necessary to consider the fact that information on cattle ownership, as noted in chapter 5, was the most difficult to obtain, and the declared number of cattle owned is mostly unreliable. This is because cattle function as savings (stores of real value), and questioning about this is like asking someone how much he or she has in a savings account. Additionally to this analysis, a ranked mean test was also performed on the possession of horses and donkeys together, resulting in $p = .739$. This indicates that both groups have about the same number of working animals. Considering that these animals are necessary for cattle raising, then the lack of association found for cattle ownership is reinforced.

A different situation was found for crop production. Analysis of the area under crop production first considered all respondents, because large farmers may have no crop production. All beneficiaries (N = 24) compared to all rural others (N = 127) have a ranked mean of 95.33, against a ranked mean of 72.35 for the former. With $p = .017$, there is strong evidence that beneficiaries' planted area is larger rural others'. Even if those of both groups with no crop production are excluded from the statistical test, the association remains at the same level ($p = .019$).

This section allows for the conclusion that beneficiaries are relatively better off than the average rural producer in Carolina in terms of physical assets linked to their rural properties. They have larger cropped areas, but cannot be differentiated in terms of

the most important rural asset in that region, that is, cattle. The next section analyses income, and therefore looks for a relationship between planted areas and the various sources of earnings.

Income levels and sources of income

Level of income was measured in the rural questionnaire by using household monthly expenditure as a proxy. This strategy was taken based on the experience of the pilot questionnaire applied in the municipalities of São Raimundo das Mangabeiras and Carolina, and in the literature concerning quantitative research in rural areas of developing countries. This procedure is analysed in annex "A". Interviewees were asked to answer the average value of the monthly expenditure with all household expenses over the previous 12 months. In most of cases there was no refusal to answer the question. However, five members of the FdC did refuse to answer. A probe was included to check discrepancies. This probe asked whether the expenditure was higher or lower than a Brazilian minimum wage of R\$ 112,00 (£ 56,00) at the time of fieldwork.

Measurement of declared expenditure shows a clear association between project membership and higher income levels. In other words, those beneficiaries of the *Frutos do Cerrado* are also better off than the average rural producer in Carolina in terms of cash income. While beneficiaries (N = 19) had a mean rank of 92.11, rural others (N = 119) had 65.89, with $p = .008$. The larger income of those beneficiaries was confirmed by the probe, as shown in table 7.6.

Table 7.6 - Household monthly expenses in relation to the Brazilian minimum wage, Carolina, 1997 (*)

Category	Beneficiaries		Rural others		Total	
	N	%	N	%	N	%
Below the minimum wage	8	33.3	75	59.5	83	55.3
Above the minimum wage	16	66.7	51	40.5	67	44.7
Total	24	100	126	100.0	150	100

Source: Fieldwork data, rural questionnaire.

(*) Cases in which the head reported spending one minimum wage exactly were included in the category "below", because their expenditure is likely to be one minimum wage at the maximum.

The majority of beneficiaries (66.7%) spend more than one minimum wage per month on household expenses, while the majority of rural others (59.5%) spend less than the minimum. The Fisher's Exact Test for this table indicates $p = .02$, which indicates an association with 98% of confidence, and confirms the Mann-Whitney mean rank test.

Following the analysis of expenditure, it is interesting to note the association between rural and urban data. This is shown in the next table, which relates expenditure by rural others as compared with urban inhabitants and beneficiaries against urban.

Table 7.7 - Comparison of income mean ranks (by expenditure proxy) between rural others, urban residents, and beneficiaries, Carolina, 1997

Categories	Cases	Mean Rank	Cases	Mean Rank
Rural others	119	91.09	N/A	
Urban	148	168.5	148	86.27
Beneficiaries	N/A		19	66.34
Level of significance	$p = .000$		$p = .088$	

Source: Fieldwork data, rural and urban questionnaires.

This table shows a strong difference ($p = .000$) between the mean ranks for the expenditure of rural others (N = 119) and urban residents (N = 148). The latter group has a level of monthly expenditure much higher than the former. However, the opposite pattern is verified for the association between urban residents (N = 148) and beneficiaries (N = 19). In this case, there is a very weak statistical association, with $p = .088$.

Therefore, rural producers who are members of the FdC have a monthly expenditure level that is closer to that attained by urban inhabitants. In other words, it suggests that they are able to have a life-style closer to the urban pattern than other rural producers. In fact, some beneficiaries enjoy parties in the urban area, while other rural producers were never seen in urban festivities, unless they were there to work. The suggestion given by these associations, however, would have to be confirmed by a more careful analysis of patterns of consumption and levels of day-to-day expenditure, to allow a better comprehension of life-styles.

Given that beneficiaries have a higher expenditure than rural others, which serves as a good indication of higher income, one should verify the sources of income. A test was done to check for differences in relation to retirement pension, but this indicated no association, the two groups being very similar in the number of retired people amongst the members of the household. It is important to note that, again, the *Frutos do Cerrado* project proposal, and the monitoring and evaluation, did not analyse the number of retired people in beneficiary households. In seven beneficiary households, retirement pensions are an important source of income.

However, the questionnaire did not differentiate whether the retired person was the head of household or someone else from the household. Because the number of beneficiaries is small, it is known that three members of the FdC are retired, and that the other four cases refer to people from the household. While it seems that retirement is not a major constraint amongst members of the FdC, it is an issue that should be considered in PD/A projects.

Additionally, analysis of the rural questionnaire did not find association between beneficiaries and rural others in relation to earnings from selling animals, as well as from cash remittances, permanent or temporary employment, and ownership of business. In all these categories, beneficiaries and rural have similar conditions. However, differences were found for their most important: crop production. Related to it is the production of manioc flour, for which a strong association was also found. Both associations are shown in table 7.8.

Table 7.8 - Household sources of income relative to selling of agricultural products and manioc flour, Carolina, 1997

Sale of agricultural products	Beneficiaries		Rural others		Total	
	N	%	N	%	N	%
No	7	29.2	92	73.0	99	66.0
Yes	17	70.8	34	27.0	51	34.0
Total	24	100	126	100	150	100
Sale of manioc flour	Beneficiaries		Rural others		Total	
	N	%	N	%	N	%
No	9	37.5	88	69.8	97	64.7
Yes	15	62.5	38	30.2	53	35.3
Total	24	100	126	100	150	100

Source: Fieldwork data, rural questionnaire

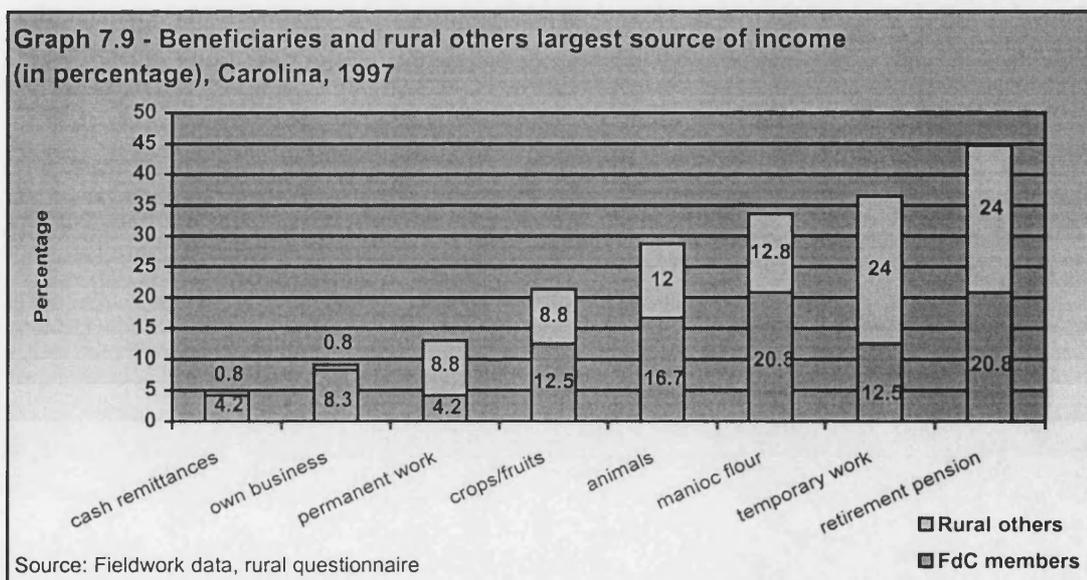
This graph shows the percentages of households for which each category represents the largest source of income. For members of the FdC the two most important sources of income are retirement pensions and sale of manioc flour (20.8% each; N = 5). This is followed by sale of animals (16.7%, mostly chickens; N = 4); temporary employment and sale of crops/fruits (12.5% each; fruits include bananas; N = 3); own businesses (8.3%; N = 2); and finally cash remittances and permanent employment (4.2% each; N = 1). For rural others the two most important sources of income are temporary employment and retirement pensions (each at 24%; N = 30). They are followed by the sale of manioc flour (12.8%; N = 16), of animals (12%; N = 15), of crops and fruits, by permanent employment (8.8% each; N = 11), and by cash remittances and owning businesses (0.8% each; N = 1).

The sum of the relative importance of each source of income for the two categories (beneficiaries and rural others) represented by each bar, shows the total importance of a source of income for local rural producers. From this graph it is possible to note the high importance of retirement pensions for rural producers in Carolina (44.8%), and the relatively low importance of selling their crop production (21.3%) in terms of household income. This pattern reinforces the argument that PD/A projects should pay careful attention to the existence of retired people amongst project members or within their households. It also suggests the relative fragility of the local merchant capital: retirement pensions and temporary work, two off-farm sources of income, are more important for local income than rural production proper. This also suggests the fragility of external links of local merchant capital.

The second most important source is temporary employment (36.5%), which refers mostly to temporary work for large farmers. For rural others this source is twice as important as for beneficiaries, indicating that the latter prefer not to engage in activities that may imply some sort of political ties, as analysed in chapter 5. Moreover, when members of the FdC engage in temporary work, this tends to be in the urban area, in activities such as construction work, joinery, and driving. From a Marxist standpoint, such temporary rural work for other farms indicates a path towards rural proletarianisation. However, the fact that members of the FdC do not work for large farmers indicates that this path could not be unequivocal. By using

The table above shows two inverted relationships for beneficiaries and rural others in relation to income derived from the sale of agricultural products and manioc flour. The large majority of members of the FdC (70.8%) households get income from their crop production, while only 27 per cent of rural others do so. This represents a strong statistical association, with $p = .000$. The percentage of beneficiary households that get income for manioc flour production (62.5%) is more than twice that of rural others (30.2%), with $p = .004$. The association shown in this table confirms the mean rank which indicates that beneficiaries' area with crops is larger than that of rural others. So, the former plants more and trades more than the latter.

There is another important relationship in terms of the total number of sources of income. While there is no association for a series of sources of income taken individually, as discussed above, if one considers the number of sources per household, there is a strong difference. Members of the FdC have a mean rank of 110.8, and rural others 66.11. This represents a strong association, with $p = .000$. The larger number of income sources amongst the categories analysed⁴ suggests that beneficiaries have developed their livelihood strategies more than other producers from Carolina. To understand these strategies it is necessary to analyse relative differences in sources of income for each group. Graph 7.9 illustrates this.



⁴Selling of crops, manioc flour, animals, cash remittances, retirement pension, permanent, and temporary employment, and ownership of businesses.

their agency, they explore income opportunities in urban Carolina, which grant them larger earnings.

The point here is not that beneficiaries are escaping from rural proletarianisation to become urban proletarians because their rural production is also larger. This characteristic is reflected in the relative importance of selling crops (12.5% for beneficiaries versus 8.8% for rural others); animals (16.7% against 12.0%) and manioc flour, the only semi-processed item from their basket of income opportunities. For 20.8 per cent of beneficiaries, the sale of manioc flour is the most important source of income, while it is so for only 12.8 per cent of rural others. It is interesting to note that is an almost identical but inverted relationship between the two groups for temporary employment and manioc flour. Another important point is that production of manioc flour normally involves the labour of women and (mostly) children. This production is left to them because it can be done within the limits of the house, while the head of household works in the fields. Therefore, their higher production of manioc suggests that beneficiaries have more and older children living on their rural properties.

Furthermore, the importance of the category owning businesses calls into question the inevitability of proletarianisation. Amongst members of the FdC, all types of businesses owned (N = 6) refer to activities performed in urban Carolina, while for rural others it refers to activities undertaken in the rural area. In almost all cases, these businesses comprise small general stores, operating in the informal sector.

The analysis of income requires examination of differences in the composition of household. However, the identification of households within the same dwelling is difficult and could not be done under the constraints of time and resources available for this thesis. An approximation is possible by looking at some characteristics of those living under the same roof, as well as family composition. Beneficiaries have, on average, a slight higher number of children (N = 6) than rural others (N = 5). If other members of the household are taken into account (including the wife), the average number of people in the household increases from 8.5 people per beneficiary family, as against 7 per rural others family. The difference of one or two

children in the family, however, is not enough to explain the differences in area planted and production levels.

This is because girls can not help as much as boys in rural production. Amongst beneficiaries' families, 48.2 per cent of the children are females. Additionally, as seen in the beginning of this chapter, the median age of beneficiaries' heads of household is 48.5 years, and the median for their children is 20 years with $s = 9.38$. For rural others, the head median age is 50.0, while the children's median is also 20 years, with $s = 12.33$. The dispersion of the latter group is slightly larger, but the head's median age is slightly higher. Children in the rural area start working by the age of ten, but is only at fourteen that they start to make a significant difference to production, probably producing more than consuming. If so, the children of both groups have until some six years ago represented a burden on consumption.

Given that, and the fact that there is no statistical difference between those who own or occupy land (which represents the majority of cases amongst beneficiaries), it can be argued that the dependency load of both groups is very similar. There would be, however, different impacts resulting from differences in soil quality, as noted in the previous chapter. Therefore, it is interesting to examine their different approaches to building a livelihood for their families, which is analysed in the next section.

Livelihood strategies for income generation

A major reference for theory and policy on the dynamics of peasant farming is the work of Chayanov. The central argument of Chayanov is that peasants' farming nature and level of activity is determined by the ratio between labour and consumption within the household. Household producers will decide whether to increase the workload based on the household needs. This model, as noted by Harriss, assumes that wage labour is (mostly) not involved, and "that 'the household' is an indivisible unit under the control of a single head". These assumptions, Harriss adds, "underestimate the independent role of women and children" (1992: 211). Additionally, as argued by Harrison (1982), Chayanov's model is based on the undemonstrated idea that peasants' aim is to maintain a constant level of well-being.

This formulation fuelled a rich theoretical debate that led to practical changes in policies directed towards support for small farmer organisations of mutual-reciprocity, such as co-operatives and associations of producers. Support should not only be technical but also political if antagonisms such as different class perspectives were to be bridged or solved. At a broader level, the path towards socialism should replace the capitalist-based system of control over the allocation of resources, and the criteria it brings on who should benefit from the resources available. This point will be further developed below, but for the moment it should be noted that Brazilian left-wing parties have for long supported peasant farming (*agricultura familiar*), and the radical change in institutions and organisations involved in policy formulation for Brazilian agriculture.

Before getting into this point it is necessary to make additional comments on graph 7.9, because this data questions Chayanov's theory and Chayanovian approaches. The graph shows that both urban temporary and permanent forms of employment represent off-farm working strategies that make-up important sources of income for rural producers. In fact, two "rural producers" members of the AAPPC received the bulk of their income from exclusively urban sources. Rosi da Silva works in civil construction, while João Martins, the former president of the local PT, works as a waiter at weekends, and at the *Frutos do Cerrado* factory on weekdays. Graph 7.9 shows that for two beneficiaries of the *Frutos do Cerrado* the most important source of income derives from the businesses they own. Olegário de Souza Carvalho has a restaurant and an electronic games shop, and his younger brother Joaquim de Souza Carvalho has a food store in which he trades his own and manufactured goods.

Additionally, four other members of the FdC also have their own business in urban Carolina, although they are not the major source of income. Together they represent 25 per cent of FdC members. In all cases, the business is carried out with the work of their wives and children. In circumstances like these, it is difficult to argue in terms of a single household unit, as foreseen by Chayanov, or, in this case, for the peasantry as a specific category, as supported by Shanin. Moreover, the analysis of income also shows that the majority of beneficiaries are not only producing for their

own consumption, but are able to obtain a marketable surplus in agricultural and manioc flour production. What is at stake, therefore is a complexity of livelihood strategies, as proposed, for example, in the work of Cleary, which was analysed in chapter 2. Such complexity is reinforced by the cases of rural producers for whom the major source of income may not be their own business, but is represented by various types of temporary work carried out in the urban area.

These preliminary considerations reinforce the point that urban dimensions responsible for the reproduction of rural livelihoods should be captured. For this aim it is necessary to look at data from both the head and other members of the household. Rural questionnaire data helps clarifying differences in the livelihood strategies pursued by beneficiaries and rural others for coping with the delicate balance between production and consumption on a small and non-capitalised rural property.

Data from children of both beneficiaries and rural others suggests quite different strategies. Table 7.10 compares the age of those living in rural and urban areas. It shows that beneficiaries' children living in the rural area are older than those of rural others, and that an inverse relationship exists for children inhabiting urban Carolina.

Table 7.10 - Age of beneficiaries' and rural others' children according to place of residence, Carolina, 1997

Categories	Median	Mode	Standard Deviation	Min.	Max.	Ranked Mean	Cases (% per category)	
							N	%
Beneficiary rural	21.0	9	11.43	2	42	252.25	51	53.7
Rural others rural (*)	15.0	10	12.35	1	64	209.39	377	78.7
						<i>p</i> = .020		
Beneficiary urban	16.5	16	7.79	1	33	56.09	44	46.3
Rural others urban	23.0	15	10.84	2	49	81.01	102	21.3
						<i>p</i> = .001		

Source: Fieldwork data, rural questionnaire
 (*) There are two missing cases.

The median age for beneficiaries' rural children is 21 years, as against 15 for rural others. In the urban area, the median age of beneficiaries' children is 16.5, as against 23 of rural others. In both cases, the standard deviation for beneficiaries rural and urban children (11.43 and 7.79, respectively), is smaller than that of rural

others (12.35 and 10.84), indicating that the former group has cases less dispersed than the latter. The ranked mean test confirms the comparison of medians. Children of FdC members living in the rural area have a mean rank of 252.25, versus a mean rank of 209.39 for children of rural others in rural area, with $p = .020$, which indicates association at $\alpha = .05$. In contrast, beneficiaries' children in the urban area have a mean rank of 56.09, compared with a rural others' children mean rank of 81.01, with $p = .001$, which shows a strong association. The last column indicates that the majority of children for both groups still live in the rural area. Within beneficiaries' families, 53.7 per cent (N = 51) live in rural Carolina, while 46.3 per cent (N = 44) live in town. For rural others' families, 78.7 per cent (N = 377) live in the rural, as opposed to just 21.3 per cent (N = 102) in the urban area.

Analysis of this table, however, requires further information from the schoolchildren's questionnaire. Data on table 7.11 compares children of beneficiaries with children from rural others living in urban Carolina. It excludes other students that are children of parents who are not rural producers. This table shows the difference in these two groups of children that have lived in the rural area in the past, for more than one year.

Table 7.11 - Former rural residence of rural producers' schoolchildren living today in the urban area, Carolina, 1997

Category	Beneficiaries		Rural others		Total	
	N	%	N	%	N	%
Lived in the rural area	25	92.6	136	45.5	161	49.4
Did not live in the rural area	2	7.4	163	54.5	165	50.6
Total	27	100	299	100	326	100

Source: Schoolchildren questionnaire

This table has been compiled from a sample of 27 of the 42 children (64.3%) of beneficiaries living in the urban area *and* are still studying, and a sample of students who are children of rural others. Because the pre-condition for access to the schools for interviewing students was not to ask their parents' name, it is not possible to match cases represented in this table with the previous one. Because they constitute two different samples, total numbers do not match, with the number of cases presented in table 7.10. Data in table 7.11 shows that the large majority (92.6%) of beneficiaries' schoolchildren (N = 25) have lived in the rural area before, while the

majority (54.5%) of rural others' schoolchildren (N = 163) have never lived in rural Carolina. This difference represents a strong association with $p = .000$.

The analysis of these two tables provides strong evidence that members of the FdC have managed to keep their children in the rural area for longer periods than rural others, as suggested by their higher production of manioc flour. Children of the former group in the rural area are generally older, and almost all those in the urban area have lived in the rural area before. The fact that urban children of rural others is more than half of the cases have never lived in the rural area suggests that they have been sent to urban Carolina as babies. If so, one has reasonable evidence to depict the livelihood strategies of FdC members and rural others in two different ways. Facing the constraint of having more household consumers than labourers, rural others solved the imbalance of consumption versus labour by "exporting consumers", that is, reducing the number of people to be nourished. The same circumstance was found by Ayres (1992) in the Solimões region of the Amazon. "Export" of consumers, however, was not foreseen by Chayanov in his analysis of the Russian peasantry.

Beneficiaries, on the other hand, managed to secure their children by diversifying their livelihood sources and expanding them into urban Carolina. As shown in graph 7.9, members of this group have more sources of income. Moreover, these sources are more related to urban activities than the sources of rural others. The fact that they have maintained their children in the rural area longer suggests that they have been able to count on the subsidy of their labour for a longer period, therefore increasing the household production that was previously balanced by expanded sources of income. By so doing, they could finally have some surplus available to invest in the urban area and send their children to live there under better conditions.

Urban-based beneficiaries today have better living than rural others. There is a significant association at $\alpha = .05$ between the two groups in terms of ownership of urban houses. Amongst beneficiaries, 45.8 per cent (N = 11) own an urban residence, as against 22.0 per cent of rural others ($p = .022$). This represents a "voluntary" transfer of financial resources from the rural to the urban area. Under a neo-Marxist framework, such a transfer would be interpreted as evidence of

articulation, and the form in which surplus labour is extracted from the rural to the urban area, so that the rural producer, in the end, is a passive agent facing structural capitalist processes.

However, if the focus switches to peoples' livelihoods, this transfer could be seen as an adaptive (i.e. long-term) strategy for dealing with the stress caused by development policies of a modernisation mould, which have been detrimental to small-scale agriculture, as analysed in chapter 2. Cleary describes this as a strategy for livelihood construction. However, as was been pointed out in chapter 2, such livelihood construction may not occur under conditions of rural producers' own choices. The question is therefore the influence of both "agency" and "structure" operating at the same time. The answer appears to be that both have an influence on the construction of livelihood possibilities.

A full understanding of the meaning of physical and financial rural-urban linkages requires an analysis of the impacts that double residence has on economic and social relations in the household. The mostly acceptable definition of household is the "common cooking-pot": people living under the same roof and aggregating or sharing of their incomes, which is expressed in the fact that they take meals together. This definition should not preclude the fact that the existence of more than one roof does not necessarily constitute another household. Thus, the nature of the household economy is preserved even if its physical location is divided. It would be an inverse relation to the possible existence of more than one household under the same roof. In this case, there would be more than one roof in the same household. The point to be made here is just to clarify why double residence has not been automatically considered as a second household.

The existence of more than one roof, however, requires an evaluation of the financial impacts of such a division in the original economic activity performed i.e. small-scale agriculture. This process can undermine agricultural production and lead to complete urbanisation of household members. Another possible scenario is that mixed rural-urban livelihoods may have better conditions to capitalise, and therefore increase production to capitalist levels. A secure conclusion on this matter would require a longitudinal study, which lies beyond the scope of this thesis. However, data from

fieldwork allows for the establishment of some hypotheses regarding the future plans of members of the *Frutos do Cerrado* project. This is the theme of the next section.

This section has shown that project beneficiaries have a higher income than rural others, and that their sources of income are relatively more diversified than those of the latter group. Additionally, FdC members tend to avoid working for other farmers, which implies a relationship of dependence as previously analysed in chapter 5. On the contrary, they rely more on their linkages with the urban area for selling their products, or for developing a business activity. In other words, their livelihood strategies tend to be more linked to the urban area than those of rural others. This livelihood strategy can be understood as an alternative approach to the solution of imbalances between consumption and labour supply at the household level. Once the imbalance was resolved, members of the FdC were in a better position to invest in the urban area and send their children to live there. As a result, today the percentage of members of the FdC families living in urban Carolina is higher than that of rural others, a fact which raises serious questions about their future as rural producers.

A final word in this section refers to the lesson that can be learnt from this type of urban linkage in relation to productive conservation projects. The higher income of beneficiaries represents higher expenditure. To some extent, their expenditure level is higher precisely because of their and their household members' presence in the urban area. Beneficiaries are present in the urban area more constantly than rural others, as indicated in table 7.12.

Table 7.12 - Heads of household number of journeys to town per month, Carolina, 1997

Categories	Median	Mode	Standard Deviation	Min.	Max.	Ranked Mean	Cases (% per category)	
							N	%
Beneficiaries	6	30	13.15	1	30	69.58	19	17
Rural others	3	1	9.68	1	30	53.83	93	83
Total						$p = .051$	112	100

Source: Fieldwork data, rural questionnaire

Data in this table shows that the presence of beneficiaries in urban Carolina is substantially more frequent than in the case of rural others. If the median is taken as the measure of central tendency, then the former group would be in the urban area twice as much as the latter. However, examination of the ranked mean shows that the difference of ranked number of journeys is from 69.58 (N = 19) for beneficiaries, versus 53.83 (N = 93) of rural others, which represents an association ($p = .051$) at the exact level of significance established for this thesis. Thus, the ranked mean, while confirming a central tendency towards greater presence of beneficiaries, shows that the difference with the group of rural others may not be as large as twice the number. In any case, is significantly bigger.

To cope with the increased expenditure derived from urban linkages, members of the FdC have made more extensive and intensive use of their properties' natural resources. Therefore, the expansion of livelihoods into urban areas may not imply a lower rate of natural resource use, but the opposite. This circumstance would only be reverted if the income allowed by urban sources exceeded in value that obtained with farm activities. The rural questionnaire also asked respondents about the size of the area in their properties that have been cleared. This data was converted into percentages and then the descriptive statistics calculated. Amongst beneficiaries, the median for cleared land is 78.02 per cent ($s = 25.08$), while non-members have a median of 55.83 per cent ($s = 38.88$). All the cases in both groups reported using fire to clear the land. In this sense, the project is not only targeting those that have higher interests in the urban area, but also those who use land clearance more often and are therefore more destructive to the environment. The next section analyses some other paradoxes involved in the project.

Involvement in the project and future plans

Rural-urban linkages are also highly influenced by the need for education, mainly beyond the fourth year of primary education. As noted in chapter 5, there is no course beyond this level in rural Carolina. So if one has studied beyond the fourth year, he or she has necessarily lived in an urban area. Amongst beneficiaries, 25 per cent of children have studied beyond the fourth year, as opposed to only 7.1 per cent

of non-members. Unfortunately, the number of cases falling in each category is too low to perform a *chi square* test. However, by grouping categories it is possible to see that beneficiaries have a much higher level of literacy than rural others. Almost all (N = 22) FdC members are literate (91.7%), against a much smaller percentage (61.3%) of rural others (N = 76). Just two members of the project are illiterate (8.3%), versus 48 of non-members (38.7%). This represents a strong association with $p = .000$.

Better levels of education, however, do not guarantee that beneficiaries can follow project implementation without problems. First, because their level of instruction is still too low, they face difficulties in understanding more complex ideas. Second, and without any doubt, communications within the *Frutos do Cerrado* is totally inappropriate. During the phase of testing the pilot questionnaire, it became clear that, even for the researcher, it was difficult to understand the instructions given by project technical staff (extensionists) relative to fruit production. The questionnaire then asked the beneficiaries whether they found it easy or difficult to understand the talks given by *Frutos do Cerrado* agricultural extension staff.

Just one producer (4.2%) had not attended any talk. Amongst those who had, 33.3 per cent (N = 8) found it easy to understand the training sessions, and 62.5 per cent found it difficult (N = 15). Considering that producers would tend not to admit that they do not understand what has been explained to them, the percentage of those with difficulty in understanding technical training is probably even higher. This is confirmed by the fact that a recorded interview was conducted with all the beneficiaries' children interviewed in the school questionnaire. None of them was able to explain what the *Frutos do Cerrado* project is, nor its objectives.

What is at stake here is not a concern with the way in which traditional knowledge is extracted from rural inhabitants by researchers and intermediary NGOs involved in development projects⁵. It is a more basic question related to principles of communication for development, especially rural communication. The incapacity of extensionists to make themselves clear to rural producers epitomises differences in urban and rural forms of expression that are normally overlooked in development

⁵See Hall (1997) for a discussion on this theme.

projects, as they have been in the PD/A. However, if proper communication is not present, the whole effort can be jeopardised.

This lack of comprehension can be attributed not only to problems with very basic communications skills of the intermediary NGOs, but also to the fact that both parents and children still do not see in the *Frutos do Cerrado* a secure alternative source of livelihood. They are not yet "into" the project. The NGO responsible for the management of the fruit processing unit and for the commercialisation of production, the CTI, had a very poor administrative performance during the first year of project implementation. As a result, the processing unit experienced a financial loss, and the rural producers did not receive any payment back for their work, or for the fruits they delivered to the Vyty Cati, the Amerindian association linked to the CTI that owns the processing unit, controlled by CTI personnel.

Various beneficiaries lamented that they did not have any information on or control over the production and commercialisation process after the fruits were delivered to the processing unit. "We do not know what happens after we deliver the fruits to the factory", says Joaquim de Souza-Carvalho (1997). As a consequence, the producers' comprehension of the project's overall objectives is precluded.

This relates the discussion back to the issue of participation and empowerment, analysed in the previous chapter. The lack of real participation in the *Frutos do Cerrado* suggests that when "participation" is reduced to "consultation" (as was the case in this project), the rural-urban divide is not broken. Literature on this subject recognises that knowledge and key decision-making usually remains in the hands of those acting as intermediaries. They normally resort to arguments based on rural producers' lack of capacity to fulfil administrative functions, and keep project control in their hands. In Carolina, the CTI was implementing a training programme for Amerindians with a view to allowing them to take control over all the functions performed in that town's office. However, nothing was done to involve rural producers, showing that the historical divide between producers and aboriginal groups has not been bridged by the *Frutos do Cerrado*, as planned in the project proposal.

While this indicates that the CTI was biased towards Amerindians, it also reflects the argument that real empowerment carries an urban dimension, whether in terms of skills development or critical knowledge expansion. This is an issue of delicate balance that cannot be underestimated. For the young Amerindians being trained, their period in town was a mixture of enjoyment for learning new skills in the office, and a painful experience of being in town. They are not harassed, but their presence in public spaces frequented by the élite, or even the lower middle class, is not welcomed. Amerindians, and to a lesser scale rural producers, are seen as an under-class. Only those rural producers that managed to put a foot in the urban area gain social respect.

However, the central issue of this discussion is the fact that rural producers did not see the project as their own. Neither were children of beneficiaries involved in the project. On 12 July 1997, members of the IAG (the International Advisory Group of the PP-G7, see chapter 4) visited Carolina and had meetings with CTI personnel (without the presence of rural producers), and with rural producers (with the presence of one CTI employee). In the latter gathering Adilson Serrão, regional director of EMBRAPA, suggested that rural producers' children should be involved in the project administration because they "have more knowledge of numbers, can learn quicker, and replicate knowledge" (Serrão, 1997).

Arão Dias dos Santos, AAPPC member and project co-ordinator, replied that "there is no money to pay for their services" (Dias dos Santos, 1997a). He was specifically referring to the fact that the only two rural producers' children involved in the project (working in the plant nursery) had not been paid for three months. During the same period, CTI members withdrew part of the working capital to pay for their own expenses. In addition to problems like this, the involvement of urban children in project management has further significance.

Firstly, it became clear during fieldwork that rural heads of household do not develop a livelihood strategy on their own. During informal conversations about their life perspectives, all producers, beneficiaries or not, always mentioned concerns about the future of their family members. One could hypothesise that, because of rural producers' ties to the land, and their limited economic perspectives, heads of

household develop livelihood strategies that are more focused on creating alternatives for future generations than for themselves.

It is obvious that all heads of household are always concerned about family members, and their life chances. However, further research would be needed to investigate the extent to which beneficiaries of development initiatives attach their household members' future to the success of the project. In the case of the AAPPC, there is a paradox. Heads of household demonstrated more concern about their children's future than other rural producers. They need an alternative to children's migration, and the involvement of the youth in the project would be certainly welcomed. The fact that they are not reflects a serious deficiency in project design.

A second dimension of urban children's involvement in project implementation relates to the conditions of such engagement, which differs from possible work of children in the rural area. The labour of urban children cannot be taken as a subsidy, as rural labour may, even if it is not adequate. Paid work for children in the urban area is absolutely paramount, even more than in rural areas. Amongst beneficiaries' schoolchildren interviewed 63.0 per cent (N = 17) have already worked to earn money. Amongst rural others' schoolchildren, 63.7 per cent (N = 191) have done the same. The virtual coincidence of percentages reflects the fact that only the very young do not work in the urban area.

The median age of beneficiaries' children who have not yet worked is 14 ($s = 2.67$), and for rural others it is 13 years ($s = 3.19$). The median age of those who have already worked for a salary is the same in both groups, i.e. 18 years, with $s = 4.12$ for beneficiaries', and $s = 6.06$ for rural others' children. According to Brazilian law, a child under 16 can only work with the permission of a judge. This is not always respected, mainly in small towns. What seems to regulate the entry age is the balance between labour supply and work demand. The large number of young people living in urban Carolina for educational reasons brings the average entry age near to the legal requirement.

Most rural children go to urban areas to study beyond the fourth year of education. By this time they are between 10 and 12 years old. This means they will remain without "productive" work for a period of four to six years, on average. During this period, they can help with minor domestic duties, but their consumption needs must be subsidised, which can only be done with the help of their brothers and sisters. So, while the involvement of children in development projects may be desirable for the reasons explained by Serrão, it can only be performed if proper payment is set aside. This is reinforced by the (paradoxical) fact that, in the case of the *Frutos do Cerrado*, rural work with fruit production was considered as counterpart funding for official grants. This has represented an extra burden for those already living on the margin of subsistence, and a contradiction for a development programme that wants to reduce poverty through the generation of income.

The sum of these factors has been responsible for the beneficiaries' and their children's perception of the *Frutos do Cerrado* as an activity that does not yet form part of their livelihoods. It has not been dreamed up by them, on the opposite, it is a complementary positive alternative for expanding income and reinforcing their social and political organisation. Being supplementary, it does not play a major role in their future expectations. On a number of occasions beneficiaries were asked what would happen if the project did not succeed and had to be closed down. All beneficiaries were quite confident in answering that nothing would happen, that they would just follow their regular work, trade unionism, politics, and religion.

Perhaps the most significant evidence that the *Frutos do Cerrado* is not perceived as part of their future came from Arão Dias dos Santos, who was one of the first to join Olegário in the creation of the local CEB movement, and the STR. He is one of the pillars of those rural producers organised around the *Frutos do Cerrado*. On the eve of this researcher's departure from Carolina, Arão (Dias dos Santos, 1997b) asked if he could, in the future, count on this author's support to help his children to move to Brasília. In fact, out-migration has been so far the ultimate goal of the youth of Carolina.

Table 7.10 compares the number of children of beneficiaries and rural others living in Carolina rural area and town. One should also consider the fact that 31.2 per cent of beneficiaries' children (N = 43) have already migrated, as have 21.0 per cent of rural others' (N = 128). Amongst beneficiaries' children, 55.6 per cent (N = 15) have already decided to migrate, while 47.0 per cent (N = 141) of rural others' children have taken the same resolution. With $p = .36$, there is no statistical difference, showing that, despite larger proportion amongst beneficiaries' children, the large majority of the youth wants to leave Carolina.

What is perhaps more relevant, is the examination of both rural and schoolchildren's questionnaires in relation to parental support for migration. The rural questionnaire asked parents which children living in other municipalities whether they had given their support for the children to move way. Amongst beneficiaries, 73.7 per cent (N = 14) answered yes, "we did give support", and an astonishing but unrealistic 100 per cent (N = 64) of rural others answered the same. Unfortunately, this cross-tabulation does not provide enough cases to allow association.

Nevertheless, it was asked in the schoolchildren questionnaire whether parents would support their migration to another municipality. Amongst children of the FdC members, 71.4 per cent answered that they would get their parents' support, against a more realistic 43.1 per cent of rural others. With $p = .022$, there is in this case association at $\alpha = .05$, and one could argue, with some caution, that beneficiaries are more concerned that their children migrate than non-members of the project. However, it is also possible to assert with confidence that the large majority of the beneficiaries want their children to look towards a future outside of Carolina.

If support for migration is so widespread amongst rural producers, who will in the future look after their properties? Table 7.13 shows how the head of household foresees succession for their land.

Table 7.13 - Property inheritance, Carolina, 1997

Category	Beneficiaries		Rural others		Total	
	N	%	N	%	N	%
Children will take over	12	54.5	75	84.3	87	78.4
Other situation (*)	10	45.5	14	15.7	24	21.6
Total	22	100	89	100	111	100

Source: Fieldwork data, rural questionnaire

(*) Includes cases in which the rural producer plans to sell the land, expects that someone else from the family will take over, or simply do not know what will happen.

This table shows that beneficiaries are much more insecure about inheritance than rural others. 45.5 per cent of FdC members (N = 12) do not know what will happen, expect that someone from the family will take the property over, or even plan to sell the property (3 cases fall in this latter category). Amongst rural others, 84.3 per cent (N = 75) depend on their children to look after the property.

In both circumstances, these numbers contrast with the high rural producers' support for the children to migrate. One could hypothesise that these rural producers estimate that, possibly, one child will finally agree to remain in Carolina, and keep working on the land. This however, may be unrealistic, as shown in table 7.14, which explores beneficiary children's willingness to live in the rural area in the future.

Table 7.14 - Beneficiaries' children opinion on possible future life in rural area, Carolina, 1997

Category	Beneficiaries' Children		Sex	
	N	%	Male	Female
I will not live	12	44.4	10	2
I can live	3	11.1	1	2
I do not know	12	44.4	4	8
Total	27	100	15	12

Source: Fieldwork data, schoolchildren questionnaire

This table shows that only a minority (11.1%) of the beneficiaries' children (N = 3) consider the possibility of staying in Carolina and living in the rural area. The percentages of those who have decided not to live there equals that of those who are still in doubt. It is also significant that the large majority of those who have already decided not to live in rural area are males. On the other hand, the majority of females are in doubt. This is because they will consider the possibility of living in the rural area if their future husband lives there. The fact that this analysis is based on

the total number of schoolchildren reinforces the meaningfulness of the percentages' analysis.

The main argument of this section has been that beneficiaries still do not see the *Frutos do Cerrado* as an integral part of their livelihood strategy. On one hand, project objectives are not clearly perceived and technical assistance not fully understood. In addition, the fact that the *Frutos do Cerrado* has been conceived, and has been implemented without adequate levels of producer participation, precludes their full integration. On the other hand, rural producers' livelihood strategies are conceived as including an urban linkage necessary for children's education. This implies that rural heads of household need to create economic and social conditions to allow their children to move to the urban area. After they have moved, the household economy should be balanced between income and expenditures derived from both areas.

Incentives to improve rural production, therefore, may face a double challenge. First, it will need to be done under conditions that do not undermine this rural-urban balance, and thus jeopardise the whole household. Second, it may face difficulties in involving members of the household who are getting their sources of cash income from urban activities. It has been demonstrated that children of project beneficiaries want to leave Carolina and that they have their parents' support for that. Moreover, male children more than female do not plan to work or live in the rural area. This situation is reflected in their parents' uncertainty in terms of succession to the land.

In summary, those rural producers who benefit from the *Frutos do Cerrado* have managed to improve their livelihood conditions through a strategy that differs from that of rural others. Whilst the latter depend more on the rural area for their sources of livelihood, the former expanded their sources of livelihood in such a way that today they are balanced between rural and urban activities, for them and for their household members. This strategy is a clear manifestation of the marked urban dimension in rural livelihoods, and needs to be analysed in terms of the various theories reviewed in this thesis. This is the subject of the next chapter.

Conclusion

This chapter has examined statistical data from rural producers' sources of livelihood that builds on the analysis presented in the previous three chapters and, in particular, complements the profile of local small-scale production presented in chapter 6. It has been shown here that there is strong statistical evidence that members of the *Frutos do Cerrado* project enjoy larger-scale participation in CEBs and in the STR, and that they adopt *mutirões* as a strategy for increasing production, sharing experiences, and binding ties of mutual co-operation. As stated in the previous chapter, these activities create an enabling environment for the establishment of social networks that perform a substantial role in the beneficiaries' expansion of entitlements and development of capabilities. These memberships and the activities pursued in these organisations constitute the foundations upon which members of the FdC build the particularities of their livelihood strategies.

The investigation of beneficiaries' material conditions proceeded with the analysis of indicators based on assets and expenditure. The most important relation that emerges from these indicators is that members of the FdC are better off than rural others because of their expansion of livelihood sources into urban area. This expansion, however, demands larger-scale and more intense use of natural resources.

It has been demonstrated that beneficiaries cannot be differentiated from other rural producers in terms of size or rural property, or number of cattle owned. There are, however, differences in crop production, which is substantially larger amongst FdC members. An important fact ignored by the PD/A is that some 20 per cent of beneficiaries do not have land titles. Control over land is well established in the development literature as a prerequisite for success in project implementation. If producers do not secure legal access to resources, as it is the case of a substantial proportion of beneficiaries, it may jeopardise the sustainability of the project in the long run.

The analysis of income sources has been particularly informative. FdC members are clearly better off than other rural inhabitants, and their income levels are closer to those of urban dwellers. It has been suggested that this may allow them to have a life-style similar to the urban inhabitant, a situation not enjoyed by other rural producers in Carolina. Moreover, beneficiaries' income is more equally divided into various alternatives, and relatively more linked to urban activities. This is reflected in their stronger reliance on categories of income such as businesses, permanent and temporary employment. The latter type of income opportunity is the most important productive activity of rural producers in Carolina, indicating that a significant number of local producers rely more on labour outside their own land to make a living than on the production they could obtain from their rural areas.

In summary, rural production may guarantee the subsistence of the household, but it cannot take its members much further. For the expansion of assets it is necessary to establish other sources of income. Urban sources of income are much more significant for beneficiary households than for other rural producers. This analysis has also pointed out the failure of the PD/A to identify the relative importance of retirement pension incomes amongst members of the FdC, which is paramount for a long term strategy for sustainable development.

These small farmers' production strategies have been analysed under the theoretical framework proposed by Chayanov. It has been argued that beneficiaries' livelihood strategies deny the validity of the authors' account in terms of a specific peasantry labouring the land to balance consumption and production levels. On the contrary, it has been pointed out that the analysis of sources of income provides elements to depict beneficiaries and rural others as pursuing two different strategies. While the latter apparently solved the production versus consumption imbalance by "exporting" consumers to urban areas, the latter adopted a more proactive strategy of diversifying their sources of livelihood into urban Carolina. While rural others' tactics reflects a traditional attitude towards rural-urban migration, the beneficiaries' one is grounded on the expansion of human agency. This was made possible mainly by the organisational-institutional support provided by their membership of CEBs and STRs.

As a result of their investment in livelihood expansion, a significant percentage of FdC members managed to capitalise and invest in the urban area. By doing so, they create secure conditions to send their children to live and study in urban Carolina, resulting in the fact that a larger proportion of their family members are now town inhabitants compared with rural others. This larger rate of urbanisation amongst the families of beneficiaries, which includes larger proportion of urban residence ownership, demands a sustained income at higher levels than those obtained by the average local rural producer. It is not a coincidence, therefore, that beneficiaries not only have larger crop production and more sources of income, but also use their land more intensively.

The sum of sources of livelihoods associated with organisational membership gives a clear picture of how members of the FdC already had a far larger control over their destinies than other rural producers from Carolina. Those that are now beneficiaries of the project were already more empowered than the average rural producers. They were so because of their capacity to make critical judgements, together with their substantive degree of independence from the economic and political ties associated with the clientage imposed by local *coronelismo*. Under such conditions, it has been argued here, along the same lines as in the last chapter, the empowerment may lead to urbanisation of grassroots groups' members.

One clear condition for empowerment is a minimum level of formal education, so that people can articulate and express their needs. The need for educational services, which are provided in urban areas, is certainly a major factor leading to rural peoples' urbanisation. While this is known, differences in patterns of urbanisation at local level are essential for understanding people's livelihood strategies. This chapter has shown that there is evidence of the association between beneficiaries' past urban residence and education beyond the fourth year of basic instruction. Despite statistical limitations on providing an unequivocal test, it is certain that beneficiaries have better education than rural others, as demonstrated by the analysis of literacy levels.

Despite their better educational level, and empowered profile, the majority of beneficiaries have been unable to understand technical assistance instruction

provided by CTI extensionists, and their overall comprehension of the *Frutos do Cerrado* is also limited. This is because of the combined effect of lack of proper, active participation and a lack of adequate communication. Problems of adequate communication (i.e. capacity of explaining things clearly) have been neglected under the PD/A, as they are usually left aside in development projects. In the case of Amazonian development, both government and international organisations have taken for granted the fact that NGOs working with rural people can automatically establish a good rapport through adequate communication, and therefore lobby on their own. The example of Carolina suggests rather a paternalistic, if not authoritarian, approach to relating with project beneficiaries.

Therefore, the result of a livelihood strategy that looks for alternatives in the urban rather than in the rural area, associated with a lack of active participation in project design and implementation, results in the fact that beneficiaries do not see the project as a real option for sustaining a livelihood. If conditions for beneficiaries' active participation had been provided, project design would probably reflect their concerns over succession. The point made in this chapter is that beneficiaries, more than other rural producers, want their children involved in the project because it could provide an alternative to their out-migration. However, the lack of resources to pay for their labour, as well as the lack of beneficiaries active participation, has resulted a situation in which members of the FdC do not yet see the project as part of their broader livelihood strategies.

It has been shown that, compared with rural others, a larger proportion of beneficiaries' children live in urban areas, including other municipalities. Members of the FdC support for migration is just above 70 per cent, which is higher than rural others' support. Additionally, beneficiaries are less secure about conditions for succession on their rural properties, and that the large majority of male children do not want to live in the rural area.

In summary, while rural-urban linkages of rural producers are an integral part of development processes, there are nuances that must be considered if projects aiming at grassroots development and sustainability are to be effective and sustainable. Specific conditions of rural-urban linkages, reflect people's broader

tactics, and a *modus operandi*, that is, without putting all their "eggs" in one basket. If one overlooks rural producers' livelihood strategies, the needs, wishes and plans of other household members will be precluded. It is fundamental to bear in mind that the head, especially in rural areas, does not take decisions without a careful examination of possible consequences for household members. This is basic, but apparently has been disregarded.

It has been demonstrated in this chapter, that members of the *Frutos do Cerrado* have developed livelihood strategies that include far more urban links than the strategies of other rural producers. Beneficiaries' livelihood strategies involve the searching for conditions to make claims, as well as for better material aspects of a livelihood. Together, material and non-material aspects of a livelihood provide conditions for expanding human agency. This issue will be dealt with in the next chapter, which concludes this thesis by bringing together theoretical considerations and qualitative and quantitative data involved in the discussions placed in this and in the previous chapters.

CHAPTER 8 - URBAN DIMENSIONS IN RURAL LIVELIHOODS

This chapter will relate the framework of analysis used in this thesis to the main theoretical paradigms examined. It first investigates the way in which rural production in Carolina relates to Marxist-based theories that predict the transition of the peasantry in complete, dual, or articulated ways. The same characteristics found in the case-study are then related to approaches of a liberal lineage, showing both strengths and deficiencies in dealing with those specific circumstances found in the fieldwork.

The discussion then moves on to the importance of the urbanisation process in the Amazon, and its relevance for the analysis of livelihoods. It is argued that in today's Amazonia one cannot address rural development properly if rural-urban linkages are not taken into account. The urban dimension in the livelihoods of Carolina's rural producers are then considered in relation to the major theoretical approaches. The chapter ends with a discussion of the implications of the urban dimension in the livelihoods of those beneficiaries of the *Frutos do Cerrado* for grassroots development and sustainability in the Amazon generally.

Marxist paradigms and rural production in Carolina

The analysis of the rural sector in Carolina leaves no doubt that the circumstances of an agrarian transition have not taken place, as was predicted by both Marx (1959) and Lenin (1982). Despite the development of capitalism at the national level, the penetration of capital in the countryside, as foreseen by Marx has not occurred. Local rural production in Carolina is still primarily subsistence-based. Furthermore, the process of peasant differentiation, with the formation of capitalist farming and a rural proletariat, as predicted by Lenin, is not a generalised trend. No local rural producer is highly capitalised. Additionally, those working as rural labour still control their means of production. In most of the rural units, as shown by the analysis of production levels, what is at stake is the persistence of

agricultural production at subsistence levels. Some differentiation has occurred amongst small-scale rural producers in Carolina. This, however, represents the expansion of a middle peasantry, rather than its destruction. Amongst those who managed to improve production levels are the majority of those who today are the beneficiaries of the *Frutos do Cerrado* project.

Dependency and world-systems frameworks centre their analysis on trade relations, and argue that the possibilities of development in the periphery are constrained and regulated by metropolis interests. Frank (1967) claims that excess profit moves upwards from the rural area to the regional primary city, and then to the international metropolis. This formulation, therefore, does not get into the analysis of development at the level of production, as pursued by Marxist-based theories. The dependency thesis could be used to explain the first penetration of the cattle economy in Carolina, as described in chapter 5. At that time, Carolina was dependent on the Brazilian Northeast states. However, with the economic depression that took place after the 1960s, external links were cut, and the chains of dependency became less clear, although one could argue that migration is a phenomenon which reveals the dependent character of the local economy. Overall, however, extraction of surplus from the municipality is not significant.

Another explanation for capitalist penetration in the Amazon has been that of the political economy school, which sees capital directly expropriating the means of production (Velho, 1972, 1976; Foweraker, 1981). In this case, small farming in the periphery was interpreted as part of a State-backed strategy to add value to the land, which was subsequently appropriated by capital. The political economy approach predicted that land ownership would become heavily concentrated, and that small-scale subsistence farming would be largely replaced by capitalist ventures. Former peasants then would be turned into a "reserve army" of cheap labour, and denied permanent access to land. State backed large-scale infrastructure building and colonisation programmes that took place in the 1970s have in fact led to the expropriation of the means of production in some areas of the Amazon, which constituted the basis for the formulation of this political economy approach. However, the capitalist penetration was in fact based on huge government subsidies and could not be sustained (Cleary, 1993). Just few

industrial ventures were established and became capitalist enclaves (Becker and Egler, 1982). Overall, the process of direct expropriation and land ownership concentration was not generalised, although in some parts, such as Eastern Pará and Rondônia, it was a major feature.

In Carolina, the opening up of the Belém-Brasília highway did bring about speculation in land and resulted in some land ownership concentration. Furthermore, the large majority of local rural inhabitants owns or has property rights over the land occupied. Lack of clear land rights and titling, however, is still a potential for conflict and eviction through force, as it has occurred in various parts of the Amazon. However, in Carolina land conflict has been minimal. Additionally, fieldwork data suggests that those displaced from the land may have turned into petty urban traders, and have not formed a reserve army of labour. This, however, is an issue that would require further investigation.

More recent theories of a Marxist lineage argue for the articulation of modes of production. Articulation is made possible, state authors like Alavi (1975), Banaji (1977), and Alavi and Shanin (1982), because capitalism sets the "laws of motion" that control reproduction possibilities of non-capitalist forms/modes of production. Therefore, even if non-capitalism production persists, it is playing a functional role to capital because it provides, amongst other things, cheap food and labour. The mechanism of capitalist dominance is the extraction of surplus labour. As proposed by Rey (1931), Wolpe (1972), and Melliassoux (1971, 1975), such extraction of surplus labour is manifested in the fact that the price paid by urban consumers for foodstuffs barely allows for rural households' simple reproduction. Despite variations in these formulations, all agree that workers are subsumed under capital in a "real" or "formal" way. The latter refers to the direct expropriation of surplus labour in the relation of production, while the latter refers to the generic condition of subordination, when workers are subordinated to the logic of capital, rather than being directly expropriated.

An alternative circumstance occurs when the dominant form of capital present is merchant capital, as it is the general case in Amazonia. Analyses of surplus appropriation via merchant relations (Banaji, 77; Bernstein, 1977), have

concentrated on highly theoretical formulations that dispute whether such extraction should be better qualified in terms of exchange relations or at the level of production. A third position is that of Kay (1975), for whom these previous analysis lose sight of the fact that the production of use-values that are necessary for reproduction but are not getting into the market, does not count. For capitalism, defends the author, only labour that can release surplus is considered to be productive, and other forms of labour do not count. If it is maintained that only labour which can release surplus is productive, then the subordination of rural producers to capitalism is restricted to their production that gets onto the market.

To some extent, all these formulations share the view of rural producers as being "peasants". The concept of peasantry developed by Shanin (1987) has been particularly influential in the social sciences. It portrays the social formation as a specific peasantry, that is, the peasantry is understood as making use of simple equipment and family labour, producing mostly for its own consumption. This implies that peasants are primarily concerned with their simple reproduction, and staying attached to the land. This definition also assumes that peasants are concerned with "meeting their needs, rather than making profits or accumulating by enlarging the scale of their farming" (Bernstein, 1992: 31). Another proposition is that of Friedmann, who states that peasants are involved in subsistence production, while those who have commoditised their production are best called petty commodity producers.

Central to all these propositions is that the general capitalist environment determines reproduction possibilities. Capital, it is believed, sets the "central tendencies". Only a few producers could be able to capitalise due to specific production and market circumstances. In other words, capital subsumes and does not allow room for producers to control their own destinies. As Hall states, "explicitly or implicitly, the rural population is considered a largely passive social force, victims of a harsh State machine controlled by capitalist interests, powerless to take the initiative to promote alternative development strategies which might better serve the people's interests" (1997: 215).

This implies that Marxist-based theories overemphasise the economic determination of structure, while political and ideological manifestations of forms of production are neglected (Scott, 1986). Putting this another way, small-scale rural producers are controlled to a lesser or greater extent by large-scale forces that block their capacity to influence their own destinies. Therefore, Marxist-based approaches have the benefit of making clear opposing interests between labour and capital. However, by placing an overemphasis on the economic determination of structural forces, it overlooks other livelihood dimensions, as well as underestimates the capacity of the human agency to build a livelihood.

One could agree that capitalism does exert a strong influence on the possibilities available to local rural producers. As shown in chapter 3, government policies have squeezed the price of "traditional" crops and favoured agribusiness. However, the uneven presence of capitalism in the Amazon (as in developing countries in general) makes it difficult to talk in terms of "laws of motion" or "central tendencies" governing local economic relations. Moreover, agricultural markets may be regulated by factors with little, if any, capitalist (or simply economic) rationality (Bates, 1989). While one could agree on the existence of articulation, its application as a formula raises problems.

The articulation of modes of production approach departs from the understanding that capitalist relations transform the existing natural social formation into a landless peasantry. As analysed in chapter 5, Carolina's peasantry resulted from the expansion of the cattle economy. It replaced the existing Amerindian social formation, therefore constituting a peasantry "by default". Second, the articulation formula understands that surplus is transferred mainly towards industrial capital. However, the local dominant capital is merchant capital, with few if any external linkages. Extraction of surplus from the local towards the national economy is not relevant. Even so, it would be possible to agree with the interpretation of a peasant form of production in Carolina being articulated to capitalism, which implies that rural producers are somehow subordinated. But there are further problems in this formulation.

Local economic relations can be defined, to use a phrase coined by Nugent (1993), as part of a "bowdlerised" environment. This is one that mixes some small-scale industrial with (dominant) merchant capital, and opens up possibilities for petty forms of production and trade, in both rural and urban areas. An additional factor, stressed by Cleary (1993, 1994), is the role of the State, which fuels the local economy with capital transferred from federal sources (therefore not generated locally), and allows the operation of petty activities (the so-called informal sector). As posed by Nugent (1993), the urban setting constitutes a repertoire of petty commodity production (and trade) possibilities.

In Carolina, a significant portion of rural production is sold directly to consumers, for the same price it is sold to local merchants. Therefore, even if the price does not pay for the totality of the product's labour content, it represents a substantially better reward for it. Another difficulty is to differentiate between subsistence and commodity production. As posed by Nugent (1993), from the point of view of the rural producer this division simply does not make sense: all production is for consumption and all production is for the market. The division between the two bunches depend on a series of factors related to production, demand, and market possibilities.

The case of Carolina has shown that "peasants" have mixed sources of income. Even those who are not beneficiaries of the *Frutos do Cerrado* have expanded their sources of income to opportunities available in the urban area. This is clear in their income levels and in the fact that all rural producers rely on more than one source of income to earn a living. Additionally, "peasants" may also be "entrepreneurs". This tendency towards entrepreneurship has been reinforced by the *Frutos do Cerrado* project.

Still, the articulation formula could be applied in all these circumstances. However, local economic circumstances show that the nature of subordination is not clear at all. The diversification of income sources, and their expansion towards the urban area not only weakens the articulation formula, but also shows that small-scale rural producers have some room for manoeuvre. Furthermore, the articulation formula, as noted by Scott (1986) is highly concerned with the economic

determination of structure, neglecting political and ideological dimensions involved in small-scale forms of production.

It has been demonstrated in chapters 5, 6, and 7, the organisation of local economic possibilities is highly influenced by political and institutional dynamics. There is little, if any, capitalist rationality in the way the local élite blocks agricultural development to keep producers under political control. Additionally, political-related organisations, such as the Christian Base Communities, and the Rural Workers' Trade Union play a determining role in granting producers some room for manoeuvre by making possible the development of critical knowledge, the establishment of claims, and the organisation of *mutirões*. The joint result of these activities was the basis upon which rural producers set up their association to become part of the *Frutos do Cerrado* project.

As discussed in chapter 6, this PD/A project represents a form of transition under patronage. By giving rural producers cash and technical support, the *Frutos do Cerrado* is making possible transition under circumstances that allow producers to have a substantial control over their own labour surplus, and the general conditions needed for the improvement of their livelihoods. Additionally, the project represents the union of local groups that have grown under the influence of Marxism though with government and international agencies' policies that are based on a liberal vein.

The understanding that structural and contextual factors play a deterministic role in setting the conditions for economic reproduction of small-scale forms of production is not exclusively drawn from Marxist-based theories. Propositions derived from liberal branches of sociological thought have also neglected small-scale producers and their capacity to determine their own future. This is the theme of the next section.

Modernisation in Amazonia and Carolina

From the perspective of economic modernisation, small-scale rural producers have been portrayed as an interest group deprived of the rational knowledge necessary for choosing the correct path for their own development. Development approaches and policies based on Weberian thinking understand the urban individual as bearer of modern, rational values. Opposed to this is the traditional, backward rural inhabitant unable to develop unless a process of externally-induced cultural change and technical organisation takes place.

Weber believed that State bureaucracy could act as an organising agent which would be able to set the standards necessary for cultural, technical and economic development. As rationality and technique blended, peasants would be able to expand production and accumulate. This framework led to the formulation of top-down policy prescriptions, which believed that the benefits of development would trickle-down to the poorer strata of society.

The type of development prescribed was based on industrialisation, for which agriculture should give its support. As analysed in chapter 2, the theses of Lewis (1954) and Pebrisch (1959), amongst others, foresaw agriculture as a source of resource transfers for industry, the leading sector in development. Modernisation theories predicted that capitalist penetration would promote the capitalisation of some small-scale activities, while a large majority of displaced labour would be absorbed by urban industry.

State bureaucracy, it is argued under Weberian thought, can foresee and implement development goals largely autonomous from interest groups. Under the modernisation approach, "[p]ublic participation is considered an unnecessary prerequisite for progressive change, at best obstructive and at worst potentially subversive ... Local populations at the grassroots are thus assumed to have little influence over the course of policy formulation or implementation" (Hall, 1997: 214).

Despite essential differences in their conceptions of the role of capitalist development, both Marxist- and Weberian-based theories have approached rural development in a similar way. Both understand that large-scale economic forces are able to exert control over small-scale forms of production, beyond their capacity to influence in the process of development. Also in both cases, the rural sector is expected to release surplus for the development of the urban industrial sector. In the two accounts, rural-urban imbalances are interpreted as being an integral part of the development process and, to some extent, a necessary outcome of capitalist expansion into rural areas.

These approaches differ, however, in terms of their interpretation of the outcomes of such rural-urban linkages. While Marxist-based theories consider that urban capital exploits the rural sector by extracting surplus and labour, liberal approaches understand that the outcome of such relation will be beneficial for efficient rural production in the long run. Marxist theories predict capital accumulation in a few hands, while liberal approaches foreseen a broad-based capitalist development as the benefits of growth "trickle down" to all levels.

Modernisation approaches strongly influenced intervention of the Brazilian government in the Amazon, and became particularly influential after the military coup of 1964. As examined in chapter 3, these policies promoted national territorial integration via large-scale infrastructure building, and colonisation programmes. These approach resulted in what became known as "conservative modernisation" of the countryside. That is, some capitalist development was introduced, but without changes in the highly concentrated structure of land ownership of the country as a whole. Although some Amazonian colonisation programmes had social concerns, the lack of credit lines and technical support resulted in overall failure.

Perhaps the main ingredient that was missed from government interventions was an adequate perception of local circumstances and people's real needs. Chapter 3 has also shown that the central government was to some extent successful in incorporating the Amazon into the national economy. Large mineral deposits

started to be exploited, a network of roads was created, and some private colonisation programmes did achieve good production levels and managed to secure people on the land. However, these policies were conceived and implemented with a top-down centralised approach, which was highly influenced by concerns over national security.

The exclusion of local inhabitants from the planning and implementation process was therefore based not only on Weberian thinking, but was also reinforced by political and ideological concerns of the 1960s and 1970s. Public participation was not only unnecessary, but was also seen as a potential source of subversion because it would foster the organisation of rural producers, landless people, and urban workers.

Carolina benefited from the early period of Amazonian integration, from the 1940s to the 1960s, due to its strategic location between the Southeast and Centre-West, and the Northern part of Amazonia. It became a commercial *entrepôt* because the federal government built a huge airstrip in the municipality. During this period the local economy flourished thanks to merchant activities that linked the town to the national economy. These links promoted some development in both urban and rural production. Some industries were established, and the municipality's role as a commercial *entrepôt* grew. This early development was rapidly undercut when regional integration was further expanded. When road links (such as the Belém-Brasília) were opened in the 1960s, the town's economy was sidelined. Factories moved to other municipalities that were closer to new paved roads, so that local agriculture and cattle-ranching lost their competitiveness. Local rural producers remained largely at the subsistence level. This started a period of economic depression that has lasted until today.

Development policies of a modernisation pedigree, however, started changing in the 1970s. Small-scale forms of development via the promotion of entrepreneurship became fashionable, and grassroots groups started to be allowed to participate in rural development programme conception and implementation. Integrated Rural Development and Basic Human Needs approaches, reviewed in chapter 2, were manifestations of this change. Despite

shortcomings in both approaches, they contributed to the inclusion of people's participation in project development. However, the economic and financial crisis of the late 1970s and early 1980s led to development approaches that became dominated by macro-economic strategies and fiscal and monetary policies, with extensive negative social impacts. Structural adjustment policies largely reduced the capacity of the State to invest in social sectors, and welfare, or welfarist-type programmes were undermined or simply discontinued. As the "language of the market" grew, the poor were required to make use of their most abundant asset: their own labour. Entrepreneurship, then, became a buzzword.

By the mid 1980s onwards, negative social and environmental effects of development strategies became more evident. There was a widespread concern that sustained economic growth at both local and global levels could be halted by environmental degradation. A new agenda for development started to be formulated including the study of linkages between poverty, farming strategies, and environmental degradation. As industrialised countries started to relate change in the natural resource base at the local level to global environmental change, Amazonian conservation was put at the centre of the new "green" agenda. A number of efforts towards the conservation of Amazonian resources were launched, of which the G7 Pilot Programme constitutes a major example. In some of its funded activities, this programme adopts a strategy that has become predominant in recent years, which is to reconcile environmental conservation with income generation for resources' users.

The change in liberal approaches reflected more a change in policy prescription than in the theoretical basis of modernisation theories. The promotion of entrepreneurship is derived from Weberian postulates of cultural change. The same can be argued in relation to environmental conservation. As has been discussed, the "discovery" of agroforestry systems, and the imagined market potential of non-timber forest products, resembles Schultz's analysis of small farmers as efficient allocators of their meagre resources in need of technology, expertise, and capital.

Although the modernisation paradigm has changed over time, most of the Brazilian central government intervention in the Amazon has been until today based on this kind of top-down approach, as the government investment programme *Brasil em Ação* exemplifies. As well as its linkages with national security policies, the exclusion of public participation also plays a positive role for local *coronelismo*, which is not interested in giving local people capacity to organise and manifest themselves politically.

However, the Pilot Programme, and the PD/A, are examples of the change in the Brazilian modernisation discourse and practice. It aims at organising local rural producers in a participatory way. However, as has been argued in chapter 4, the PD/A conception was highly influenced by environmental, rather than by social or economic concerns. It seems that the PD/A has still not managed to strike a balance between its conservationist and its social aims. This is clear in the lack of beneficiary participation in project conception and implementation, as exemplified by Carolina. To some extent, however, this pitfall is not typical only of the PD/A, but also of intermediary NGOs responsible for the implementation of *Frutos do Cerrado*.

The sort of programme that tries to balance conservation with economic and social development, especially if it involves international aid, has been criticised for its lack of a socially and politically informed strategy¹. One main criticism is that Amazonian conservation may be a priority for international donors, but not for local producers who need to use the environment to make a living. Additionally, poverty-environmental degradation effects have proven to be directly associated, leading people into what has become known as a “downward spiral”.

Redclift (1992), for example, considers that, in Third World countries, poverty reduction should be considered before environmental conservation can be properly addressed. Another position is maintained by authors like Hall (1997), who believes that productive conservation projects can lead to both environmental conservation and people’s livelihood strengthening, implying the pursuit of poverty

¹See Nugent (1993a).

alleviation strategies. For Hall, "the key issue is not so much whether aid is given, but for what purpose and with what consequences" (1997: 229).

In the case of the *Frutos do Cerrado* it is possible to argue that environmental and commercial objectives have so far overridden social concerns. This is reflected in the lack of beneficiary participation in project conception and implementation, in the lack of data about land ownership, occupational structure, income sources, etc. Additionally, fruit production will overlap with the main crop planting and harvesting period. This implies that producers will have to make a choice between maintaining their traditional crop production levels, or shifting into fruit production. This is a frequently difficult choice, which may increase rural producers' vulnerability. In this sense, one could agree with Nugent (1993a) and Redcliff (1992) about the pervasive effects of programmes with environmental aims.

However, it is difficult to imagine for the majority of the Amazonian small producers another route out of their low-level subsistence other than through the profitable use of their most abundant assets: labour *and* natural resources. There is no indication that governments, either at national or state level, would reverse their policies to support small-scale, family-based rural production. There is also no indication that the price of "traditional" crops will have any significant improvement. The question is not to choose between poverty alleviation or environmental conservation, because for a large majority of the Amazonian population the unique option available is poverty alleviation through the sustainable use of their natural resources. The real question, therefore, is how to reinforce social dimensions in environmental projects.

An assessment of available PD/A documentation suggests that the same problems faced in Carolina may be occurring in other funded projects. One example is the lack of importance with high rates of urbanisation in the Amazon. This question, which was considered inappropriate by the large majority of government, international organisations, and NGO people involved in the PD/A, as indicated in interviews which key informants (analysed in chapter 4) proved to be of significant importance. This is because, as stated by Cleary (1993), rural-urban

relations within the specificities of the Amazonian setting open possibilities for the construction of complex livelihoods.

This thesis has adopted a framework of analysis based on the concept of sustainable livelihoods as introduced by Chambers and Conway (1992). Briefly, a livelihood comprises the capabilities, assets, and activities required for making a living. A livelihood is sustainable if it can cope and recover from shocks and stresses, maintain or enhance its capabilities and assets, and provide sustainable livelihoods for future generations at local and global levels, and in both short- and long-term. This concept is appropriate for the investigation of rural-urban linkages because it reveals the various dimensions of a livelihood, and does not concentrate only on economic or social aspects. In this sense, the concept of sustainable livelihoods helps to identify people's needs and priorities, which have been overlooked by both Marxist-based theories and modernisation approaches. When looking at rural livelihoods in the Amazon, one will inevitably come across their urban linkages. This will be discussed in the next section.

Amazonian urbanisation and urban dimension in rural livelihoods

A common result of the application of both Marxist and modernisation approaches to theory and practice in the Amazon has been the lack of attention paid to local populations. As Nugent (1993) puts it, the *caboclo* peasant population of the Amazon has been marginalised or relegated to the status of an "invisible" majority. This has occurred because the Amazonian social landscape has been poorly defined. Some recent theoretical approaches have co-operated to bring Amazonian local producers out of their "invisibility" by looking at the diversity of situations in which they get involved in order to develop their own livelihoods. One essential step in this direction has been the acknowledgement of the real conditions shaping the local social landscape. This implies a greater attention to the overall process of urbanisation and its impacts on small-scale producers.

Analyses of urbanisation processes, generally speaking, have been undertaken in various theoretical frameworks. Under Marxist approaches, urbanisation is a function of surplus labour mobilisation that takes place when peasants are transformed into proletarians or semi-proletarians. In this sense, urban-rural relations are essentially exploitative, whichever the form of capital present, whether industrial or merchant. Core-periphery frameworks, based on both dependency or world-systems theory, reach similar conclusions, but place the analysis at the macro level and focus on exchange relations. Again, the rural area appears as providing resources to the urban metropolis. A parallel approach has been that of Lipton, who emphasised sectoral conflicts (urban against rural), rather than on class struggle. Lipton (1977) sees development as an essentially exploitative relation in which the urban sector exploits the rural.

Two other alternative approaches were analysed in this thesis. Hoselitz (1957) believed that cities could be "generative" or "parasitic" in developmental terms. In the former mould, cities would be able to create economic and cultural influences, and only a few settlements would be "parasitic", by exercising unfavourable influence on local economic growth. Along the same lines, Rondinelli (1983) believes that urban areas can be beneficial for rural and overall development, as long as there is a geographically and demographically balanced system of cities, and local élites are conscious of broader social interests and needs.

Recently, Browder and Godfrey (1997), studying Amazonian urbanisation, have proposed what they called "a pluralistic theory of disarticulated urbanisation". This is in fact a reasonably large framework of analysis, rather than a theory, but it does constitute a scaffold for theory-building. The authors stress the difficulty of portraying the local economy as articulated to national or global capitalism, and reinforce the view of a "bowdlerised" economic setting. From this framework, the following points are more relevant for the analysis pursued here.

- *The distinction between rural and urban is not clear*

Browder and Godfrey note that "on the frontier permanent residence is a rarity. Urban pioneers are constantly moving between rural and urban environments"

(1997: 14). This is relevant because it supports the view that the urban dimension in rural livelihoods is an important phenomenon in the whole Amazon region. Carolina is an area of old migration, but nevertheless urban linkages are significant, as analysed in chapters 6 and 7. It is interesting to note that members of the Brazilian government considered that this research could be valid for Eastern Amazonia, where large urban centres can be found, but not for the western part of the region. However, the quotation above suggests that in areas where the frontier is still expanding, rural-urban linkages could even be stronger.

- *Environmental change is increasingly mediated by urban-biased interests*

Such interests, as identified by the authors, are twofold. Firstly, regional urbanisation brings large-scale environmental change due to hydroelectric and mining expansion, and the growth of shanty-towns. Secondly, and perhaps more relevant, is the fact that "a growing percentage of the urban population owns rural property, and these rural assets are managed in ways that enhance urban accumulation strategies, not necessarily with long-term forest conservation in mind" (1997: 15). This issue was checked in reference to Carolina, but only 10 urban inhabitants amongst 151 interviews declared owning rural property. This small number, therefore, did not allow for statistical analysis.

However, as was suggested in the last chapter, urban dimensions in rural livelihoods may lead to the same effect. That is, amongst rural producers those who have greater interests in urban areas may manage their rural properties with the aim of meeting the higher expenditure levels demanded by urban linkages. In other words, it requires a more intensive use of natural resources to obtain the higher levels of income necessary to maintain, or expand, urban livelihoods as well as the expensive rural-urban links associated with frequent transit between the two areas.

Therefore, the approach of Browder and Godfrey (1997) breaks with urbanisation theories of Marxist, world-systems, and liberal moulds by looking at diversity, which implies granting to local development processes some autonomy in relation to structural processes. This thesis is embraced by Cleary (1993) who analyses

the fundamental role played by government funds in Amazonian municipalities, the importance of the local informal sector, the high geographical mobility of local populations, and the complexity of livelihoods. In his examination of local development, Cleary stresses that both urban and rural people build a livelihood by working in both rural and urban areas. The local informal sector plays a paramount role in making possible activities for income generation. As a consequence of the operation of these forces, Cleary argues, it is necessary to grant some autonomy to Amazonian social formations in relation to structural capitalist forces operating at the national level.

In a similar vein, Nugent (1993) analyses how capital first destroyed the natural society and replaced it with an imported peasantry. Subsequently, capital failed to "develop" Amazonia, and allowed for the expansion of petty forms of production. The form of capital that remained dominant in the Amazon, the author states, is small-scale merchant capital which, at the same time, transforms and conserves the peasantry. It transforms because merchant capital demands the production of exchange values, and therefore makes possible access to the market. On the other hand it conserves the peasantry because it does not change the relations of production under which commodities are produced. The persistence of some small industrial activity, alongside the importance of government funds and international agencies' policies, allows peasant social reproduction in the Amazon to maintain a significant degree of autonomy from structural forces. Such an autonomy is exemplified by the lack of real subsumption to capital. In the case of Carolina, small rural producers' autonomy may be reinforced by a successful outcome of the *Frutos do Cerrado* project, which may grant producers a larger control over their own labour.

What is therefore paramount for the adequate analysis of small-scale rural development in the Amazon is the evaluation of both types of capital acting at the local level, and the extent to which local social formations can experience some autonomy. In other words, the importance of rural-urban relations. In fact, growing rural-urban linkages appear to be relevant in most of the Amazon region. As Hall states:

"In Amazonia, given the rapid expansion of communications and human settlements, the notion of isolated, self-contained groups producing to meet household subsistence-needs largely independently of commercial markets is an increasingly rare phenomenon."

Hall (1997: 228)

and

"... while structural factors impose clear limits on the freedom of choice, which small producers may exercise, they are nevertheless learning to become masters of their own destiny."

Hall (1997: 216)

Hall's (1997) identification of the importance of commercial markets, which are themselves a manifestation of rural-urban relations, reinforces Browder's and Godfrey's (1997) view of the role played by settlements in the Amazon. Additionally, the integration of the peasantry in economic relations has been confirmed even in the remote area of middle Solimões (the area where the Mamirauá Ecological Station was later created), where Ayres (1992) found a significant degree of rural-urban interactions amongst local *caboclo* population. The importance of rural-urban linkages was also identified by Sawyer (1989) who sees positive effects arising from the linkages between the urban network and rural areas on the frontier.

The second point noted by Hall (1997) refers to the capacity of small rural producers to play an active role in defence of their livelihoods. In this sense, there is a general agreement between Hall (1997), Nugent (1993), Cleary (1993), and Browder and Godfrey (1997) about the fact that small rural producers in the Amazon may enjoy some "room for manoeuvre" in their relations with capital. To reveal the possibilities opened to these producers, therefore, it is necessary to adopt an actor-oriented approach that can help disclose the specificities of social, economic, and political relations established by them.

This is the case of the modified rational-choice work of Bates (1989) analysed in chapter 2. The author notes that apparently irrational economic decisions may have a political rationality. In this sense, both the application of Marxist analyses that focus on "central tendencies", or liberal accounts that place too much importance on the role of the State in determining rural planning and agricultural modernisation fail to interpret the real rationality of local markets. Therefore, researches based on those paradigms fail to tackle heterogeneity, which is understood as the "variability of social response to and real outcomes from such allegedly primary shifts at the global or national level" (Booth, 1994: 305). Booth therefore makes the case for an actor-oriented research which, however, "must address structural issues" (1994: 307). The need for a focus on the specificities of local level relations is also recognised by Flynn, who states that "a key issue is the relation between these expanding urban areas, with their political, economic and other demands, and the rural sector and its population and priorities" (1992: 21).

In fact, the very notion of livelihood strategies reflects, on one hand, a concern with the identification of constraints and opportunities exerted by the existence of various modes/forms of production, a circumstance that is particularly relevant in developing countries. On the other hand, it reflects dimensions that are not purely economic but nevertheless as paramount as the political dimensions stressed in the analysis of Bates (1989), and Flynn (1992). The urban dimension in the livelihood of Carolina's rural producers is the theme of the next section.

Urban dimensions in rural livelihoods

In this study, urban dimensions have been defined as the material and non-material linkages established by rural people in urban areas as a means of maintaining or expanding their sources of livelihood. This thesis has used qualitative and quantitative methods to analyse the importance of urban dimension in the livelihoods of rural people. The indicators used are derived from the conception of livelihoods, and involve cash income, other physical assets, personal assets, religion, politics, claims, and movement of people. As a general rule, urban dimensions are significant for the rural population's sources of

livelihoods as a whole, but they are even more important for beneficiaries of the *Frutos do Cerrado*.

An essential dimension in a livelihood strategy is the capacity of people to make demands in their own defence. In order to analyse this issue, this thesis has investigated how different "classes" are perceived by the local élite, as well as how local politics are conducted. It has been shown that rural producers are placed at the bottom of the social scale. Only those who establish secure sources of livelihood in the urban area gain social respect. The local "political economy" operates with a logic whose aim is, rather than promoting development, keeping producers in a situation of economic and political dependence. Local élites also make political use of urban activities which could be classified as the informal sector. Only those businessmen who are in political opposition are charged municipal taxes. Those businessmen who support the administration are exempted.

This situation resembles Bates (1989) rational-choice framework in which he describes the functioning of agricultural markets in Africa, which function with a logic that has little to do with capitalism. In such circumstances, Marxist-based accounts of development fail to perceive that "irrational" economic choices may be more important for analysing local development possibilities than mechanisms of articulation based on the assumption that the economy is of an ideal capitalist type. Liberal approaches based on top-down strategies, in their turn, have failed to incorporate into analysis and policy prescription such local factors, which, nevertheless, may be fundamental for the successful implementation of programmes and projects.

In order to escape from this political control, local producers have found support in the CEBs. Under the protection of the church, rural producers have been able to develop a critical perception of local politics and of their own circumstances. As a result, rural producers created a Rural Workers' Trade Union and founded the local representation of the Workers' Party. Together, these organisations provide them with the organisational and institutional support necessary for making their demands. This institutional dimension of development has also been ignored by

both Marxist and liberal schools, which place far too much importance on the analysis of economic relations, and overlook the fact that "economy" is not an entity that functions independently of the institutional framework.

Another dimension not perceived is that these organisations which support rural producers' claims are located in the urban setting. It has been suggested in this thesis that to counter-balance local *coronelismo* and urban-biased development, rural producers need to set up urban organisations. It is necessary for conditions of access, but also for "visibility". That is, because of difficult transport, and a general lack of means of communication, it is in the urban area of small countryside municipalities that politics can be carried out. If political participation is necessary for the establishment of claims, then rural producers need to create a political base in the urban area.

It has also been pointed out that religious links may have economic consequences. By attending religious services, rural producers are able to create a social network that constitutes the basis for expanding market possibilities. The sale of products directly to the consumer is an important strategy to by-pass local small merchants. However, in small towns direct trade involves personal links. It has also been suggested that higher levels of income are derived from participation in collective work efforts (*mutirões*). These activities allow for the improvement of techniques, with consequent expansion of production levels and material assets. In other works, *mutirões* can represent an instrument for the expansion of entitlements and capabilities. As a general rule, beneficiaries have more physical assets and higher income levels than rural others.

Analysis of sources of income has shown that this differentiation can be linked to the expansion of sources of income into urban Carolina, together with an expansion in rural production. It has been shown that beneficiaries have more sources of income than rural others, and that the participation of urban sources is more relevant in total income. On the other hand, higher rural production has been explained by longer residence of their children on the rural property. This implies that beneficiaries have been more active, and have managed to engage in remunerated activities more often than rural others. The examination of these circumstances has shown the

inappropriateness of Chayanov's theory of peasant economy, as well as definitions of the peasantry, such as the classical portrayal provided by Shanin.

The diversification of income activities represents, in the words of Cleary, a complexity of livelihoods. In Marxist terms, it implies that different forms of production may be found in the same household. In some cases, peasants are also merchants or entrepreneurs. While the thesis of the articulation of modes of production could be maintained under the logic of "laws of motion" governing petty production and trade, the mechanisms of articulation are certainly blurred. In terms of liberal thinking, the complexity of livelihoods implies that beneficiaries are more "entrepreneurial" than other rural producers, and may also be more so than urban inhabitants. This calls into question the very basis of the classical portrayal of the rural area as backward. Cultural change may be needed, but it may be particularly necessary in the urban rather than in the rural area.

This implies that recommendations made by Rondinelli in terms of a local political élite capable of fostering development should be considered. Rather than assuming urban areas to be capable of spreading development into rural areas, the point is to inspect the extent to which local élites are in fact committed to overall development, or tied to urban-biased politics. The case of Carolina both supports and contradicts Lipton's thesis of urban-biased development. There is in fact a bias towards urban areas, but this must not be taken as a factor which necessarily impedes human agency.

The way in which the local economy functions in Carolina shows the importance of taking local factors into consideration. Marxist- and modernisation-based approaches fail to consider the diversity of economic and institutional circumstances, which come to light when one analyses people's livelihoods. Such diversity also serves to justify for the need for a new approach to development: urban and rural areas cannot be taken as separate issues in the Brazilian Amazon, and the same should be true for a number of developing countries where urbanisation rates are significant. At the same time, it shows the importance of an actor-oriented approach, involving direct fieldwork, and a political perspective. In the words of Booth:

"[T]he promise that actor-oriented work of an anthropological or modified rational-choice (Bates) type will continue to be a source of powerful reinterpretation of otherwise mystifying development problems (e.g. the so-called 'urban-bias' of so much of the institutional set-up in many poor countries) still holds good, and is worthy of a big investment of research effort."
(Booth, 1994: 306)

By looking at actors without neglecting structural factors, this thesis has shown how rural-urban interaction constitutes an important field of research in relation to rural areas in the Brazilian Amazon. The significance of urban dimensions in rural livelihoods to grassroots groups development and sustainability will be approached in the next and final section of this chapter.

Implications for grassroots development and sustainability

It was discussed in chapter 6 how the original idea for the *Frutos do Cerrado* project arose from the need to generate income for rural producers via the sustainable use of natural resources in order to keep them on the land. The project aims to avoid land ownership concentration, which has traditionally resulted from the adoption of monocultures or cattle-ranching. This idea has been encouraged by the PD/A, which places emphasis on commercial agroforestry. Producers are not prevented from cultivating "traditional" crops, but the cost of this activity is not financed by the programme. Therefore, it is assumed in the case of the *Frutos do Cerrado*, that commercial fruit production will create conditions for securing "rural producers" on their properties.

This last section examines the extent to which urban dimension in the livelihoods of project beneficiaries can raise questions over both the aim of keeping producers on the land, as well as creating conditions for the sustainable use of natural resources. The analysis provided in this thesis can be divided into two main lines of argument.

- *Changes in production and accumulation strategies*

Perhaps the single most important point to be made is that the expansion of urban dimensions brings about changes in the livelihood strategies of former "typical" rural

inhabitants. As place of residence becomes blurred, producers need to meet higher income levels to match higher expenses derived from urban commitments. It implies that they need to make more intensive use of natural resources to meet costs derived from urban areas. Greater urban linkages requires the more intensive use of the natural resources

If the household income of those with double residence does not substantially depend on rural sources, then rural production tends to be abandoned. Additionally, cultural factors may lead to the same consequence. In the case of the beneficiaries of the FdC, support for children's migration and insecurity over inheritance demonstrate this trend.

Furthermore, when urban dimensions increase, producers' presence in rural areas decrease. This relation is clear in terms of generation of cash income. However, other dimensions such as religious and political activities may be as important as urban employment. Overall, greater urban dimensions imply that rural producers will have less capacity to invest their own time and financial resources in the rural area.

It should also be noted that in this thesis it has been argued that urbanisation is a widespread phenomenon, but that the circumstances of the urbanisation of beneficiaries and rural others represent different strategies. The strategy pursued by members of the FdC guaranteed higher security for household members in urban Carolina. This is represented in the fact that a larger proportion of beneficiaries have invested in the urban area: 45.8 per cent own an urban residence, against 22.0 per cent of rural others. This urbanisation also granted better social acceptance for rural producers, and also allowed them to make their claims.

The expansion of urban dimensions in rural livelihoods brings about a contradictory situation for project beneficiaries. Greater urban dimensions may take to the expansion of material and non-material dimensions of a livelihood, such as occurred with beneficiaries of the *Frutos do Cerrado*. It is therefore unlikely that beneficiaries' household members that have experienced such livelihood expansion will accept to commit themselves to a type of work that represents a reduction or an undermining in their livelihoods. This is visible in the case of beneficiaries' children. If one

considers all dimension in a livelihood, then these youths currently living in the urban area would be losing sources of livelihood by joining the *Frutos do Cerrado* and committing themselves to rural production. It is understandable why the majority has no intention of working in the rural area. They prefer to assume the risk of moving to another city in search of underemployment rather than taking over ownership of the rural property.

In this sense, the question is not to try to keep rural producers on the land, because the large majority will probably not stay there anyway. If one aims at fostering grassroots development and sustainability, then the overall livelihood dimensions should be considered, and proper strategies devised to allow children to engage in the management of rural production.

Data on children's age and migration has shown that an extremely rapid process of urbanisation is taking place. Beneficiaries' children are not only moving out of the rural area, but they are also moving out of Carolina, with the support of their parents, who are members of the FdC. If this process is to be contained, and future generations are to meet sustainable conditions of developing a livelihood, then PD/A projects should conceive dual strategies that include some activities in the urban area, complementing the project's rural objectives. This question will be further developed in the policy recommendations presented in the next chapter.

- *Political and religious constraints*

Urban dimensions bring other, non-economic consequences for the livelihoods of FdC members. Their involvement in the project was made possible due to the previous expansion of sources of livelihoods that they had experienced by being members of CEBs, STR, and the Workers' Party. These are integral and fundamental dimensions of their livelihoods, which cannot be separated from the analysis of conditions for achieving grassroots development and sustainability.

As noted before, linkages with left-wing politics will raise questions over the sustainability of the project when the support from the PD/A is removed. The *Frutos do Cerrado's* success will have political consequences. It will increase the political

power of the Workers' Party and the Rural Workers' Trade Union, which are directly opposed by the local élite. Local Carolina politicians started to promote a top-down organisation of associations of producers after the *Frutos do Cerrado* was started. Therefore, the initial strategy of local politicians seems to be to create competition, rather than establishing direct challenge. An additional political circumstance is that project success is also likely to bring about some internal differentiation among project members. The extent to which they will be able to deal with this, considering their religious basis, is unknown but very likely to affect the sustainability of the *Frutos do Cerrado*.

Religious linkages also have further implications for sustainability. The Theology of Liberation, responsible for the origin of CEBs, believes that the moral acceptability of a development programme depends on whether it promotes the "liberation" of the people. In other words, if it removes the contradiction between capital and labour (Betto, 1985). If the project succeeds, then these producers will find themselves closer to capitalist production, and that may generate an internal contradiction which would probably result in the end of group cohesion.

Another related effect of religious activity is that their experience with empowerment has come from the participation in CEBs, which has a "methodology" of work that mixes Gospel interpretation with critical analysis of current life circumstances. This implies that if an empowerment strategy is to be applied by those intermediary NGOs involved in the *Frutos do Cerrado*, then it will have to consider this historical experience, and adopt the methods employed.

It will also be necessary to consider whether the overall sustainability of local societies in the Amazon can be achieved if there is a Catholic-biased access to project funding. Beneficiaries' participation in CEBs clearly helped them to get access to information, which passes through the channels of CEBs, STR, PT, and NGOs, which are inter-linked. Other groups of other creeds may be excluded of these networks. One should note that there is a significant growth of evangelical communities in the Amazon region and elsewhere in Brasil.

A final comment refers to the capacity to communicate properly. It was discussed how beneficiaries were unable to understand the technical instructions given by intermediary NGO personnel. It was also pointed out that this was due to the use of inappropriate urban language and concepts, which were not comprehensible to rural producers. If grassroots development and sustainability is to be achieved, then the most basic, essential requisite should be met: that they simply understand the project's aims and orientations.

In the next, final chapter, a number of ideas for policy implementation will be presented, together with a discussion of relevant areas for further research.

CHAPTER 9 - CONCLUSION, POLICY RECOMMENDATIONS, AND SUGGESTIONS FOR FURTHER RESEARCH

The portrayal of the Amazon as an empty rural space has now given way in the literature to the recognition that urban Amazonia has a rapidly growing urban sector. Data from the 1996 Brazilian mid-term census shows that, overall in the Legal Amazon, the urban population is now larger than the rural. Of 18.7 million inhabitants, 11.4 million (61.06%) live in urban areas. In a theoretical perspective, urbanisation trends have been analysed in terms of Marxist-based and liberal approaches. This thesis has analysed various ideas advanced by scholars of both traditions, as well as by other authors of rational-choice or post-modern persuasions. The central aim was to identify the constraints imposed, and the opportunities opened up for the livelihood of small-scale rural producers in the Amazon through linkages established by them with urban areas. In other words, this thesis has investigated urban dimensions in rural livelihoods.

For Neo-Marxist writers, small-scale rural producers are interpreted as being a peasantry subsumed to the laws of motion set by capitalist forces. The nature of the subsumption is that the peasant mode/form of production plays a functional role within capitalism by providing cheap labour and food for the capitalist mode of production, which is clustered in urban areas. Underlying this view is the idea of urban classes exploiting the rural, in a process that leads automatically to rural-urban migration. Those writers focusing on the political economy of Amazonian frontier incorporation saw peasants' means of production as being directly expropriated by capital. State-backed policies would reserve land for speculation, and create a "reserve army" of cheap rural labour. This process would then result in concentration of land ownership and proletarianisation as petty commodity production is replaced by capitalised rural units.

Liberal accounts based on the Weberian tradition see capitalist development as bringing benefits for rural producers. The backward character of rural societies is replaced by an achievement orientation proper of the urban, rational individual.

Economic growth would be led by urban industry, which would "trickle-down" the benefits of general development to the whole society, including rural producers. In the same account, the State would play a decisive role in steering development. Seen as relatively independent from the interests of groups in society and acting rationally, government technocrats could set up adequate development goals without the need for public consultation. Such thinking heavily influenced policy making and implementation in Brazil, but perhaps especially in the Amazon, because of its lack of "development" as perceived by modernisation theorists.

This study has argued that both Marxist-based and liberal accounts have in common the perspective of "rural" and "urban" as totally separate sectors and that rural social formations are passive agents in the process of inevitable, urban-driven capitalist development. To some extent, both accounts subscribe to the idea that rural producers are impotent in the face of the demands of structural forces determined by the owners of capital or Governments. In both accounts, Amazonian social formations have been neglected their identity, and their economic relations, taken as stagnant, or dismissed altogether.

This thesis has discussed how these accounts changed after the 1970s to include concerns over local-level development, and the analysis of diverse, local-specific circumstances. Such change has been influenced by a number of theoretical contentions that challenge both mainstream Neo-Marxist and liberal ideas. Lipton's (1977) notion of "urban-biased" development, despite its theoretical fragility, was an example of an alternative approach that sought further explanations for patterns of development and urban primacy over rural areas. Furthermore, the political dimension of development was incorporated under both "positive" and "negative" views. In the liberal tradition, the work of Rondinelli (1983, 1985) places a strong emphasis on the positive roles played by politicians in fostering development. In contrast, Bates' (1988, 1989, 1990) developed a modified rational-choice approach in which political interests drive local markets with a rationality that does not follow economic, capitalist logic.

Along this same line of debate, Nugent (1993) argues that Neo-Marxist accounts fail to perceive that it is merchant capital which regulates local forms of production. Rather than displacing producers from the means of production, this form of capital encourages the expansion of petty forms of production and trade. A similar contention is posed by Cleary (1993, 1994) and Hall (1995, 1997). The former looks at the "complexity of livelihood strategies", that is, the diversity of activities performed by small-scale rural producers to earn a living both in rural and in urban areas, and at the role to the State in providing funds for local development. The latter analyses the circumstances involving grassroots groups and their capacity to make sustainable use of natural resources for their own benefit. Both accounts could be described as post-modernist approaches that challenge the idea of small producers being passive victims of forces exerted by capitalism development and the State.

This thesis makes use of this rich theoretical background to analyse both the importance of urban dimension in rural livelihoods, and the extent to which such dimensions may influence rural producers' capacity to engage in projects designed to increase production and secure beneficiaries on their land. As a case-study, a project financed by the Pilot Programme for the Conservation of the Brazilian Rain Forest (PP-G7) was selected. The PP-G7 is a major national and international initiative for promoting sustainable development in the Amazon. It aims at reconciling productive and conservationist objectives. Theoretically, the foundations of the PP-G7 lie in new approaches for local, small-scale development and poverty alleviation, which have been originated in the developmentalist thinking of the end of the 1970s and the early 1980s.

These new approaches to development argued for changes in pure modernisationist platforms towards a more socially responsible, sustainable strategy for development. It appeared as a reaction to the pervasive effects of those Brazilian policies of the 1970s and 80s based on modernisation paradigms. In relation to the Amazon, such policies led to huge forest clearance, and rapid urbanisation without significant industrialisation or agricultural expansion. New development strategies, such as Integrated Rural Development and Basic Human Needs played a central role in attracting attention to the need of incorporating

welfare-type assistance into development goals. However, structural adjustment policies of the early 1980s reduced the capacity of the State to provide social benefits. The harsh economic conditions derived from adjustment were challenged by critics who called for the inclusion of a "human face" in economic policies, as well as for the conservation of the natural resource base.

As a result of this shift towards social and environmental concerns, the notion of sustainability gained clear contours and was then applied at the household level. From this originated the idea of sustainable livelihoods, as presented by Chambers (1988, 1995) and Chambers and Conway (1992). This concept focuses on assets, activities and capabilities, that is, material and non-material dimensions of people's lives, with a view to analysing the extent to which a livelihood can recover from stress and shock. This approach complements that of broad sustainable development because, if sustainable development is to be a useful concept, then it should guarantee that livelihoods are themselves sustainable.

This study has adopted the framework of sustainable development to analyse urban dimension in the rural livelihoods of *Frutos do Cerrado* project beneficiaries. This project financed by the PP-G7 under its Demonstration Projects' component. The *Frutos do Cerrado* project is located in southern Maranhão, in the eastern corner of Legal Amazonia. Despite concentrating on just one project, this thesis has shown that a prudent generalisation of the research findings is possible because of the literature on related issues, and of the elevated rate of urbanisation in both Legal Amazonia (61.06%), as well as in municipalities where the PD/A supports projects (69.6%).

Most of the PD/A projects are attempts by rural producers to improve their incomes through marketing agroforestry and non-timber forest products produced with sustainable concerns in mind. It has been argued that the PD/A gives priority to nature conservation by placing conditions on the type of activity to be financed, rather than gearing current production practices towards sustainability. The *Frutos do Cerrado* project assumes that one outcome of the project will be a higher income, which will grant rural producers the incentive needed to stay on their properties instead of migrating to urban areas. Beneficiaries of the project,

however, are small-scale producers of "traditional" crops (rice, beans, manioc, and maize), and by engaging in fruit production will have to partially alter their production base.

This thesis has analysed the importance of the urban dimension in rural livelihoods at programme level, in relation to the development patterns in the municipality of Carolina, and in the livelihoods of project beneficiaries. Urban dimension have been defined as the material and non-material linkages established by rural people in urban areas as a means of maintaining or expanding their sources of livelihood. It has been shown that the importance of urban dimensions established by project beneficiaries was not considered at the PP-G7 planning level. It was also analysed how modernisation policies sidelined Carolina's economy, rather than promoting its development. Furthermore, it has been demonstrated that there is in fact an "urban-biased" type of development in Carolina, and that small-scale rural producers are exploited by urban classes that benefit from cheap food and labour.

Nevertheless, by combining data from interviews from key informants and statistical analysis, this thesis has shown that Carolina's rural producers in general, and beneficiaries of the *Frutos do Cerrado* in particular, have developed strategies that mix rural and urban sources of livelihood, both in terms of income (cash and assets), and other non-material dimensions. These producers have expanded their sources of livelihood into urban Carolina, and managed to retain, or even expand, their agricultural production. However, it has also been shown that the families of project beneficiaries are more urban-oriented than the families of other rural producers. In general, beneficiaries of the *Frutos do Cerrado* are, amongst local rural producers, those least likely to stay working the land.

Local political dimensions have been scrutinised, and it has been suggested that, in order to deal with the urban-biased type of development imposed by the local élite, rural producers need to develop urban-based organisations that sustain their capacity to make claims for labour rights, political participation, and local development conditions. In this sense, the improvement and sustainability of rural livelihood is directly associated with people's ability to make claims through organisations that are urban-based. In the case of Carolina, these producer

organisations represent a paradox for the PP-G7. Rural producers are involved in Christian Base Communities (CEBs), Rural Workers' Trade Unions (STRs), and in the Workers' Party (PT). These three organisations have a very strong Marxist background. However, the promotion of entrepreneurship and environmental conservation through agroforestry systems, aims of the project, derive essentially from modernisation thinking. The paradox also relates to international and national capitals helping the peasantry in the process of transition. In projects like the *Frutos do Cerrado* peasants are been granted money to develop income-generating activities that may allow them to enjoy better control over their own labour power.

Therefore, the expansion of livelihoods into urban areas, together with the effects of a development project, challenge the view of a peasantry being totally governed by the laws of motion set by capital. While structural forces should be recognised, the peasantry's capacity to act in defence of its own interest should also be acknowledged. It has been argued that a full comprehension of the peasantry's expansion of livelihood sources demands the recognition of the importance of urban linkages, which requires an actor-oriented approach. This thesis has also argued that the recognition of expanded livelihood sources challenges the view of the peasantry as portrayed in classical studies such that of those of Chayanov or Shanin. The so-called "peasants" are in fact small-scale rural producers that get a substantial percentage of their income from urban activities, which have nothing to do with peasant production. The logic of their rural activity is not a subsistence-driven one, but rather one that aims at accumulating, a circumstance reinforced by the *Frutos do Cerrado* project. Furthermore, both neo-Marxist and modernisation approaches fail by not recognising the fact that the local economy is mediated by forces that have little to do with the economic logic of capital. These forces were explained by using the rational-choice approach of Bates (1988, 1989, 1990).

Such urban dimensions have direct consequences for sustainability and grassroots development. This thesis has argued that the expansion of livelihoods into urban areas results in greater pressure upon natural resources. The resource base of local producers needs to be used more intensively in order to meet the higher costs associated with more frequent presence in urban areas of both the household head and his/her family. Furthermore, urban dimensions bring other consequences that

are not directly economic. These relate to political and religious activities, which nevertheless serve as the basis for the expansion of other, more economic, livelihood dimensions. Examples are sources of urban income and ownership of urban property.

This thesis has also discussed how the analysis of data obtained only at the head of household level precludes the view of broad strategies pursued by householders, which will affect the head's future decisions and economic possibilities. It has been shown that children's out-migration is widely supported by parents in Carolina, but children of beneficiaries of the *Frutos do Cerrado* have migrated more than children of non-beneficiaries. This was explained by the fact that project beneficiaries are more urban-oriented, and have managed to expand their capabilities more than others. It has been suggested that the aim of securing people on the land is not feasible *per se*, and that an urban strategy should form a part of rural development programmes. In other words, grassroots-level programmes that aim at improving sustainable use of the natural environment should focus on householders' overall needs, and design strategies that are not exclusively oriented towards the rural area.

A related issue is the social, political, biological, and economic feasibility of projects that try to commercialise forest resources. It has been argued that the success of the *Frutos do Cerrado* may demand greater urban commitment amongst the beneficiaries of the project. It may also bring about a political reaction, as the group that benefits from the project is opposed by the local élite. Biological sustainability has been called into question, because the three years of funding provided by the period of granting is far lower than the 12 years or so required by agroforestry to complete a production cycle. Economic sustainability has been highlighted as a major problem of the *Frutos do Cerrado*, an issue which is directly linked to the lack of technical expertise of both beneficiaries and the intermediary NGOs involved in the project. This thesis has suggested that PD/A projects should be more carefully designed and implemented in order to allow rural producers and the NGOs to move on a step by step basis. This would be one that builds upon the actual strategy of beneficiaries' social reproduction, rather than trying to impose aims that do not fully reflect the priorities of those involved in project implementation. A series of policy recommendations to make operational the theoretical discussion of this thesis is

provided in the next section. After that, the last section of this chapter presents some ideas for further research in relation to the theoretical debate done in this study.

Policy Recommendations

A number of key areas for improvement in public policies can be identified from the discussion developed in this thesis. They will be analysed in this section, under three sub-headings: (a) PD/A project design and implementation; (b) central government policy framework, and (c) institutional links. Each sub-heading is divided into a number of policy recommendations, which are identified by numbers. The chapter concludes with suggestions for further research on this topic.

- *PD/A project design and implementation*

1. Use a "sustainable livelihoods" approach in small-scale productive conservation projects

The sustainable livelihoods framework has proved to be a powerful tool in both theoretical and practical terms for the analysis of small-scale development projects. It helps to reveal livelihood dimensions that are paramount for sustainability, but which are normally excluded due to the overall trend amongst development practitioners to focus more on the accomplishment of project objectives rather than addressing people's needs. Implicit is the idea that productive conservation projects, while undoubtedly necessary, may put nature conservation ahead of people's broader needs. The use of a sustainable livelihoods approach has been based on the idea that it makes little sense to talk about the preservation of natural resources if the life conditions of those managing the environment are not sustainable as well.

This thesis has argued that amongst livelihood dimensions there are important urban linkages that help maintain and/or expand people's livelihoods. They are part of the coping and adaptive strategies needed to face situations of stress and shock. Therefore, the sustainable livelihoods approach helps identify all the spheres

involved in making a living, which include urban strategies even for those habitants of the Brazilian Amazon.

Qualitative research has shown that, despite its complexity, the PD/A was conceived and implemented based on a very loose definition of sustainability. Some fundamental concepts, such as "vulnerability", were ignored by key actors. Theoretical inputs into the PD/A are therefore urgently required, and the sustainable livelihoods approach is probably the best analytical framework for this purpose.

2. Develop techniques to apply the "sustainable livelihoods" framework

Fully application of the sustainable livelihoods framework will require further development of indicators and methodological strategies. Rather than creating new indicators, what appears more suitable is the use of combined existing indicators, but which have been applied separately in research directed towards economic, social or environmental aspects of development. This thesis has used a modified household questionnaire, which, together with qualitative research in a period of almost six months of fieldwork, helped identify some important lessons for developing appropriate sustainable livelihood questionnaires:

- A good pilot questionnaire is fundamental to check for differences in livelihood strategies. In the Amazon setting, this pilot questionnaire must be tailored to fit people's relationship with the natural environment, which should differentiate between high and low resource areas. The former would include (a) *várzea* systems, and (b) *terra firme* systems. The latter would comprises traditional crop production. Projects of the PD/A areas "forestry resources systems", water resources systems", and "agroforestry systems and environmental recovery" would fall into one of these categories according to the specific conditions of the location where the project is to be implemented;
- Longitudinal data is crucial for identifying coping and adaptive strategies. This implies that quantitative data should be produced prior to project approval as a means of making possible a comparison with the *ex-ante* situation;

- Data gathered exclusively from the head of household tends to be gender biased and excludes livelihood strategies within the household, which may affect the head's own future strategies. Key indicators are, occupation of family members', and the current place of residence. It is also extremely helpful to include (a) open questions to the wife, when appropriate, and (b) a short questionnaire for children and/or other household members. Children's short- and medium-term aspirations help revealing parents' non-quantifiable strategies.

- Questionnaires should be tailored in order to make evident livelihood dimensions related to claims and access. It is important to specify people's claims to greater social and political participation, and access to public organisations, services, and means of financial support, such as credit for rural production. A combination of closed and open questions will be necessary for this. These two dimensions involve data on political and religious influences, that this research has shown to be fundamental. Information on both subjects should be asked in the form to be submitted for project approval. Key indicators are (a) membership to organisations (including CEBs), (b) periodical reception of favours from members of the élite, (c) robberies and social violence, (d) access to social services, (e) access to credit;

- Both quantitative and qualitative data should help to reveal the complexity of the head of household's livelihood. Key indicators are the head's (a) urban income activities, (b) urban investments, (c) presence in urban areas, and (d) past urban experience (including residence, study, and work);

- The quantitative analysis revealed the usefulness of cross-checking various groups in the same area like "rural producers", urban inhabitants" and "schoolchildren". If PD/A funded projects would improve monitoring procedures to include quantitative analysis, than periodic evaluation could include data from non-beneficiaries as a means of comparing beneficiaries with non-beneficiaries.

3. Develop methods of statistical analysis adequate to PD/A type projects

The application of "traditional" inferential statistical methods in development projects is quite limited due to the small number of cases falling in each category of the variables being tested. Because of that, most of the parametric tests cannot be applied, and associations cannot be tested. As a result, national, international, and non-governmental organisations working with development issues have limited their efforts in this area to descriptive statistics. However, as this research has shown, the non-parametric statistical methods helps to analyse data measured at both interval and ordinal levels in small-scale samples. Because rural projects invariably involve a small number of beneficiaries, the use of non-parametric statistics could be extremely valuable.

4. Gather better quantitative information prior to project approval

The Brazilian government, together with international organisations, has donated money up to the value of US\$ 210.000,00 to individual PD/A projects without having any substantial information on the livelihood circumstances of project beneficiaries. This thesis has shown the lack of information on specific issues like land tenure and property rights, as well as broader questions such as urban dimensions in rural livelihoods. Without proper *ex-ante* information the PD/A is shooting in the dark, and may put at risk not only the money invested, but also increase people's vulnerability.

Additionally, this sort of information is needed if monitoring and evaluation analyses are to be effective. It is necessary that the PD/A develops a short but precise questionnaire (that could be completed by respondents themselves) that gathers information for the head of household on some key areas. Some worth noting are: (a) current average monthly expenditure, (b) sources of income per calendar year, (c) property rights over land, (d) total number of household members, (e) number of household members' living in (i) that municipality's urban area, (ii) other municipalities' urban areas, and (f) beneficiaries' properties. This information could be used to select projects to be granted on a more accurate basis. It should be noted

that the statistical analysis of such data is straightforward, and would, create no major burden for the PD/A administration.

5. Economic planning for partial substitution of production basis

The PD/A deals with all projects on an equal basis. However, some projects may bring about significant changes to production arrangements. This is the case of the introduction of agroforestry systems in already degraded areas. Currently, beneficiaries of the *Frutos do Cerrado* make no commercial use of the (few) fruit trees they have on their properties. Their labour, within the rural property, has been so far directed to the production of *lavoura branca* (rice, beans, maize, and manioc) goods. Therefore, the introduction of an agroforestry system based on fruits will require from these producers a reduction on the time currently spend on their *lavouras*.

Given that, if the project does not generate enough income to compensate for this transfer of labour, rural workers will have their total assets (cash and other) reduced. This may lead to real impoverishment together with an increase in vulnerability. Rural producers will probably try to compensate this loss with part-time income activities, which may involve the work of other household members, possibly in the urban area because it is there that this sort of opportunity is available more frequently.

It is therefore urgently necessary for the PD/A to establish different approaches to project financing, based on the beneficiaries' natural endowments. The policy recommendation derived from this is that the PD/A should differentiate between high and low resources areas, and adapt both project financing and the period of support for these conditions. An even more accurate economic analysis will be necessary in cases involving the partial substitution of the natural resources' base.

6. Adopt a realistic economic approach to projects that involve marketing

Analysis of the *Frutos do Cerrado* has demonstrated that the project relies on the use of subsidised family labour for the production of the raw-materials needed for

processing. Problems in the factory, associated with lack of experience with commercialisation, and the difficulties of placing on the market a new product, resulted in financial loss during the first year. Therefore, the *Frutos do Cerrado* has had so far an uncontrolled and inefficient use of labour. It is fundamental that projects, with the help of the PD/A, calculate the necessary labour input for each product to be traded. In other words, a study of economic feasibility must be carried out before making grants to projects involving trade. During project implementation, the PD/A should give the necessary support for financial and accounting activities.

These recommendations imply a trade-off between quantity and quality. The need to improve quality to the detriment of quantity appears to be overwhelming, since it is simply unrealistic to support economically unviable ventures. The beneficiaries themselves would not invest their own money in risky situations, so why should the PD/A expose their labour to such risks? Therefore, in cases where commercial skills need to be developed, a small grant should be provided in the first instance.

7. Scale-up market conditions for PD/A projects

The recommendations made above show how the PD/A is by-passing the economic analysis necessary for any entrepreneurial endeavour. In addition to this, the PD/A is also overlooking local economic structures. Analysis of the *Frutos do Cerrado* has demonstrated how the local economy is dominated by merchant relations operating in the so-called informal sector. In Carolina, the local producer of fruit pulps who competes with the *Frutos do Cerrado* works entirely in the informal sector, i.e. his activity is completely unregulated, and he pays no municipal, state, or federal taxes.

However, because PD/A money comes through official development agencies and is channelled via the Brazilian government and the Bank of Brazil, projects are required to pay taxes on all commercial transactions. They may be exempt from municipal taxes (an item not checked by the PD/A bureaucracy), but they are required to pay ICMS (VAT). PD/A projects will not be able to face market competition from non-regulated firms, which are predominant in the Amazon region. In other words, PD/A legal requirements are making commercial agroforestry/productive conservation projects unfeasible from the start.

It is therefore recommended that PD/A projects should be fully integrated into real market conditions not only through careful economic planning, but also through bringing the activity to the formal economy on a step-by-step basis. It is unrealistic to demand formalisation in the Amazonian setting. As a consequence of this, the PD/A should give priority to supporting association of producers rather than co-operatives, because the latter operation is regulated by law and requires accounts to be kept. In the case of the *Frutos do Cerrado*, as has been discussed, there is a larger number of co-operatives not because they are better prepared for the market, but because legal regulations demand greater group participation, which may serve the political or electoral interests of some involved in the project.

Additionally, market conditions should be gradually introduced into projects by dividing the projects' total grant into soft and hard. Soft grants would be interest-free, and used to finance infra-structure, and setting up the project. The hard part of the grant would initially charge interest rates at values far below the market, and scale them up as the project gets moving.

8. Support for creating markets for new, feasible agro-ecological products

Projects like the *Frutos do Cerrado* involve production of goods that may be well known and consumed regionally, but have little if any penetration in national and international markets. The case of tropical fruits is typical. Although very tasty, consumers are not used to them and just a few have been commercialised in Brasil. In fact, the most commercially accepted fruits being processed by the *Frutos do Cerrado* already participate in the national market at prices far below those proposed by the project.

The introduction of a new product in the market is a delicate entrepreneurial operation, involving perfect timing of production, processing, quality control, storage, sale, transport, invoicing, and charging. In addition, there must be funds for marketing and advertising. The most complicated operation is the one that aims at co-ordinating agricultural production, industrial processing, and trading. From the entrepreneurial point-of-view, things get even more complicated if production is

located far from the main consumer markets, if transport and communication conditions are precarious, and if the product itself is perishable. If that food product, which requires hygienic standards, is processed by an association of Amerindians, then suspicion and prejudice will add to existing difficulties. If, on the top of that, the activity is controlled by NGO personnel with no skills in management, by a group of Amerindians that barely speak Portuguese, and by semi-illiterate rural producers, than serious organisational problems are bound to occur.

There is, therefore, reasonable grounds to suspect that the project will face enormous difficulties to establish itself as a commercially viable enterprise. The PD/A administration should then be aware of such risk, and analyse the extent to which the same can occur to other projects in the Amazon. Despite the risk involved, people do need an option to improve their life conditions, which will hardly be provided by small-scale, labour-intensive production of "traditional" crops. The question is therefore to analyse whether there will be, in practice, room for community-based sustainable use of timber and non-timber forest products.

Some experiences in the Amazon and elsewhere indicate that there could be, but a number of already known lessons should be incorporated into the PD/A. Based on the experience of the *Frutos do Cerrado*, some key recommendations can be stated:

- The process of getting into the market should be better planned, and grants/loans should be given on a step-by-step basis, according to the real capacity of beneficiaries to accomplish the project objectives, and according to the community's natural resource endowments;
- The PD/A should use part of its resources to finance a project aiming at knowledge gathering and replication. It could take the form of a new unit, or could be performed by a specialist NGO in this field. This unit should be able to provide managerial, commercial, accounting, and technical assistance to all projects. This function cannot be performed by individual consultants because of its wide scope, and because it requires gathering lessons from individual initiatives to be rapidly incorporated into other projects;

- This new unit should also fill the gap between the PD/A and other Pilot Programme components, such as the sub-programme on Science and Technology,;
- This unit should develop a course on these issues, which would be given to project beneficiaries or their children, seeking their commitment to return to the community and replicate the knowledge. Financial assistance in the form of "scholarships" should be provided the participants.
- Knowledge replication should not be urban-biased, but rather incorporate techniques for appropriate rural communication. It must care for problems associated with knowledge extraction, and care for intellectual property rights;
- This unit, which should be located in the Amazon region, should have project beneficiaries on its board from its inception;
- Links with other national and international organisations operating in the same fields should be actively supported.

Furthermore, the PD/A should give incentives for projects to work with non-perishable products. Most PD/A projects have opted to work with some sort of food processing, which is probably the most evident alternative. In some cases, however, food processing could be extremely complicated, as it is the production of frozen fruit pulps in Carolina, one of the hottest places in Brazil. In that locality, production of sun-dried fruits would probably make more sense. Additionally, there is a broad range of non-perishable non-timber forest products that could be explored, which would have a higher market value than fruits, just to cite one case. Examples of such products are oils, resins, essences for perfumes, fibres, etc. These products obviously require larger technological inputs, but the Pilot Programme is financing a sub-component on Science and Technology for this aim.

9. Extend the project cycle in years

Donor organisations tend to limit the period of their financial support in order to put pressure on for results, and to encourage beneficiaries to eventually find their own financial support. In many cases, as occurs with the PD/A, the length of the funding period is not adequate. PD/A projects are supported for three years, but agroforestry systems have a cycle of some 12 years, and it is not possible to achieve for environmental sustainability before this period. Additionally, the introduction of a new project in the market may take from 5 to 20 years (Clay, 1996). So, within the granting period defined for the PD/A it will be impossible to claim environmental or economic sustainability, let alone in terms of social dimensions.

If the PD/A assumed a step-by-step approach, paying greater attention to specific local conditions, than intermediary objectives can be defined, and granting/funding period extended in accordance with the accomplishment of those aims. The total amount of funds could be kept at the same level, but their disbursement would be extended and made progressive in function of the project performance. If the financial support is kept the way it is now, it represents no guarantee for the donors, but also, and more importantly, neither for the beneficiaries.

10. Religious influences on group organisation

Religion is a central element in the organisation of the rural producers in Carolina. It was through attendance at mass, and participation in CEBs, that a group of rural producers enlarged sources of livelihood, and finally became beneficiaries of the *Frutos do Cerrado*. Because the PD/A is directed at groups which already have some experience with participation, and are reasonably independent from political coercion, it is possible that there has been an automatic bias in favour of communities with CEB linkages.

Therefore, it is necessary for the PD/A to check for possible religious-bias amongst its projects, which could have two consequences. First it would imply the exclusion of a non-Catholic minority from the programme's benefits. Secondly, it could influence

projects' development at latter stage. CEBs' are based on Liberation Theology, which has a strong Marxist influence, and understands that development projects must improve equality, not the opposite. However, it is possible that projects like the *Frutos do Cerrado* could increase social differentiation amongst beneficiaries, as well as between beneficiaries and other rural producers. To some extent, in both cases some differentiation would be inevitable. This issue may represent a major barrier for project development in communities where CEB activities are paramount. The PD/A has ignored so far information on religious activities, but this is a fundamental question. The PD/A should ask information about religious activities in the projects proposal form, and draw a strategy to deal with such question, and to avoid PD/A projects being Catholic-biased.

11. Political constraints on project implementation at the local level

Local political influences have proved to be an absolutely paramount issue in the case of the *Frutos do Cerrado*. The influence of *coronelismo* and other forms of patron-client relations in the Amazon is well known. Linkages of most Brazilian NGOs with the Workers' Party are also evident. However, the PD/A has so far bypassed analysis of the effects of political influences. It is therefore recommended that the PD/A should make explicit in project approval forms that proponents should make a brief evaluation of their own political position, and that of the locality where the project is to be implemented.

Additionally, the PD/A should include concerns with political relationships in its monitoring and evaluation efforts, and consider the extent to which possible local political influences could constitute an obstacle to project implementation. It is critical that the PD/A starts to reflect on the political sustainability of projects once the funding period has ended. A feasible recommendation is for the PD/A Technical Secretariat (TS) to approach the majors of municipalities where projects are being implemented. It is clear that the TS has not enough staff or financial resources to send representatives to discuss the project with local representatives. However, majors go to Brasília quite frequently, and could include a visit to the Pilot Programme on their agenda. If the PD/A performs such "public relations", it would

help overcome misunderstandings about the nature of the Pilot Programme, as well as political resistance to project implementation and continuity.

Political pressure, however, is not exclusive to local politicians. There have been debates within the PD/A about the appropriateness of improving project effectiveness at the expense of the quantity. It is not unreasonable to suppose that NGOs, including the GTA, would be interested in maximising the number of projects within the Amazon. In many localities, one PD/A project could represent a very significant injection of money in the local economy, and may create the most important commercial activity of the municipality. This has tremendous political effects at the local level, and may result in political revenues for the politicians linked to NGOs. Furthermore, greater quantity is also beneficial for high level bureaucrats of the Ministry of the Environment, because the greater number gives more political visibility for the PD/A. Ministerial personnel could claim that some 100 projects have been financed in the Amazon, without specifying their outcomes. However, if the Pilot Programme intends to promote sustainable development, then sustainability should be the most important criterion. Because PD/A projects are influencing household's development, than what should be financed are those projects which are successful in expanding and sustaining people's livelihoods.

12. Verify for appropriateness of intermediary staff communication

It was evident from the *Frutos do Cerrado* that intermediary NGOs are sometimes unable to establish a proper communication with project beneficiaries. In Carolina, the majority of members of the project could simply not understand explanations about the project itself, nor the technical assistance provided by extensionists. The PD/A should not take it for granted that NGOs play an effective role in the local community. Members of the CTI in Carolina had a very conflictive relationship with project beneficiaries, and with CENTRU, the other intermediary NGO involved in the *Frutos do Cerrado*. However, this issue has not emerged in the monitoring and evaluation reports produced so far. It is recommended that the PD/A places particular attention to communication problems, especially in the case of projects in which there is an NGO from outside the Amazon involved. Although this is a type of problem likely to occur in every small-scale development project involving

intermediaries and NGOs, the fact that a substantial number of NGOs external to the Amazon are working in the region makes this question particularly relevant.

Additionally, the PD/A should improve its own communications. The project proposal form has been criticised for its complexity. Despite efforts to simplify explanations and requirements, the document is still unintelligible to rural producers, who rely on explanations provided by NGOs, which are not understood. It is advisable that the PD/A produces information that can be understood by people that have completed only the fourth year of basic education.

13. Include strategy for communication with local society

None of the inhabitants of Carolina contacted during almost six months of fieldwork had an accurate perception of what the *Frutos do Cerrado* is all about. Some used to call it "the project of the Workers' Party", others "the project of the (Amer)indians". Not even the beneficiaries' children could explain the project's aims and strategies. It is recommended that the PD/A should encourage beneficiaries to explain the project within their households, and that those responsible for project co-ordination should discuss of publicising the project within the local community.

The importance of the *Voz do Brasil* radio programme has been demonstrated in this research. Moreover, programmes of the *Radio Nacional da Amazônia* are also very popular, mainly amongst those who not follow the *Voz do Brasil*, and also amongst women. Together, the two programmes constitute a major tool for the Pilot Programme, and especially the PD/A, to publicise its information. However, neither source has been used so far.

14. Improve current monitoring and evaluation practices

It has been discussed how monitoring and evaluation efforts so far have not included the beneficiaries' vision of projects. This is fundamental for a proper social analysis and, in the final analysis, for the success of the projects. As discussed above, monitoring and evaluation should also be able to collect quantitative data under a sustainable livelihoods framework. This should pay special attention to people's links

with urban areas. Furthermore, it is important that the PD/A make clear, before final project approval, that those involved in its implementation should carry out permanent monitoring with a view to promoting empowerment, and that evaluation efforts should be supported.

During fieldwork, members of the IAG visited Carolina, and it was clear that members of the CTI were deliberately omitting information about the difficulties faced in implementing the project. Instead of making the best of the presence of those specialists, NGO members were trying to hide information about the project problems, which they probably interpreted as their own fault rather than the result of normal pitfalls faced by projects of that nature. It is the responsibility of the PD/A to make clear that monitoring and evaluation is not inspection, but rather an essential tool for project improvement.

Additionally, as pointed in this thesis, monitoring of the *Frutos do Cerrado* considered women's participation which was, in practice, an extra burden on their workload. It is urgent that the PD/A refines the way gender issues are approached by the programme. Far more attention should be paid to this issue, as became clear from the very *machista* practices of the own *Frutos do Cerrado* beneficiaries, as well as of local society in general.

15. Interfaces with other Pilot Programme components

Since the discussions that preceded the creation of the Pilot Programme, the need has been pointed out for close co-ordination and co-operation between its sub-components. However, the PD/A and other sub-components still function separately. This reflects difficulties internal to the Brazilian government, both in terms of administrative capacity and political good will. As PD/A implementation proceeds, the lack of contact becomes more critical. Urgent measures are needed if the Pilot Programme is not to be turned into a "development Frankstein", that is, a series of sub-programmes that do not form a coherent body of development policy.

- *Central government policy framework*

1. Co-ordinate the PD/A with other governmental efforts

The federal government in Brazil is well known for its lack of internal articulation. Programmes developed in various Ministries do not communicate despite overlapping aims. This problem is probably more acute in relation to programmes of the Ministry of the Environment. Because it is a relatively new and small ministerial body (created in 1992), and because the lack of comprehension of other ministries of the sustainable development agenda, programmes of the Ministry of the Environment are unknown or regarded as utopian. The Pilot Programme's PD/A, in particular, is ignored even within the Ministry of Agriculture.

Despite such lack of interaction, some government projects are particularly relevant for the PD/A. These are the national programmes of:

- (a) Development of basic level education (PMDE), Ministry of Education and Sports;
- (b) Improvement of household agriculture (PRONAF), Ministry of Agriculture and Provisions¹;
- (c) Jobs and income generation (PROGER), Ministry of Labour; and
- (d) Professional Education, Ministry of Labour

All these programmes are co-ordinated by the *Comunidade Solidária*, which is a type of institutional umbrella linked directly to the country's Presidency. There are within the *Comunidade*² some experts more concerned about sustainable development, which suggests this as a better way to insert the PD/A into the government's priorities.

¹This programme may have been extinguished by the time of this thesis approval.

Other governmental programmes that deserve integration with the PP-G7, and especially the PD/A, are the Credit for the Extractivism, and the Green Protocol. The former constitutes a credit line within the Constitutional Fund for the North (*FNO Especial*), which is accessible to individuals or associations of producers and co-operatives that extract forest resources (which are not defined in the draft bill approved). The latter constitutes a declaration of principles signed by Brazilian Banks aiming at reconciling their borrowing and investments with "sustainable development" concerns, which are loosely defined.

2. Adapt fiscal policy to small-scale productive conservation activities

Fiscal policies in Brazil largely ignore environmental issues. Nevertheless, taxes could be applied to foster small-scale sustainable development. However, because this would involve some tax revenue sacrifice from both federal and state governments, its application is very difficult, but not impossible if the activity promoted results in larger revenues. What seems difficult is a change in mentality that would allow government officials to see fiscal policy as an instrument that can not only provides funds, but also guide development in a sustainable way. During the 1970s and 1980s an imprecise amount of money, probably reaching some five billions of dollars, was granted in tax concession and fiscal incentives for cattle ranchers and speculators. The socially and environmentally negative effects of that tax scheme well illustrate how taxes may have a strong impact on development. The point is to find a way to use the same instrument for the benefit of people and the environment.

In particular, three taxes have an environmental interface. All three have what is known as a non-fiscal dimension (*extra-fiscalidade*). This refers to the power of some taxes to act as market regulators, rather than improving revenues. That is so in the case of the (federal) industrialised products' tax (IPI), which is higher for cigarettes, and lower for medicines. What makes the IPI value change is the extent to which the product is considered essential. Thus, medicines pay less tax than cigarettes. Yet, the Brazilian Constitution recognises that the natural environment is an essential

²By October 1998, the continuity of this programme was uncertain.

asset. Therefore, any equipment used for environmental protection could, at least in theory, claim tax reduction. The same logic could be applied for the ICMS (equivalent to the VAT), which is a tax charged by state governments.

3. Make credit available at realistic conditions

Government programmes of agricultural credit normally do not reach the poorest strata of society due to financial and bureaucratic conditions attached to them. Examples are the insistence on collateral, and high interest rates. The PRONAF, for example, charges interest rates on the basis of a spread of 3 per cent plus the half of the sum of the Long Term Interest Rate (TJLP) plus 6 per cent per year. By the end of 1998 it would mean an interest of some 15 per cent per year, which is a value too high not only for small-scale, but also for the majority of Brazilian rural producers.

If the PD/A improves the economic performance of the projects it supports, there is the chance to transform them into micro-finance projects, which would serve as an example for other government and private initiatives.

▪ *Institutional links*

1. Local level

An important change in the organisation of local administration in Brazil has been the implementation of Municipal Councils. These are collegiate bodies created by the local legislative power (*Câmara dos Vereadores*), and sanctioned by the mayor. Councils comprise members of the government and society, and have the central aim of helping to define municipal policies in their specific area. In Carolina, for example, the Municipal Council for Youth and Teenagers demanded local policy to enforce laws related to alcohol consumption, and banned (at least open) prostitution. Less successful was the Municipal Council for the Environment, which nevertheless was trying to avoid the paving of a road that would have had uncertain economic benefits, and unequivocally large environmental impacts. Despite limitations, these councils do represent a step forward in terms of a participatory public administration.

Direct beneficiaries of PD/A projects, and intermediary NGOs, should promote the creation of such councils, and/or participate in them, in the municipalities where projects have been developed.

2. National level

The PD/A should develop links with national organisations that have interests in areas related to productive conservation, such as income generation, appropriate technology, rural extension, and environmental education. Three fundamental links are those involving CNPq, SEBRAE and CONTAG. The *Conselho Nacional de Desenvolvimento Científico e Tecnológico* (CNPq) develops together with state government, a US\$ 10 million programme for the improvement and use of alternative technology. The *Programa de Tecnologias Apropriadas* (PTA) has financed activities that are very similar to those supported by the PD/A.

The Brazilian Service for the Development of Small-Scale and Micro Enterprises (SEBRAE) is particularly relevant and is already, to some extent, involved in PD/A projects. In Carolina, for example, the SEBRAE local representative was negotiating with the CTI to pay for the costs of courses on management of small-scale business and fruit production. In many municipalities, the PD/A project can be the most important entrepreneurial venture. If so, SEBRAE and PD/A should develop institutional links that would guarantee permanent support for projects under implementation.

Another relevant contact should be with the National Confederation of Rural Workers (CONTAG). It is now a fact that the PD/A finances, and will continue to finance projects whose beneficiaries are affiliated to CONTAG. It is in the interest of both PD/A and CONTAG to improve the livelihoods of small producers within a sustainable dimension.

3. International level

Participation of international organisations in development programmes has always raised questions about the compatibility of national and international priorities. In the

case of the Pilot Programme there have been concerns about the balance between environmental protection, a concern normally attributed to international donors, and social needs, which, at least in theory, should be one central concern of national governments. It is difficult to make a dualistic interpretation of Pilot Programme actors' role. As far as one can see, both national and international governments are concerned with both aims. Furthermore, the lack of attention to social issues within the PD/A appears to be a pitfall that can be attributed more to the lack of expertise within members of the Brazilian government rather than to the international organisations. Nevertheless, the question of the extent to which international financial support should be kept or phased out remains.

While it seems that there is no formula that can answer this question, it is certain that small-scale productive conservation in the Amazon could only be independent from external funding if it is both (a) institutionalised by the Brazilian government, and (b) projects can be sustainable in all dimensions, including the financial. It has been argued here that the correct approach to sustainability of such projects should be that of sustainable livelihoods. If this is the approach selected, then the real needs of beneficiaries will be carried for.

However, both national and international organisations should keep in mind that the "pilot" nature of the Pilot Programme does not refer only to the type of projects being financed, but also to its very bureaucratic functioning. A major advance of the Pilot Programme, and especially of the PD/A, has been the procedure of collegiate decision-making that involves the participation of NGO representatives. In this sense, the Brazilian government can use this experience to become stronger when facing international pressure for resource allocation. In terms of this decision-making procedure, the PD/A has already accumulated knowledge that could be replicated within the Brazilian government, as well as in development projects being implemented in other countries.

Nevertheless, it is necessary to consider that the "pilot" nature also refers to productive conservation/commercial agroforestry projects. There is no guarantee that these projects will succeed. On the contrary, shortcomings in terms of projects' economic performance indicate that few will be able at least in the short term create a

sustained and sustainable alternative model of development. Facing this dilemma, members of the Brazilian government and the international organisations have answered that they are just financing projects chosen and (in theory) designed by the beneficiaries.

By not paying enough attention to the issue of project feasibility, both the Brazilian government and the international agencies do little to facilitate the success of the PD/A and other Pilot Programme components. It is not only necessary that bureaucrats get more involved in project implementation with a proactive approach, but also that safety nets are set apart for emergency cases. The PD/A still have to find a balance between social and political concerns and economic development.

What seems fundamental at this stage of PD/A implementation is that both actors should reinforce technical capacity of the PD/A. This includes a redefinition of its "sustainable development" aims in the terms proposed by the sustainable livelihoods approach. If this is achieved, then procedures for monitoring and evaluation will have to be improved. Only when activities of monitoring and evaluation are capable of capturing the implications of change from the point of view of the beneficiaries can financial support, internal or external, be phased out. The question, therefore, is less the origin of funding, but rather the way in which it has been used.

Further research

Theoretical and practical discussions developed in this thesis point to some relevant areas that deserve further investigation. It is now clear that present theories of agrarian transition have been unable to capture the diversity of situations present in social formations. The case study used in this research illustrates how Marxist and liberal-based theories have, at the same time, failed to present a complete answer for the transition of the peasantry. This also implies that categories traditionally used, such as "peasants", "petty commodity producers", or "informal sector", are also called into question. On the other hand, agent-focused studies have the benefit of revealing local heterogeneity, but are unable to present a body of theory than can galvanise different circumstances into a meaningful theoretical approach.

In the specific case of the Brazilian Amazon, one could argue that, despite this theoretical impasse, more agent-focused research is needed to capture the heterogeneity of local social formations, which have been overlooked for too long. This research, it is argued here, must consider the influence of urban areas in the development of rural livelihoods. A central argument in favour of an "urban dimension" analysis is the need to perceive dimensions of people's livelihoods that are not immediately economic, but can have decisive economic outcomes. This can be revealed under a "sustainable livelihoods" approach, which inevitably has to consider urban dimension in rural livelihoods. Therefore, the perception of rural and urban areas as economic, social, and political spaces where real people interact and from which they eventually benefit, can co-operate for the solution for the impasse in the theory of agrarian transition.

Such actor-oriented research will require the theoretical and practical development of indicators of sustainable livelihoods. Because of the broad and complex nature of a livelihood, there is the danger that one tries to work with too many indicators. Further research is needed to identify some core livelihood indicators that should always be looked at, and other, complementary indicators that are appropriate on a case-by-case basis. What seems adequate, however, is the careful examination of rural-urban cross-sectoral influences over peoples' livelihoods. In cases like the Brazilian Amazon, it is today difficult to speak in terms of isolated rural livelihoods. The Amazonian example should be taken into account by those analysing development projects in areas where the rural population is still today larger than the urban. This is the situation in most African countries and over a great deal of Southeast Asia.

To recognise the importance of urbanisation rates in all areas of the Legal Amazon requires further research into the extent to which such urbanisation has been affecting the use of natural resources. It is possible, as suggested here, that larger urban dimensions in people's livelihoods demand more intensive use of natural resources. On the same lines, it is also possible that such urban dimensions reduce people's personal commitment to the preservation of natural resources, which no longer constitutes the household's main source of income.

The PD/A represents a good opportunity for further research in all these areas. A number of projects could therefore be selected to serve as case studies. It would be a shame if theoretical implications of such projects are not raised. After all, what the PD/A really needs is greater theoretical consistency, which could give a practical meaning to what "sustainable development" is all about.

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ANNEX "A" - METHODOLOGY AND QUESTIONNAIRES

The main aim of this research is to determine the significance of urban dimensions in the livelihood strategies of rural people. By comparing data from rural producers selected at random with those from the beneficiaries of one PD/A project, this research allows conclusions to be drawn about the impacts of urban dimensions for the implementation of the project itself. This in turn allows for conclusions to be reached on the prerequisites needed for achieving livelihood sustainability and grassroots development.

In this research the concept "urban dimensions" has been defined in the light of the theoretical discussions undertaken in chapters 1, 2 and 4. The concept is stated in the following way: urban dimensions are the material and non-material linkages established by rural people in urban areas as a means of maintaining or expanding their sources of livelihood. Amongst the many livelihood dimensions of any human life, the following were selected as indicators: (1) cash income and assets; (2) religion; and (3) political ties. The analysis of cash income and assets appears to be an automatic requirement for researches of this kind. Religion and politics were selected as a function of the bibliography analysed, and as result of previous fieldwork knowledge.

The above-mentioned indicators were made operational through a series of statistical tests described below. The interpretation of these tests was complemented by qualitative data based on recorded interviews. Criteria and methods for interviewing are also described in this chapter.

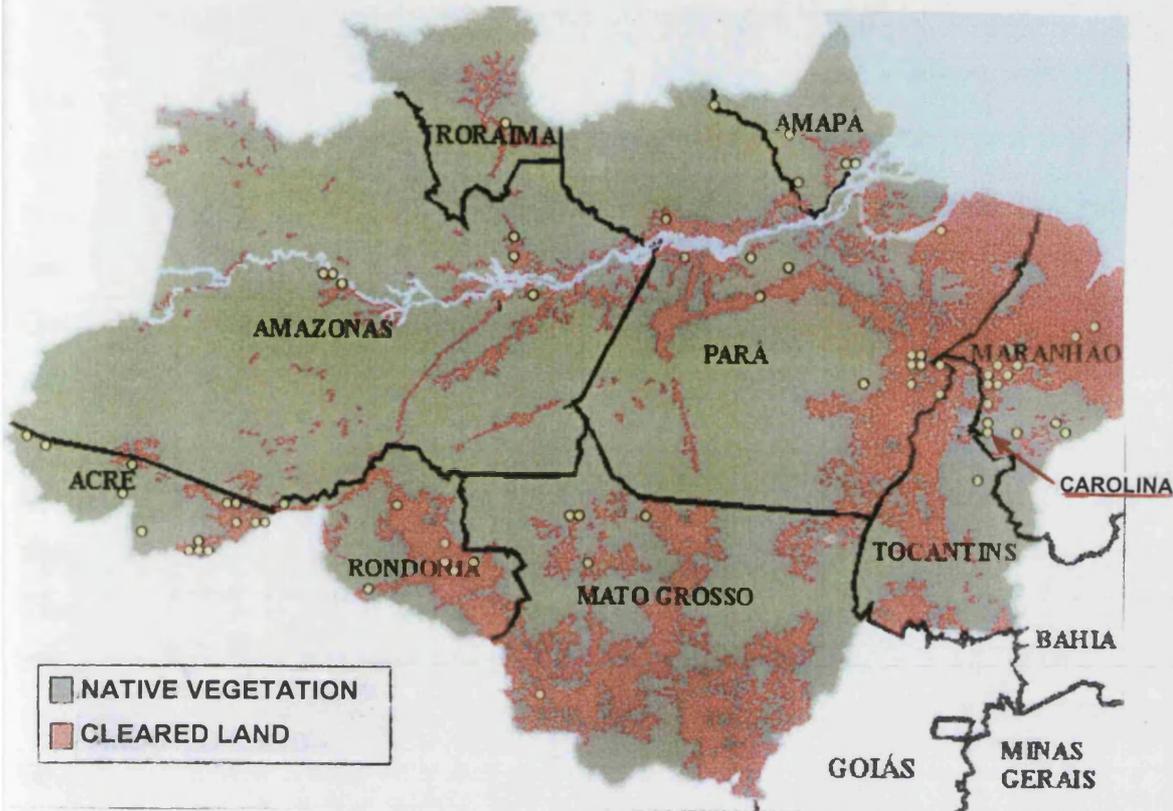
Selection of the case-study, and methodological strategy

Projects carried out under the Pilot Programme are scattered throughout the Amazon (see map A-1), and located in areas of “open” forest, “closed” forest, savannahs, “várzeas”, and “terra firme”. This posed an initial problem for the selection of one or more projects upon which to centre the research. The ideal situation would have been to visit a representative number of projects before the start of research in order to gather knowledge about similarities and differences. It would also have been an advantage if the research could have been carried out on more than one project in order to extend the capacity for making generalisations. However, due to the constraints observed above, and the limited funds available (see below) there was not enough time or practical conditions to do so.

The only feasible alternative was to select just one project as a case-study. This, of course, brings problems of representativeness and generalisability which are associated with specific case-studies (Bulmer, 1993). Due to the diversity of local development circumstances in the Amazon, however, generalisability would have been a problem even if a handful of projects were scrutinised. The only possible alternative then, was to select a case-study and make generalisations to the theory, as Yin (1994) suggests.

The question of representativeness was also a difficult one because no PD/A project would be in fact representative of all those being supported. This issue was dealt with through the analysis of official documentation, and interviews with key informants. From the start it became clear that the majority of projects aimed at the promoting productive conservation of natural resources. Therefore, this issue became the central selection criterion.

MAP A-1 - LOCATION OF PD/A PROJECTS IN THE LEGAL AMAZON



Source: "Subprojetos em Execução - PD/A", mimeo, Programa Piloto (1996)

Because of this research focus on rural-urban linkages, the second selection criterion was determined by the area in the Amazon in which the rural population was most exposed to urban influences. Analysis of the 1991 Brazilian census data showed that the cities of Marabá (Pará state) and Imperatriz (Maranhão state) were the fastest growing urban centres in Amazonia. Furthermore, Maranhão state had the largest proportion of rural population in Legal Amazonia. Therefore, it was decided that the project should come from the 19 PD/A projects being supported in this area.

Amongst the possible alternatives, the *Frutos do Cerrado* project appeared as the most attractive for a number of reasons. It is the largest project being financed by the PD/A, it involves groups of Amerindians and rural producers, it is located in ten different municipalities, and covers areas in which the natural environment (*cerrados*)

is well preserved, and areas in which the former existing transitional forest has been well cleared.

The initial intention was to carry out the research in a representative number, if not in all, municipalities with *Frutos do Cerrado* projects. It was believed that transport would be easier in that area, as it is in the *cerrados* of central Brazil. However, the *cerrados* of southern Maranhão are particularly sandy and crossed by humid valleys. Only off-road vehicles can drive in that region, and even so with difficulty. Additionally, project membership did not correspond to geographical location, but rather to affiliation to Christian Base Communities and/or Rural Workers' Trade Unions. Thus beneficiaries' properties are scattered within each municipality, which are quite large. So most of the beneficiaries' farms are located far from each other. Therefore, it was not possible to interview the beneficiaries of all *Frutos do Cerrado* projects.

Given that, the research strategy was changed in order to focus on just one municipality of those covered by the project, but in greater depth. Amongst the ten municipalities, Carolina was chosen for a number of reasons. First, it is the place where the project was conceived. It is also there where the fruit processing unit is located. Furthermore, Carolina hosts one of the two technical secretariats of the project, managed by the CTI, one of the intermediary NGOs involved in the *Frutos do Cerrado*. The other technical secretariat is located in Imperatriz. Eventually, the research could be based there, but the city is so big that it is not typical of other areas in the Amazon region. Additionally, the sheer size of Imperatriz would make it difficult to conduct the research.

The methodological strategy selected to answer the research question was one of reconciling quantitative and qualitative data within a case-study framework. This was done for two main reasons. Firstly, as suggested by authors like Nichols (1991) and Peil (1993), methods must be chosen according to the data to be gathered and must be tailored to the sources of these data. To answer the research question it was necessary to obtain quantitative data about people's assets (cash income and

others), mobility, and activities, as well as qualitative data about people's behaviour, values and belief systems.

Secondly, it is clear that quantitative data collection in that region would face many of the problems identified in the literature on research in developing countries, as noted by Bulmer and Warwick (1993). These are related to inaccuracy or unavailability of administrative data at state and local levels, and difficulties in transport and communication in the locality where the research is conducted. These difficulties, notes Kumar (1989), are even more pronounced in cases of data on income. This, however, is a fundamental item for the analysis of development projects that intend to promote the productive conservation of natural resources via commercial agroforestry.

The integration of different methodologies could then provide crucial information that would not be available from a single method. As noted by Warwick (1993), methodological integration can improve accuracy and reliability, augment the survey depth, expand the possibilities of making generalisations to a broader population, and provide a historical interpretation of the fact under analysis. Additionally, as posed by Whyte and Alberti (1993), such integration of methods also helps capture existing variability within a given community.

This research, therefore, has made use of a number of quantitative and qualitative methods. Qualitative methods employed include direct observation in Carolina, key informants (semi-structured) interviews, and in-depth (unstructured) interviews. Information gathered through qualitative methods aimed to help understand people's behaviour and expectations in relation to their livelihoods and the presence of urban linkages. The main quantitative method used was a rural household questionnaire survey, designed to complement qualitative information through measuring aspects related to urban dimensions in rural livelihoods in relation to the following central variables: income, access to and distribution of assets, organisation membership, religion, and movement of people.

During fieldwork it became clear that it would be interesting, and possible, to develop two other sets of questionnaires. One was an urban questionnaire, aimed at checking for rural linkages amongst urban inhabitants, and gathering information that could be cross-checked with the rural questionnaire, making possible comparisons in relation to livelihood standards. Additionally, it became evident that out-migration is significant in Carolina, and therefore it was also useful to talk to the children of both urban and rural inhabitants in order to see their aspirations, school levels, and activities. A self-answering questionnaire was developed and applied to schoolchildren. Further information on these questionnaires is provided below.

A pilot questionnaire was developed and applied for the three -- rural, urban, and schoolchildren questionnaires -- to verify, firstly, if people were psychologically or culturally prepared to answer a structured survey, a need stressed by Bulmer and Warwick (1993). In the three cases, initial direct observation and informal talks with key informants helped formulate questions that were meaningful for respondents. As Bulmer and Warwick (1993) note, in locations where people have little or no formal education, and income is low, the chances of recording opinions that do not and never have existed are very high. This underlined the need to set very clear and appropriate questions.

Additionally, the pilot questionnaire also served to check if the design was appropriate, as well as to avoid problems of lexical and conceptual equivalence, even though some problems of equivalence could only be identified once the questionnaire had already started being applied. For example, it was found out that for Carolina people, "water closet" (*privada*) means "pit" (*fossa*), and pit means water closet. When necessary changes were made. Although it is recommended that rural household questionnaires should be based on open-ended questions (Alers, 1993; Bulmer and Warwick, (1993). This however, makes difficult statistical analysis. because the strategy of this thesis is to reconcile research methods, and because the fieldwork included almost six months of residence in Carolina, the questionnaires were mainly based on closed questions. The schoolchildren questionnaire,

particularly, was entirely based on closed questions because children and teenagers tend not to have opinions formed as much as adults.

It was considered, however, that people of low educational levels may face difficulty in condensing their thoughts into predefined categories. Therefore, all questionnaires concentrated on a nominal level of measurement. One further problem related to non-sampling errors derived from the difficulty of contacting people, particularly in rural areas (Ward, 1993). Fortunately, by coincidence, the months during which the rural questionnaire was applied were at the beginning of the dry season, in which rural producers have the lowest workload during the year.

The urban questionnaire is in fact an adaptation of the rural questionnaire to the urban setting. The rural questionnaire, which is the centerpiece of this research, was formulated based on the available literature, and on five other questionnaires recently applied in communities of the Brazilian Amazon region. Two of them were developed by the Institute for the Study of Society, Population, and Nature (ISPN), a research NGO from Brasília. The other two were developed by the World Wide Fund for Nature (WWF), and applied in Amazonian extractive reserves, and the fifth was developed by EMBRAPA.

The rural questionnaire used in this research owes a debt to ISPN. Some changes were made to reconcile the original form to the specific needs of this research. However, because both are rural household questionnaires, most of the original one was maintained. This added reliability and accuracy to this research, as those questionnaires had already worked well in the Amazon. One of them had been recently applied within the island communities of the Tucuruí reservoir, which is close to Carolina by Amazonian standards.

Questionnaire survey strategies

This statistical analysis undertaken in this research comes from data collected in the rural, urban, and schoolchildren's questionnaires. Because of the constraints considered above, it was decided that the statistical analysis should avoid complex tests, which require larger sample sizes. It was also decided to take a conservative approach to data collection and analysis. Therefore, a target of 150 interviews was set for each questionnaire, in order to guarantee a 95 per cent confidence interval, with bound on error $B = .08$ (the z score in this case is 1.96), which is adequate for rural researches, considering the $B = .12$ recommended by Oxfam (Nichols, 1991).

However, amongst *Frutos do Cerrado* members in Carolina there are only 24 heads of household. All were interviewed, constituting one data-set. This was not interpreted as the population of beneficiaries, because, if it had been, tests for statistical association could not have been performed. It had to be considered as a sample of the project members, which makes sense since project membership is not closed, and that number could change at any time. This sample size, if analysed with the assumption that the population distribution is normal, that is, under parametric statistics, gives a bound on error for proportions of 28 per cent. This is a value too high to guarantee confidence. The solution was to analyse this data with non-parametric tests, which do not make assumptions about the shape of the population. These tests will be analysed separately, below.

The aim of achieving 150 interviews with non-project members could not be achieved due to a number of difficulties in reaching rural people. A total of 127 interviews was concluded satisfactorily, which guarantees a bound on error (for percentages) of .09. This number of interviews represents a high percentage of the total number of households: approximately 5.3 per cent of a total of 2.383 rural households. The urban questionnaire was concluded with 152 interviews, which represents approximately 5.9% of the total number of urban households = 2.545. The schoolchildren's questionnaire was applied in 300 interviews (approximately 3.5% of

the total number of schoolchildren = 8.625), which gives a bound on error of .06. Additionally all the 27 children of the *Frutos do Cerrado* beneficiaries currently at school answered the schoolchildren's questionnaire, a sample size that gives a bound on error of 27. Because of the level of measurement, and the problems of accuracy and reliability associated with any rural questionnaire in the Amazon, data analysis concentrated on descriptive statistics, and *chi square* tests. The level of significance was established at $\alpha = .05$. The procedures of data collection for each questionnaire are described below.

- *Rural questionnaire strategy*

Because of the difficult access to rural areas in Carolina, and the number of questionnaires to be applied, it was necessary to hire two research assistants to help with the work. However, interviews with beneficiaries of the FdC were carried out by this researcher alone in order to guarantee the most confidence on the central data of this investigation. The two assistants, Cláudio and Célio Pereira, are brothers that a few months earlier had been trained by the Brazilian Institute of Geography and Statistics (IBGE) to apply questionnaires of the Brazilian agricultural census (done from August to November 1996). While this could imply some bias towards an "IBGE style" (i.e. large-scale sample, closed questions, and lack of adequate supervision), their knowledge of local rural areas was most valuable for this research.

These two assistants were submitted to two weeks of training in applying this questionnaire, and all the questionnaires they produced were discussed with them almost on a question by question basis. Before being contracted, their local political links were checked to see if they would be identified with any local political group. It happened that both were sympathetic to "pé liso" politicians, but were not seen as active political supporters. Anyway, it would have been difficult to find any other research assistant not be linked to one or another political group.

The selection of rural properties where questionnaires should be applied followed the necessary criteria to guarantee randomness. Firstly, a copy of the only map of Carolina ever produced was obtained from the National Health Foundation (*Fundação Nacional de Saúde* - FNS). This map, which has no scale but a good guess on distances, indicates the approximate location of farms, rivers, roads, paths, and municipal boundaries. The localities plotted on the map were checked, one by one, against a more recent list of rural localities, also produced by the FNS. After two days of work it was possible to distinguish the localities or farms that had been created, or had "disappeared" from the map. Overall, it gave a good grasp of the populational density within the municipality.

After that, a list of communities and farms that have electricity was obtained from Maranhão State Electricity Company (*Centrais Elétricas do Maranhão* - CEMAR), and plotted on the map. The same was done for the localities which function as voting zones, and for the localities and farms that have Christian Base Communities (CEBs). However, it is common in Maranhão for people to change the name of, or to attribute different names to farms. Because of that, many places with electricity or CEBs could not be found on the map, even with the help of those working for CEMAR or CEBs. Finally, the most important characteristics of the soil and the landscape were identified on the map, together with the van routes for private transport of people to some rural areas.

Having this information, it was possible to divide the municipality into 16 sub-areas of similar population densities. All the farms in each sub-area were numbered, and then 150 were selected for interview using a table of random numbers. Therefore, the research assistants could not choose the farms where to apply the questionnaire.

However, in a few cases, the "farm" selected was in fact a small rural locality, with a number of families living nearby, and working on their lands in the vicinity. In these cases, it was not possible to make a random selection of households to be interviewed, and it was left to the assistants to decide. Nevertheless, they were repeatedly told not to be friend-biased, i.e. selecting for interview (only) people they

known, or friends. Additionally, it was determined that only the head of the household could be interviewed, and that the interviewer should invite the wife to participate.

In a few cases, the farms selected had been sold, or the people interviewed were not the head of the household. These questionnaires were excluded, resulting in the final number of 127 valid interviews. The assistants were also asked to write a few lines of their own impressions about the household on the back of the questionnaire. These personal opinions were useful for two reasons. Firstly, they helped clarify doubts about some answers. Secondly, and most important, they helped avoid the assistants faking interviews. It would have been difficult for them to describe their opinions about the household, at least in detail and variety, if the questionnaires had been fabricated.

- *Urban questionnaire strategy*

The urban questionnaire, as mentioned above, was adapted from the rural survey in order to make comparison possible. However, some variables such as sources of income, for example, had to be completely reformulated. This survey also aimed at checking possible rural linkages of urban inhabitants, but this proved not to be significant. Two research assistants, Genário Silva and Sirleide Mendes, were hired to carry out the survey. Neither had any major political links in Carolina.

Genário was very committed, but a slow learner. It took four weeks of training for him to be able to apply questionnaires alone. Sirleide, on the other hand, was ready to work after one week of training. In order to facilitate their work, this researcher managed to give an interview in one of the two local TV stations, explaining the research objectives, and asking people to co-operate with the interviewers. This proved to be of great value afterwards, as people were less resistant in giving information.

Data collection was based on a list of all urban buildings of all seven urban neighbourhoods of Carolina, compiled by the FNS. The list was prepared to guide

health agents in combating dengue fever. Each building was marked by FNS agents with a number, restarting in each block. This served as the basis for the FNS to prepare seven maps of urban blocks, which are shown in map A-2 . The blocks where interviews were conducted are highlighted on the map.

The list also indicated the number of people living in each block, which allowed for a proportional division of interviews, according to the population of each neighbourhood. Once the number of interviews was defined, the blocks were selected using a table of random numbers. After the selection of a block, the exact building to be visited was also randomly determined. It happened a few times that the building selected was a commercial place, a school, or even the town hall. In these cases, another building was selected at random.

It was determined that interviews should be conducted with the head of the household, but some other members could if necessary be interviewed in his or her place. When the respondent was unable to answer all the questions, the interviewer would make an appointment to return to that household when the head could be found. Some 10 per cent of selected households refused to answer the questionnaire, and were replaced by an other household within the same block.

- *Schoolchildren questionnaire strategy*

The execution of this questionnaire required some political negotiation to gain access to local urban public schools. The municipal educational system covers only up to the fourth year of primary education (from six to 10 years of age), and therefore has no formal control over higher years, in state schools. However, the local secretary of education functions as a focal point for the state secretary, and therefore headmasters of tertiary level (11 to 15 years), state schools, must report to the municipal authority. The local secretary welcomed the survey, but required it to include students from the third and fourth year of the primary level, which was not originally interviewed. This is because they were considered too young to have a clear idea of their future possibilities, they have not worked yet, and they do not have

clear aspirations. Additionally, rural schools provide education up to the fourth year, which means that children studying in urban schools up to the fourth year are children of urban residents. However, these children had to be included because the secretary wanted to have some data on the schoolchildren in the municipal educational system. This enlarged the sample of 300 cases, was not strictly necessary for this research.

The schoolchildren questionnaire was a 28 question self-answering questionnaire, which was applied with the supervision of two research assistants. Iracema César and Érika Rocha, two local teachers of the tertiary level educational were hired for this function. They would not apply questionnaires in their own classrooms. The schoolchildren survey was stratified disproportionality in the following way.

- 1) 76 questionnaires amongst children of the 3rd and 4th years of the first level (primary education), which is the most numerous group. Children of this age were included because of the demands of the local education secretary. In some analysis of associations, they were excluded;
- 2) 65 questionnaires amongst children studying from the 5th to the 8th year of primary education;
- 3) 69 questionnaires among children from the 1st to the 4th year of the secondary level. They are over-represented, but this group is at the jumping-off stage, i.e. the age at which people leave Carolina;
- 4) 90 questionnaires among students of all series of the *supletivo* system, which compress four years of education into two. This group is super-over-represented, but almost all schoolchildren on these courses are former rural children trying to catch up years of lost schooling.

Survey data analysis

A descriptive statistical analysis was undertaken for all variables in all the three questionnaires. This gave the researcher a good grasp of the main variables that should be further analysed. The descriptive analysis of both data-sets of the rural questionnaire provided a platform for further investigation into statistical association tests. This descriptive analysis was discussed with the supervisor of this thesis.

A few hundred tests of association were performed with the variables of all questionnaires. However, only those that represented a significant variation, and proved to show association when related to other variables, have been presented. They comprise the statistical material used in chapters 5, 6, and 7. One of the most important variables was that of income. In the case of the rural questionnaire, this variable was measured via proxies for consumption and expenditure, and also probed. Fieldwork observation indicated that data on declared monthly household expenditure would be more reliable than data on consumption. This was because people were not secure about quantities bought of selected items of consumption, or because they felt less doubtful about declaring cash expenditure than consumption of goods. The probe asked people to say if the total average monthly expenditure was less or higher than the monthly national minimum wage.

In the case of the urban questionnaire, income was measured by declared expenditure, in the same terms as in the rural questionnaire. The declared value could be checked against the occupation of household members. After some months of fieldwork, levels of remuneration for urban activities were well known because they, in fact, do not vary too much. A list of 16 possible occupations was developed for the questionnaire. This proved to work well, because only six cases fell into the category "other".

The declared level of total household expenditure could be checked against the income activities of household members. Of course this would not identify possible

savings. However, in the recorded interview with the manager of the local bank of Brazil branch it became clear that levels of savings and the number of accounts in Carolina are very low. Therefore, the comparison does give a good idea of the accuracy of declared urban household expenditure. Only in a handful of cases did some disparity appear. In all of these the household members' activities indicated a lower level of income than that which had been declared.

The inferential analysis for income and other variables was based on the tests appropriate for small-scale samples, and on the type of data, that is, in which most of the measurement was done at the nominal level. These tests combined techniques of parametric and non-parametric statistics. Within the former, *chi square* tests complemented the description of parameters of central tendency. All tests observed the minimum expected count of 5 per cent cell. Because this is a common statistical test, it does not need to be explained here. The reader can refer to any introductory statistical book for a discussion of the theme. This research used the recent publication of Agresti and Finlay (1997), "Statistical Methods for the Social Sciences".

Unfortunately, a common and useful parametric test, which is the analysis of confidence intervals, could not be applied to data from beneficiaries of the *Frutos do Cerrado* because the number of project members is under 30. This is the minimum number recommended for analysing confidence intervals (Nichols, 1991; Agresti and Finlay, 1997). This test was, nevertheless, used to compare proportions in the datasets of rural others and urban inhabitants in relation to percentage of parents that give their children supported to migrate, and the percentage of existing retired people.

The use of non-parametric statistics was necessary because of the specific characteristic of the data. The tests used were Fisher's Exact Test for 2 x 2 tables, and the Wilcoxon-Mann-Whitney test, also known only as Mann-Whitney. The use of non-parametric tests was needed because of the small size of the samples, and the highly skewed distributions found for all important variables being tested.

An alternative to the use of non-parametric tests would be the parametric *t* test. This is adequate for small-scale samples, and more powerful than non-parametric tests. However, as Siegel and Castellan (1988) point out, the use of this test may require the violation of some assumptions on which it is based. Amongst them, two are fundamental for the data analysed here:

"The observations must be drawn from normally distributed populations... (and) in the case of analysis concerning two groups, the populations must have the same variance (or, in special cases, they must have a known ratio of variances."
Siegel and Castellan (1988: 20)

These two assumptions are not met by this research's data. In the case of land under control analysed in chapter 7 (see table 7.5), for example, beneficiaries' (23 cases) standard deviation is very high at $s = 133.8$, with variance $v = 20,287.74$, and skewness of 1.6. For the same analysis, rural others' (123 cases) standard deviation is almost three times higher, at $s = 370.94$, the group's variance is $v = 137,594.60$, and the skewness = 4.7. Which such extreme values in small samples it is difficult to assume the requirements of a parametric test based on the existence of a normal distribution. For these circumstances, especially for the treatment of interval level data, this thesis has applied non-parametric statistics, which calculate associations regardless of the shape of the distribution.

The first non-parametric test used was Fisher's Exact Test. This is an alternative to *chi square* tests, when the association involves two small independent samples, and the variable has been measured at either nominal or ordinal level. The test is so straight that computer programmes like SPSS calculate it automatically when the sample is small and the degree of freedom is 1. In practice, Fisher's Exact Test is a factorial analysis, which produces a result "*p*" that can be compared with the established level of significance. In a 2 x 2 contingency table, the cells are designed by letters such as:

2 x 2 Contingency table

Variable	Group		Combined
	I	II	
+	A	B	A + B
-	C	D	A + D
Total	A + C	B + D	N

The factorial formula of p is:

$$p = \frac{(A + B)! (C + D)! (A + C)! (B + D)!}{N! A! B! C! D!}$$

In this thesis, Fisher's Exact Test has been used in chapter 7 a number of times to analyse differences between the groups of beneficiaries and rural others in relation to:

- 1) Christian Base Community membership;
- 2) Rural Workers' Trade Union membership;
- 3) Participation in *mutirões*;
- 4) Level of household monthly expenditure in relation to the Brazilian minimum wage;
- 5) Sale of agricultural products and manioc flour;
- 6) Former rural residence of children currently living in the urban area;
- 7) Expectation of inheritance of land.

A second non-parametric test used was the Mann-Whitney test, whose features have been introduced in chapter 5. Its logic is to test whether two independent groups have been drawn from the same population. The Mann-Whitney can be used for ordinal- and interval-level data. Siegel and Castellan state:

[The Mann-Whitney test is] "one of the most powerful of the non-parametric tests, and it is a very useful alternative to the parametric t test when the researcher wants to avoid the t test's assumptions, or when the measurement in the research is weaker than interval scaling."
 Siegel and Castellan (1988: 129)

The Mann-Whitney test ranks scores of the frequency distribution of the two groups, and compares the average ranks. If the average ranks in each of the two groups are about equal, then one can claim non-association. Comparison of the two ranks produces a z value, which is then analysed in terms of its position in a table of probability associated under H_0 , which gives a p value. This is then compared to the significance level $\alpha = .05$, in other words, to the probability with the occurrence of the z score when H_0 is true. The z score formula for sample sizes larger than 10 cases is:

$$z = \frac{W_x \pm .5 - m(N+1)/2}{\sqrt{mn(N+1)/12}}$$

Where,

- W_x is the sum of ranks;
- m is the number of cases in the first group;
- n is the number of cases in the second group;
- N is the total number of cases in the sample;

The mean = $\frac{\mu_{wx} = m(N + 1)}{2}$

and the variance = $\frac{\sigma^2_{wx} = mn(N + 1)}{12}$

The value $\pm .5$ is included to find probabilities in both tails of the distribution.

Therefore, the result obtained by the Mann-Whitney test is a ranking, which cannot be interpreted as if it had the same unit of measurement as the original data. For example, data on income departs from real values measured in relation to some currency. The result of a Mann-Whitney test is a ranked mean, which has no unit of

measurement. Therefore, rank tests allow us to verify if there is an association between data from two groups, and permits one to say that one rank is bigger than the other. But it does not allow one to say how much bigger one ranked score is from the other. To illustrate this¹, let's suppose that two groups, X (with three cases) and Y (with four cases), have the following income:

Group X:	9	11	15	
Group Y:	6	8	10	13

One should first rank the scores in order of increasing size. The result is:

Score:	6	8	9	10	11	13	15
Group:	Y	Y	X	Y	X	Y	X
Rank:	1	2	3	4	5	6	7

Therefore, the sum of the ranks of the first group equals $W_x = 3 + 5 + 7 = 15$. For the second group the sum equals $W_y = 1 + 2 + 4 + 6 = 13$.

The Mann-Whitney test is automatically calculated by computer programmes like SPSS, which this thesis uses. This non-parametric test was employed for testing association in four cases: size of land, income levels, age of children, and head of household number of journeys to town. These analyses were presented in chapter 7.

Qualitative data collection and analysis

This research has also made use of qualitative data, based on direct observation and recorded interviews. Observation was particularly important during the months of fieldwork in Carolina. The notes were made in a fieldwork diary, information which was particularly relevant for organising the arguments presented in chapters 5 and 6. The strategy used to analyse this information was to cross-check diary notes with the transcripts of taped interviews.

¹This example is modified from that cited by Siegel and Castellan (1988: 129).

This researcher attended to the annual meeting of the Brazilian Forum of NGOs, which took place in Brasília in February 1997, and interviewed a number of leading NGO personnel from different Brazilian states. The meeting was also important for gathering background information that influenced the selection of the *Frutos do Cerrado* project as the case-study. This information pointed to the complexity and pilot nature of the project, which was the apple of both NGO and government personnel's eyes.

A total of 11 semi-structured interviews were conducted in Brasília, before fieldwork was undertaken in Carolina. The central aim of these interviews was to understand the views of programme managers, members of international organisations, and NGO personnel of PD/A projects in relation to key theoretical concepts (livelihood sustainability, vulnerability, and empowerment), and of the importance of rates of urbanisation in the Amazon. These interviews were fully transcribed, and the opinions of each respondent were separated and put into a framework for analysis. Three frameworks were created: for government, international organisations, and NGO personnel. Each framework was divided into the following areas of interest, which guided the formulation of the questions:

- 1) Knowledge of key theoretical concepts;
- 2) Identification of major administrative problems;
- 3) Understanding of what constitutes the pilot nature of the programme;
- 4) Views of the roles played by the GTA and the NGOs
- 5) Importance given to social aspects within PD/A projects;
- 6) Importance given to economic aspects within PD/A projects;
- 7) Importance given to rural-urban linkages of project beneficiaries;
- 8) Recommendations for the improvement of the PD/A.

This thesis tried to identify the most crucial agreements and disagreements within these interviews. The material that came out of this analysis constitutes the basis for the discussion in chapter 4.

In addition to these interviews, another 23 were recorded with key informants in Carolina. These were done at the end of the period of residence in the town. The strategy in Carolina was to have informal conversations at the beginning of the fieldwork. They served as a support for the improvement of the pilot questionnaire. Only when a good rapport was established, were formal interviews carried out. The major aims of these in-depth key informant interviews were to understand strategies for livelihood construction in the face of local economic and political environments, as well as urban-bias dimensions in local development.

These were in-depth interviews, and involved small- and large-scale rural producers, NGO personnel, local government officials and the mayor, and key professionals. The only problem of access found occurred with NGO personnel, who deliberately tried to avoid giving information. As noted in chapter 6, NGO personnel in Carolina also avoided revealing problems of the project to the members of the International Advisory Group that visited the *Frutos do Cerrado* in July 1997. Therefore, the behaviour of the CTI personnel reflected more a general lack of transparency than any personal problem. Annex "C" presents a list of the interviewees' names and their occupations for the total 38 interviews conducted.

In addition to these key informants interviews, eight others were recorded with schoolchildren. After filling in the questionnaire, some were selected on purpose, based on their performance in answering the questions, for a taped interview using a focus group methodology. The aim of the interview was to explore their opinions about Carolina in four areas:

- 1) Perceived reasons for lack of local "development";
- 2) Employment perspectives;
- 3) Intention to migrate;
- 4) Knowledge of the *Frutos do Cerrado* project.

From the eight interviews, two were conducted with groups formed by children of *Frutos do Cerrado* beneficiaries. Unfortunately these interviews did not yield much material for this research because of the difficulty experienced by these youngsters in expressing their opinions. However, it was sufficient to confirm the importance attributed by the young to the negative impacts derived from local coronelismo, and their overall lack of knowledge with respect to the nature, aims and functioning of the *Frutos do Cerrado* project. This was also the case for the children of the project's beneficiaries. This material was used in chapters 7 and 8.

- *Constraints on the fieldwork*

The collection of both quantitative and qualitative data used in this research faced the problems normally associated to people's biases or vested interests. The procedures for trying to overcome such problems in relation to the quantitative data were already described in this annex. The use of other methods, like interviewing neighbours for checking information is just not possible in rural areas where properties are scattered, and transport is difficult.

Qualitative data faced biases and vested interests from all interviewees. In Brasília, government officials may have not been totally transparent in relation to PD/A information. The same may also have occurred with people from the World Bank. In fact, just before the start of the fieldwork. There had been a quite strong clash between government and the Bank in relation to the latter involvement in the PP-G7, and all parts were measuring their words very cautiously at that time.

Both in Brasília and Carolina, recorded interviews were planned in advance, and the questions were formulated with the aim of cross-checking other people's information. Particularly in Carolina, informal talks on a bar's table proved to be very efficient to build rapport, get valuable information. However, public encounters may have political meanings. In general, to share a table means to share opinions and political preferences. To avoid problems associated with this type of judgement, at all times bar companions were clearly told that this researcher was there to talk to all sides of

the society in order to get the necessary information. Both *pé liso* and *pé rachado* politicians accepted that the researcher could sit with members of the other group, but they would nevertheless disapprove contacts with representative of the Workers' Party. Fortunately, PT people live in the suburbs of Carolina and do not frequent the same bars.

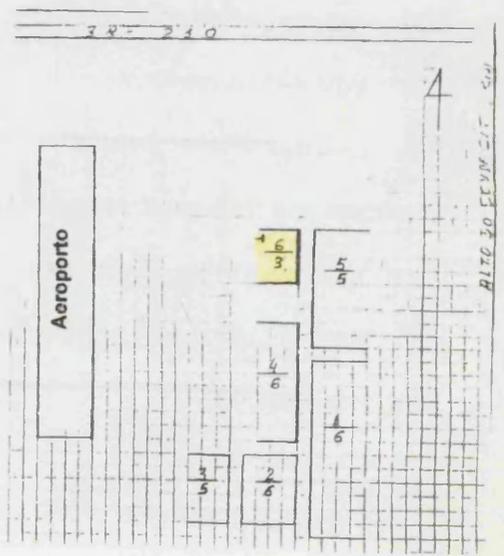
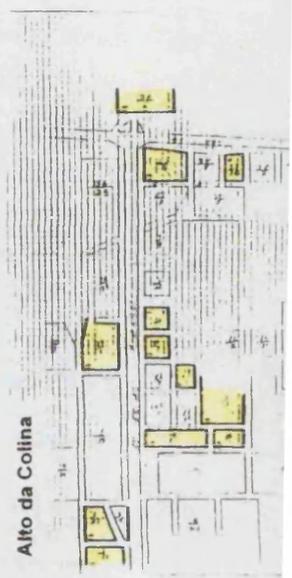
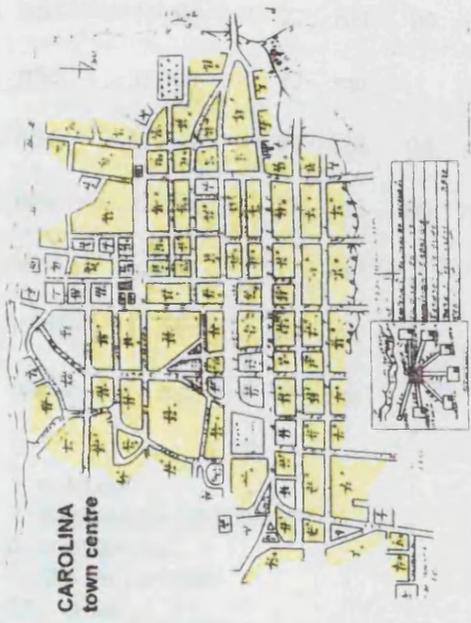
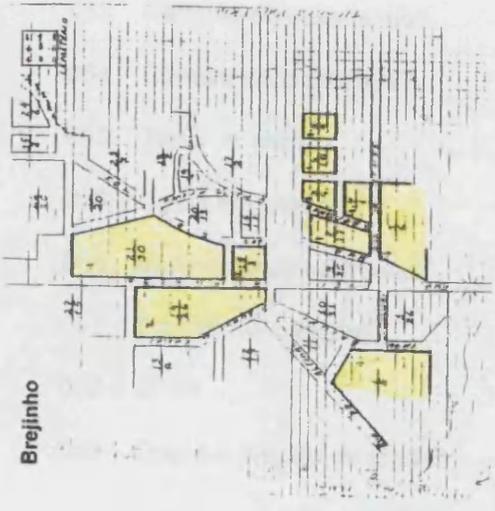
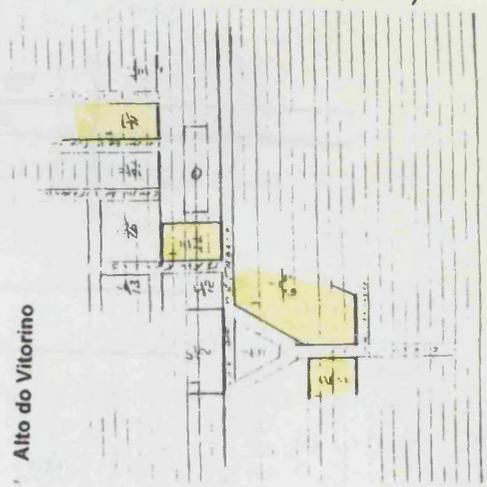
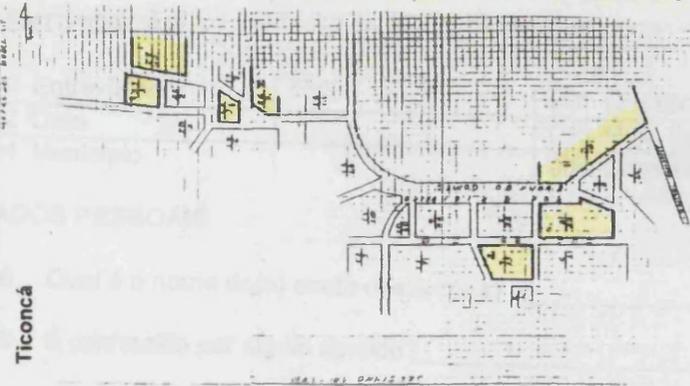
Secondary sources

In addition to the sources of information described above, this thesis also made extensive use of secondary sources. These were:

- 1) Brazilian Census: used in printed and networked version. Data for the 1996 population count was made available when the researcher was already back in London, and could only be accessed via the IBGE web site;
- 2) Official data from federal, state, and municipal governments. This item comprises material from the PP-G7, and the PD/A, as well as other official development plans and legislation. All the PD/A official documentation issued until September 1998 was made available for this research;
- 3) Bibliography obtained in London, Brasília, and Carolina.

MAP A-2 - CAROLINA TOWN CENTRE AND NEIGHBOURHOODS

(areas shown in yellow indicate blocks where the urban questionnaire was applied)



QUESTIONÁRIO DE CAMPO

IDENTIFICAÇÃO

000 Entrevistador		001 Questionário Nº	
002 Data	/ /	003 Hora de Início	: :
004 Município		005 Comunidade	

DADOS PESSOAIS

050 Qual é o nome do(a) chefe desta casa? _____

000 É conhecido por algum apelido? _____

O senhor tem guardado aqui na sua casa esses documentos?

051 Certidão de nascimento? 0. não 1. sim 77. nsi

052 Atestado de batismo? 0. não 1. sim 77. nsi 99. nsa

053 Certidão de casamento? 0. não 1. sim 77. nsi 99. nsa

054 Carteira de identidade? 0. não 1. sim 77. nsi

055 Título de eleitor? 0. não 1. sim 77. nsi 99. nsa

056 Conta em banco? 0. não 1. sim 77. nsi 99. nsa

063 Já teve conta em banco? 0. não 1. sim 77. nsi

057 Carteira de trabalho 0. não 1. sim 77. nsi

058 CPF? 0. não 1. sim 77. nsi

059 Qual é a religião do chefe?

- 1. católica
- 2. protestante tradicional
- 3. pentecostal
- 4. não tem religião
- 88. outro _____

060 Onde fica a sua igreja?

- 1. na comunidade
- 2. em Carolina
- 77. nsi
- 88. outro _____
- 99. nsa

061 Quantas vezes por mês sua família vai a um culto religioso?

- 1. quando é possível
- 2. uma ou duas vezes
- 3. mais de duas vezes
- 77. nsi
- 88. outro _____

062 O senhor paga contribuição (dízimo) para a sua igreja?

- 0. não 1. sim

MEMBROS DA UNIDADE DOMÉSTICA

	100	101	102	103	104	105
	Relacione todos os membros da família, que morem ou não aqui, e outras pessoas que morem aqui	Sexo 1. H 2. M	Relação com o chefe? 1. Cônjuge 2. Filho(a) 3. Outro da família 4. Não é da família	Anos completos	Estado civil 1. Casado/junto 2. Solteiro 3. Viúvo 4. Separado	Onde mora e o que faz.? Obter endereço para contato da pessoa que esteja morando em Carolina o mais detalhadamente possível.
01	CHEFE:	1 2			1 2 3 4	
02		1 2	1 2 3 4		1 2 3 4	
03		1 2	1 2 3 4		1 2 3 4	
04		1 2	1 2 3 4		1 2 3 4	
05		1 2	1 2 3 4		1 2 3 4	
06		1 2	1 2 3 4		1 2 3 4	
07		1 2	1 2 3 4		1 2 3 4	
08		1 2	1 2 3 4		1 2 3 4	
09		1 2	1 2 3 4		1 2 3 4	
10		1 2	1 2 3 4		1 2 3 4	
11		1 2	1 2 3 4		1 2 3 4	
12		1 2	1 2 3 4		1 2 3 4	
13		1 2	1 2 3 4		1 2 3 4	
14		1 2	1 2 3 4		1 2 3 4	
15		1 2	1 2 3 4		1 2 3 4	
16		1 2	1 2 3 4		1 2 3 4	
17		1 2	1 2 3 4		1 2 3 4	
18		1 2	1 2 3 4		1 2 3 4	
19		1 2	1 2 3 4		1 2 3 4	
20		1 2	1 2 3 4		1 2 3 4	

ATIVIDADE ESCOLAR

	000	200	201	202	203	204	205	206	207
	Primeiro nom	Última série que cursou	Está na estudando ou parou? 1. estuda 2. parou (Se parou vá p/ a perg. 207)	Onde fica a escola? 1. na comunidade 2. Carolina 3. outra cidade 77. nsi 88. outro	Escola funciona 1. regular 2. irregular 3. não está funcionando 77. nsi	Quando chove muito 1. tem aula 2. não tem aula 3. pode não ter 4. nsi	Nos dias de aula a pessoa dorme 1. casa dos pais 2. casa parentes 3. casa amigos 4. propriedade do pai na cidade 88. outro	Além de estudar 1. trabalha na casa onde dorme 2. ajuda na roça 3. não trabalha 4. trabalha fixo 5. trabalha não fixo 88. outro	Se parou de estudar, por quê? 1. não tinha jeito/ gosto 2. precisava ajudar na roça 3. escola local não tinha série 4. estudou até onde queria 5. casou-se e parou 6. escola fechou/falta professor 88. outro
01			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
02			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
03			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
04			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
05			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
06			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
07			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
08			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
09			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
10			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
11			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
12			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
13			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
14			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
15			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
16			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
17			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
18			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
19			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88
20			1 2	1 2 3 77 88	1 2 3 77	1 2 3 4	1 2 3 4 88	1 2 3 4 5 88	1 2 3 4 5 6 88

208 É preciso pagar pela acomodação ou despesas de algum filho que esteja morado fora de casa?

0. não 1. sim Quanto? _____

209 Quantas pessoas na casa sabem ler e escrever? _____

210 O senhor já teve algum curso sobre como usar melhor a terra ou sobre como melhorar a situação de sua família?

0. não 1. sim

211 Caso SIM, quem deu e qual era o curso? _____

(Perguntar sobre associação, sindicato, cooperativa, CEB ou outra organização)

SAÚDE

Desde o início de 1996 e até agora alguém nesta casa sofreu de

300 Malária 0. não 1. sim 77. nsi

301 Leish/Ferida brava 0. não 1. sim 77. nsi

302 Hepatite (A ou B) 0. não 1. sim 77. nsi

303 Doença de pele 0. não 1. sim 77. nsi

304 Lepra 0. não 1. sim 77. nsi

305 Diarréia 0. não 1. sim 77. nsi

306 Vermes 0. não 1. sim 77. nsi

307 Dengue 0. não 1. sim 77. nsi

308 Picada de cobra 0. não 1. sim 77. nsi

309 Fraqueza 0. não 1. sim 77. nsi

310 Febre Amarela 0. não 1. sim 77. nsi

311 Gripe muito forte 0. não 1. sim 77. nsi

312 Tétano 0. não 1. sim 77. nsi

313 Cólera 0. não 1. sim 77. nsi

314 Acidente grave 0. não 1. sim 77. nsi

315 Algum adulto parou de trabalhar por mais de uma semana porque teve doença ou acidente grave?

0. não 1. sim 77. nsi

000 Quem? _____

316 Alguma criança parou de estudar ou trabalhar por mais de uma semana porque teve doença ou acidente grave?

0. não 1. sim 77. nsi

000 Quem? _____

317 Alguém consultou médico ou enfermeira em 1996 ou no começo deste ano?
0. não 1. sim 77. nsi

⇒ **Caso NÃO vá para a pergunta 319**

318 Caso SIM, onde fica o médico/a enfermeira?

1. na comunidade
2. em Carolina
3. noutro Estado
88. outro _____

319 Se compraram remédio desde o começo de 1996 até agora, o remédio foi

1. comprado com dinheiro da família, em farmácia
2. ganho do médico ou enfermeira
3. ganho da cooperativa ou sindicato
4. ganho de político
- 88.outro _____

000 Para qual doença era o remédio? _____

320 Quem nesta casa tomou remédio caseiro ou garrafada em 1996 e neste ano até agora?
garrafada: _____
remédio caseiro: _____

321 Onde é que pegam água para beber?

1. rio/córrego/lago
2. poço comunitário
3. poço próprio/vizinho
4. nascente/olho d'água
88. outro _____

322 Nesta casa vocês fervem água para beber?

0. não 1. sim 77. nsi

323 Que tipo de banheiro essa casa tem?

1. fossa simples
2. privada normal (sanitário com descarga)
3. não tem banheiro
88. outro _____

324 O governo fez alguma campanha de vacinação nesta comunidade desde o início de 1996 até agora?

0. não
1. sim Qual? _____
77. nsi

325 Aconteceu de o senhor ter algum filho ou pessoa que estava morando aqui e que já morreu?
0. não 1. sim Quem e quando? _____

MORADIA

832 O senhor possui lote urbano? 0. não 1. sim Onde? _____

000 Caso SIM, qual é o valor aproximado do seu lote urbano? _____

400 Quantos cômodos tem a casa rural? _____ cômodos Casa Urbana: _____

NÃO CONSIDERAR ÁREA EXTERNA E CORREDOR INTERNO

- 401 Qual é o principal material do teto?
- | | | | |
|-------|---|--------|---|
| rural | 1. telha
2. zinco
3. brasilit/eternit
4. palha
5. cavaco
88. outro _____ | urbana | 1. telha
2. zinco
3. brasilit/eternit
4. palha
5. cavaco
88. outro _____ |
|-------|---|--------|---|
- 402 Qual é o principal material das paredes?
- | | | | |
|-------|--|--------|--|
| rural | 1. taipa
2. adobe
3. tábua
4. tijolo
5. palha
88. outro _____ | urbana | 1. taipa
2. adobe
3. tábua
4. tijolo
5. palha
88. outro _____ |
|-------|--|--------|--|
- 403 Qual é o principal material do piso?
- | | | | |
|-------|---|--------|---|
| rural | 1. chão batido
2. cimento/vermelhão
3. tábua
4. tijolo
5. cerâmica
88. outro _____ | urbana | 1. chão batido
2. cimento/vermelhão
3. tábua
4. tijolo
5. cerâmica
88. outro _____ |
|-------|---|--------|---|
- 404 Qual é o principal material de portas e janelas?
- | | | | |
|-------|---|--------|---|
| rural | 1. madeira rústica
2. madeira trabalhada
3. alumínio
88. outro _____ | urbana | 1. madeira rústica
2. madeira trabalhada
3. alumínio
88. outro _____ |
|-------|---|--------|---|
- 405 Esta casa tem forro?
- | | | | |
|-------|-------------------------------|--------|-------------------------------|
| rural | 0. não 1. sim 3. parcialmente | urbana | 0. não 1. sim 3. parcialmente |
|-------|-------------------------------|--------|-------------------------------|
- 406 Esta casa tem rede elétrica?
- | | | | |
|-------|---------------|--------|---------------|
| rural | 0. não 1. sim | urbana | 0. não 1. sim |
|-------|---------------|--------|---------------|
- 407 Esta casa tem encanamento de água?
- | | | | |
|-------|---------------|--------|---------------|
| rural | 0. não 1. sim | urbana | 0. não 1. sim |
|-------|---------------|--------|---------------|

USO DA TERRA

- 500 Qual é o tamanho total de sua propriedade? _____ m²
(segunda propriedade, se tiver) _____

CHECAR SE TEM MAIS DE 1 PROPRIEDADE EM NOME DE MULHER OU FILHO

- 000 É área de uso de morador? 0. não 1. sim
- 501 Qual é a área com roça produzindo? _____
- 502 Qual é a área com pasto? _____
- 503 Qual é a área plantada com frutas e/ou fava danta? _____
- 505 Qual é o tamanho da área que não foi mexida? _____

504 Qual é o tamanho aberto no total? _____
(incluindo a área com capoeira)

506 É seu costume usar fogo para preparar a terra para o plantio?
0. não 1. sim

507 Caso **SIM**, no ano passado o senhor usou fogo? 0. não 1. sim

CULTURAS ANUAIS (TEMPORÁRIAS)

Quais são as culturas anuais que o senhor tem plantadas neste momento?

			Tamanho
508	Arroz	0. não 1. sim	_____
509	Feijão	0. não 1. sim	_____
510	Milho	0. não 1. sim	_____
511	Mandioca	0. não 1. sim	_____
512	Abóbora	0. não 1. sim	
513	Melancia	0. não 1. sim	
514	Batata doce	0. não 1. sim	
517	Outro produto?	_____	
518	Outro produto?	_____	

CULTURAS PERMANENTES (PLANTADAS OU NATIVAS)

Em PLANTADAS dar número, para NATIVAS classificar POUCO, MÉDIO E MUITO

			Quantidade
519	Cupuaçu	0. não 1. sim	_____
520	Cajá	0. não 1. sim	_____
521	Buriti	0. não 1. sim	_____
522	Bacuri	0. não 1. sim	_____
523	Bacaba	0. não 1. sim	_____
524	Juçara	0. não 1. sim	_____
525	Caju	0. não 1. sim	_____
526	Murici	0. não 1. sim	_____
527	Mangaba	0. não 1. sim	_____
528	Açaí	0. não 1. sim	_____
529	Manga	0. não 1. sim	_____
530	Fava danta	0. não 1. sim	_____
531	Abacate	0. não 1. sim	_____

532	Jaca	0. não	1. sim	_____
533	Laranja	0. não	1. sim	_____
534	Macaúba	0. não	1. sim	_____
535	Babaçu	0. não	1. sim	_____
536	Coco da praia	0. não	1. sim	_____
000	Outro _____			
000	Outro _____			
000	Outro _____			

Quais são os equipamentos agrícolas que são da sua propriedade?

540	Facão	0. não	1. sim	_____
541	Enxada	0. não	1. sim	_____
542	Foice	0. não	1. sim	_____
543	Machado	0. não	1. sim	_____
544	Arado de tração animal	0. não	1. sim	_____
545	Matraca	0. não	1. sim	_____
000	Outro _____			
000	Outro _____			
000	Outro _____			

Quais são os animais que são da sua propriedade?

				Qtos em meia	Quantidade
546	Boi/touro/vaca/bezerro	0. não	1. sim	_____	_____
547	Cavalo ou égua	0. não	1. sim	_____	_____
548	Jumento ou burro	0. não	1. sim	_____	_____
549	Galinha	0. não	1. sim	_____	_____
550	Pato	0. não	1. sim	_____	_____
551	Cabra ou bode	0. não	1. sim	_____	_____
552	Porco	0. não	1. sim	_____	_____
553	Cachorro	0. não	1. sim	_____	_____
554	Outro	0. não	1. sim	_____	_____

HISTÓRICO E MODO DE VIDA FAMILIAR

600 Onde o chefe nasceu? Estado _____
Município _____

601 Em quantos municípios o chefe já morou? _____
(indicar o Estado de cada município)

602 Em quantas comunidades do município de Carolina o chefe já morou? _____

603 Onde nasceu o pai do chefe? Estado _____
Município _____
77. nsi _____

604 Onde nasceu o pai da mulher? Estado _____
Município _____
77. nsi _____

605 O chefe nasceu em área rural ou urbana? 1. rural 2. urbana

606 Chefe: quando e por quê veio para cá? _____

607 Desde que nasceu, já morou por mais de um ano em cidade?
0. não 1. sim

⇒ **Caso NÃO, vá para a pergunta 610**

608 Que tipo de área urbana? (nome) (UF)
1. cidade _____
2. cidade _____
3. cidade _____

609 Qual era a sua atividade enquanto estava na cidade?
(indicar mais de uma resposta se fez coisas diferentes em diferentes cidades)

1. trabalhador temporário/biscate (urbano)
2. trabalhador com carteira assinada
3. trabalhador temporário em área rural
4. recebia assistência médica
5. vaqueiro
6. vaquejada
88. outro _____

000 Quais tipos de trabalho o senhor fez? _____

610 Nesta casa, quem vai mais vezes para a cidade?
1. o marido
2. a mulher
3. o filho homem
4. a filha mulher
5. outras pessoas da casa
88. outro _____

000 Qual é a cidade? _____

611 Quantas vezes por mês esta pessoa vai para a cidade? _____

612 Qual é a distância daqui até a cidade mais próxima? _____ km

613 Qual é a situação da estrada da sua comunidade até a cidade mais próxima?

1. asfaltada
2. de chão, sem muitos buracos
3. de chão, com muitos buracos
4. não tem estrada

614 Qual é a situação da estrada para um carro de linha não traçado?

1. passa o ano inteiro
2. com chuva forte não passa
3. com chuva forte passa com dificuldade
88. outro _____

615 Na maior parte das vezes, como o senhor faz para ir à cidade?

1. vai a pé
2. carro de linha
3. bicicleta
4. carona de amigo produtor
5. carona de comerciante local
6. carona de veículo da associação/cooperativa
88. outro _____

Existe alguém nesta casa que já trabalhou ou trabalha atualmente em

Atividade			Quem	Tempo	Quem	Tempo
616 Garimpo	0. não	1. sim				
617 Carvoaria	0. não	1. sim				
618 Construção de estrada	0. não	1. sim				
619 Construção de barragem	0. não	1. sim				
620 Outras fazendas	0. não	1. sim				

Código para Tempo: 1. seis meses ou menos; 2. de sete meses a um ano (7-12); 3. de um a dois anos (13-24); 4. de dois a três anos (25-36); 5. Mais de três anos; 77. nsi

621 Desde qual idade o senhor trabalha na agricultura? _____ anos

(Indicar o nome da cidade de cada pessoa que esteja fora)

622 Quantos irmãos e irmãs do senhor estão morando em cidades? _____

623 Quantos irmãos e irmãs da mulher do chefe estão morando em cidades? _____

Desde o início de 1996 e até agora, o senhor teve problemas com

- | | | | |
|-----|-----------------------------|--------|-----------------------|
| 625 | Outros proprietários rurais | 0. não | 1. sim |
| 626 | Índios | 0. não | 1. sim |
| 630 | FUNAI | 0. não | 1. sim |
| 627 | Prefeitura | 0. não | 1. sim |
| 628 | Cooperativa/Associação | 0. não | 1. sim (qualquer uma) |
| 629 | Sindicato | 0. não | 1. sim (qualquer um) |
| 631 | IBAMA | 0. não | 1. sim |

PARTICIPAÇÃO

700 O senhor participa de alguma cooperativa ou associação de produtores?
0. não 1. sim 77. nsi

⇒ **Caso NÃO vá para a pergunta 707**

000 Se participa de cooperativa ou associação, diga alguma vantagem de fazer parte dela:

000 Por que essa organização foi criada? _____

701 O senhor participa do projeto Frutos do Cerrado?
0. não 1. sim 77. nsi

⇒ **Caso NÃO vá para a pergunta 707**

702 O senhor participou de reuniões para discutir o projeto, antes dele começar?
0. não 1. sim

703 Caso **SIM**, quem participou das reuniões?
1. o senhor sozinho
2. o senhor e sua mulher
3. às vezes um, às vezes o outro

704 O senhor levou algum filho em idade de trabalho para participar das reuniões?
0. não 1. sim 99. nsa

705 O senhor acha que as palestras sobre técnicas de plantio dadas pelos técnicos do projeto são:
1. difíceis de entender (de quem? _____)
2. fáceis de entender (de quem? _____)

706 O senhor está em dia com suas contribuições de sócio da associação/cooperativa?
0. não 1. sim 77. nsi

707 O senhor é sindicalizado? 0. não 1. sim Qual? _____

000 Qual é a sua vantagem em ser sindicalizado? _____

708 O senhor está em dia com suas contribuições de sócio do sindicato?
0. não 1. sim 77. nsi

709 O senhor participa de CEB? 0. não 1. sim

711 É filiado a partido político 0. não 1. sim Qual? _____

712 Já fez campanha para político? 0. não 1. sim Qual? _____

710 Já participou de mutirão? 0. não 1. sim Qual? _____

RENDA E CONSUMO

Aqui nesta casa tem

		Quantidade	Funcionando
800	Rádio de pilha sem toca fitas	0. não 1. sim	_____
801	Rádio toca-fitas	0. não 1. sim	_____
802	Televisão	0. não 1. sim	_____

803	Ventilador	0. não	1. sim	_____	_____
804	Energia da rede	0. não	1. sim	_____	_____
805	Gerador de eletricidade	0. não	1. sim	_____	_____
806	Máquina de costura	0. não	1. sim	_____	_____
807	Fogão a gás	0. não	1. sim	_____	_____
808	Sofá de sala	0. não	1. sim	_____	_____
809	Cama solteiro	0. não	1. sim	_____	_____
810	Cama casal	0. não	1. sim	_____	_____
811	Rede de dormir	0. não	1. sim	_____	_____
812	Carro	0. não	1. sim	_____	_____
813	Motocicleta	0. não	1. sim	_____	_____
814	Bicicleta	0. não	1. sim	_____	_____
815	Lampião a gás	0. não	1. sim	_____	_____
816	Bujão de gás grande	0. não	1. sim	_____	_____
817	Bujão de gás pequeno	0. não	1. sim	_____	_____
818	Arma para caçar	0. não	1. sim	_____	_____
819	Relógio (qualquer tipo)	0. não	1. sim	_____	_____
820	Panela de pressão	0. não	1. sim	_____	_____
821	Filtro de água	0. não	1. sim	_____	_____
822	Geladeira	0. não	1. sim	_____	_____
823	Armário de cozinha	0. não	1. sim	_____	_____
824	Armário de quarto ou mala	0. não	1. sim	_____	_____
825	Forno/casa de farinha	0. não	1. sim	_____	_____
826	Lanterna de pilha	0. não	1. sim	_____	_____
827	Sela ou cangaia	0. não	1. sim	_____	_____
828	Instrumento musical	0. não	1. sim	_____	_____
829	Canoa remo	0. não	1. sim	_____	_____
830	Canoa motor	0. não	1. sim	_____	_____

- 831 Qual é o seu direito em relação à sua área rural?
1. é proprietário (título? _____)
 2. é posse que já vem de família
 3. ocupou / é o primeiro posseiro
 4. é morador (arrendatário)
 88. outro _____
- 833 Poderia dizer quanto o senhor gasta por mês, em média, com as despesas de casa?
 _____ reais (somar despesas de ambas as casas, se tiver casa urbana)
- 834 Quais são as fontes de renda da família?
1. venda de produtos da roça
 2. venda de frutas para a associação/cooperativa
 3. venda de frutas para outros
 4. venda de animais de criação
 5. venda de farinha
 6. dinheiro enviado por pessoas da família
 7. aposentadoria
 8. emprego fixo
 9. emprego temporário - Qual? _____
 88. outro _____
- (checar se faz aluguel de pasto e incluir na opção 88)
- 835 Qual é a maior fonte de renda da família?
1. roça
 2. venda de frutas para a associação/cooperativa
 3. venda de frutas para outros
 4. venda de animais de criação - Qual? _____
 5. venda de farinha
 6. dinheiro enviado por pessoas da família
 7. aposentadoria
 8. emprego fixo
 9. emprego temporário - Qual? _____
 88. outro _____
- 836 Onde é que vocês fazem as compras de comida/material para cozinhar?
1. carro de linha
 2. cantina na comunidade
 3. cantina da associação/cooperativa
 4. vendedor ambulante/intermediário
 5. na cidade mais próxima
 88. outro _____
- 837 Qual é a forma de pagamento?
1. em dinheiro
 2. em crédito / caderneta
 3. troca por mercadoria
 4. troca por serviços / trabalho
 88. outro _____
- 838 O senhor gasta mais ou menos do que um salário mínimo com as despesas da casa
1. menos
 2. mais
- 839 Como chegam no local das compras?
1. a pé
 2. caminhão de linha
 3. bicicleta
 4. condução própria
 5. condução fornecida por comerciantes
 88. outro _____

- 840 Alguém nesta casa tem costume de pescar?
0. não 1. sim
- 841 O senhor vende parte da pesca para ajudar na renda da casa?
0. não 1. sim 99. nsa
- 842 Para quem o senhor vende a sua produção da roça
1. não vende
2. para a associação/cooperativa
3. comércio na comunidade
4. comércio na cidade
5. na rua, na cidade
6. intermediário
88. outro _____
99. nsa
- 843 Para quem o senhor vende a sua produção de frutas?
1. não vende
2. para a associação/cooperativa
3. comércio na comunidade
4. comércio na cidade
5. na rua, na cidade
6. intermediário
88. outro _____
99. nsa
- 846 Para quem o senhor vende a sua produção de farinha?
1. não vende
2. para a associação/cooperativa
3. comércio na comunidade
4. comércio na cidade
5. na rua, na cidade
6. intermediário
88. outro _____
99. nsa
- 844 Como leva a produção para vender?
1. a pé
2. caminhão de linha
3. bicicleta
4. carro da associação/cooperativa
88. outro _____
99. nsa
- 845 Quando o senhor quer se divertir, o que é que o senhor faz?
1. forró em comércio
2. forró na cooperativa/sindicato
3. futebol
4. festas religiosas
5. banho de rio
6. bilhar/beber em bar com os amigos
7. conversa com amigos
8. não tem nenhuma forma de diversão
88. outro _____

Quais foram os produtos que o senhor comprou no último mês

		Quantidade
901 Açúcar	0. não 1. sim	_____
902 Sal de cozinha	0. não 1. sim	_____

- 903 Querosene/Diesel 0. não 1. sim _____
- 904 Café 0. não 1. sim _____
- 905 Óleo de cozinha 0. não 1. sim _____
- 906 Feijão 0. não 1. sim _____
- 907 Carne 0. não 1. sim _____
- 908 Outro (_____) 0. não 1. sim _____
- 909 O senhor pensa em comprar uma propriedade rural para o senhor mesmo ou seus filhos?
0. não 1. sim
- 910 O senhor pensa em vender a sua propriedade rural?
0. não 1. sim
- 000 Caso **SIM**, por quê? _____
- 911 O senhor tem morador em sua propriedade rural?
0. não 1. sim
- 912 Caso **SIM**, qual é a forma e valor de pagamento? _____

- 000 Caso **SEJA MORADOR**, qual é a forma e/ou valor de pagamento? _____

- 933 O senhor tem tido problemas com roubo ou outro tipo de crime aqui em sua comunidade?
0. não 1. sim Qual? _____
- 934 O senhor já participou de ocupação de terra?
0. não 1. sim
- 935 O senhor ou alguém de sua família confecciona produtos para uso na casa?
0. não 1. sim Quem e qual produto? _____

- 936 O senhor pretende continuar morando aqui?
0. não 1. sim Caso **NÃO**, por quê? _____

- 937 Caso tenha filhos em alguma cidade, eles querem que o senhor vá para lá morar com eles?

- 938 Quando o senhor não puder mais trabalhar por causa da idade, quem vai continuar trabalhando aqui na sua terra? _____
- 939 Quais são as vantagens de uma pessoa que mora na cidade? _____

- 941 Caso tenha filhos morado em cidades, o senhor pode dizer se a ida deles para a cidade foi uma decisão que o senhor ou a sua mulher apoiaram ou foram contra? _____

- 942 Quais são os três programas de rádio que o senhor mais gosta de ouvir? _____

(Checar se gosta de ouvir a Voz do Brasil)

Fim da entrevista: ____ : ____

QUESTIONÁRIO DE CAMPO - URBANO

000 Entrevistador		001 Questionário N°	
002 Quarteirão N°		003 Bairro	
000 Casa N° ou identificação:			
	Visita 1	Visita 2	Visita 3
Data			
Hora de Início.....			
Hora Término.....			
Resultado.....			
Código de Resultado: 1. Completado 2. Adiado 3. Nenhum informante em casa 4. Recusado ⇨ Por quê? _____ 5. Outra situação: _____			

DADOS PESSOAIS

040 Qual é o nome do(a) chefe desta casa? _____

041 Qual é o nome do entrevistado? _____

O chefe da casa tem guardado aqui nesta casa os seguintes documentos?

053 Certidão de casamento? 0. não 1. sim 77. nsi 99. nsa

051 Certidão de nascimento? 0. não 1. sim 77. nsi

054 Carteira de identidade? 0. não 1. sim 77. nsi

055 Título de eleitor? 0. não 1. sim 77. nsi

057 Carteira de trabalho 0. não 1. sim 77. nsi

058 CPF? 0. não 1. sim 77. nsi

052 Atestado de batismo?
(qualquer que seja a religião) 0. não 1. sim 77. nsi 99. nsa

O chefe da casa tem

056 Conta em banco? 0. não 1. sim 77. nsi 99. nsa

063 Caso **Não** tenha conta
agora, já teve antes? 0. não 1. sim 77. nsi 99. nsa

059 Qual é a religião do chefe?
1. católica
2. protestante tradicional
3. pentecostal
4. é ateu
5. não pratica religião
88. outro _____

061 Quem nesta casa vai mais vezes por mês a um culto religioso? Quantas vezes?
1. o homem: _____
2. a mulher: _____
3. os dois vão juntos: _____
77. nsi
88. outro _____

MEMBROS DA UNIDADE DOMÉSTICA

	100	101	102	103	104	106	107	200	202	207
	Relacione todos os membros da família, que morem ou não aqui, e outras pessoas que morem aqui	Sexo 1. H 2. M	Relação com o chefe? 1. Cônjuge 2. Filho(a) 3. Outro da família 4. Não é da família	Qtos anos tem hoje?	Estado civil 1. Casado ou junto 2. Solteiro 3. Viúvo 4. Separado	Esta pessoa mora nesta casa? 0. não 1. sim	Qual é a cidade ou o local onde esta pessoa mora? [Se for área rural pôr o sinal R após o nome]	Última série que cursou	Se ainda estuda, onde fica a escola? 1. Carolina 2. Filadélfia 3. outra cidade 77. nsi	Se já parou de estudar, por quê parou? 1. não tinha jeito / gosto 2. precisava ajudar na roça 3. escola local não tinha série 4. estudou até onde queria 5. casou-se e parou 6. escola fechou / falta professor 7. precisava ou queria trabalhar 8. não passou vestibular e parou 88. outro
01	CHEFE:	1 2			1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
02		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
03		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
04		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
05		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
06		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
07		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
08		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
09		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
10		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
11		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
12		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
13		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
14		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
15		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88
16		1 2	1 2 3 4		1 2 3 4	0 1			1 2 3 77	1 2 3 4 5 6 7 8 88

- 208 É preciso pagar pela acomodação ou despesas de algum filho que esteja morado fora de casa?
0. não 1. sim Quanto? _____ 99. nsa
- 209 Das pessoas relacionadas no quadro, quantas sabem ler e escrever? _____
- 210 Alguém nesta casa já teve algum curso profissionalizante ou sobre como melhorar a situação da família?
0. não 1. sim
↓
- 211 Caso SIM, quem deu e qual era o curso? _____

(Perguntar sobre mecânica, contabilidade, costura, CEB e cursos de nível superior)

- 212 Caso tenha pessoa que não é da família morando em casa, vocês são responsáveis pela sua criação?
0. não 1. sim 77. nsi 99. nsa

SAÚDE

Desde o início de 1996 e até agora alguém nesta casa sofreu de

- | | | | | |
|-----|-------------------|--------|--------|---------|
| 302 | Hepatite (A ou B) | 0. não | 1. sim | 77. nsi |
| 303 | Doença de pele | 0. não | 1. sim | 77. nsi |
| 305 | Diarréia | 0. não | 1. sim | 77. nsi |
| 306 | Vermes | 0. não | 1. sim | 77. nsi |
| 307 | Dengue | 0. não | 1. sim | 77. nsi |
| 308 | Picada de cobra | 0. não | 1. sim | 77. nsi |
| 309 | Fraqueza | 0. não | 1. sim | 77. nsi |
| 310 | Febre Amarela | 0. não | 1. sim | 77. nsi |
| 311 | Gripe muito forte | 0. não | 1. sim | 77. nsi |
| 314 | Acidente grave | 0. não | 1. sim | 77. nsi |
- 000 Outras doenças? _____
- 315 Algum adulto parou de trabalhar por mais de uma semana porque teve doença ou acidente grave?
0. não 1. sim 77. nsi
- 000 Quem? _____
- 316 Alguma criança parou de estudar ou trabalhar por mais de uma semana porque teve doença ou acidente grave?
0. não 1. sim 77. nsi 99. nsa
- 000 Quem? _____
- 317 Alguém que mora aqui consultou médico ou enfermeira em 1996 ou no começo deste ano?
0. não 1. sim 77. nsi



CASO NÃO VÁ PARA A PERGUNTA 319

318 Caso **SIM**, onde fica o médico ou a enfermeira?
1. em Carolina
2. noutras cidades ⇨ Quais? _____

319 Se compraram remédio desde o começo de 1996 até agora, o remédio foi
1. comprado com dinheiro da família
2. ganho do médico, enfermeira ou farmacêutico
3. ganho da cooperativa ou sindicato
4. ganho de político ou médico-político
88. outro _____

320 Quem nesta casa tomou remédio caseiro ou garrafada em 1996 e neste ano até agora?
garrafada: _____ remédio caseiro: _____

321 Onde é que pegam água para beber?
1. na torneira
2. poço próprio/vizinho
3. poço comunitário
4. nascente/olho d'água
5. rio/córrego/lago
88. outro _____

322 A água para beber é
1. filtrada 2. fervida 3. outro: _____
4. água da torneira, fria ou não

325 Aconteceu que algum filho desta família ou pessoa que estava morando aqui já morreu?
0. não 1. sim Quem e quando? _____

MORADIA

832 O chefe da casa é proprietário de alguma casa, comércio ou terreno não construído?
0. não 1. sim



000 Caso **SIM**, quantos imóveis, quais tipos e em quais cidades? _____

(R = residencial -- C = comercial -- T = terreno)

400 Quantos cômodos tem a casa onde mora o chefe? _____ cômodos

CÔMODOS ⇨ NÃO CONSIDERAR ÁREA EXTERNA E CORREDOR INTERNO

401 Qual é o principal material do teto?
1. telha
2. zinco
3. brasilit/eternit
4. palha
5. cavaco
88. outro _____

402 Qual é o principal material das paredes?
1. taipa
2. adobe
3. tábuas
4. tijolo
5. palha
88. outro _____

403 Qual é o principal material do piso?
1. chão batido
2. cimento/vermelhão
3. tábuas
4. tijolo
5. cerâmica
88. outro _____

404 Qual é o principal material de portas e janelas?
1. madeira rústica
2. madeira trabalhada
3. alumínio
88. outro _____

- 405 Quantos cômodos possuem forro? _____
- 406 A casa tem rede elétrica? 0. não 1. sim
- 407 Esta casa tem encanamento de água? 0. não 1. sim
- 408 O chefe ou sua mulher possuem propriedade rural, ou o chefe coloca roça? 0. não 1. sim
 ↓
 ↓

CASO TENHA PROPRIEDADE RURAL OU COLOQUE ROÇA, PREENCHER ANEXO 1

HISTÓRICO E MODO DE VIDA FAMILIAR

- 600 Onde o chefe nasceu? Estado _____
 Município _____
- 601 Em quantos municípios o chefe já morou? _____
 (indicar o Estado de cada município)
- 602 Em quantas fazendas ou sítios do município de Carolina o chefe já morou? _____
- 603 Onde nasceu o pai do marido? Estado _____
 Município _____
 77. nsi
- 604 Onde nasceu o pai da mulher? Estado _____
 Município _____
 77. nsi
- 624 A mulher do chefe nasceu em área rural ou urbana? 1. rural 2. urbana 3. o chefe é a mulher
- 625 Quando e por quê a mulher do chefe veio para Carolina? _____
 _____ 99. nsa
- 626 Desde que nasceu, a mulher do chefe já morou por mais de um ano no sertão?
 0. não 1. sim 3. o chefe é a mulher
- 605 O chefe nasceu em área rural ou urbana? 1. rural 2. urbana
- 606 Quando e por quê o chefe veio para Carolina? _____

- 607 Desde que nasceu, o chefe já morou por mais de um ano no sertão?
 0. não 1. sim
 ↓

CASO NÃO, VÁ PARA A PERGUNTA 622

- 608 No sertão, o chefe vivia em terra própria, de alguém da família ou era morador?
 nome da fazenda ↓ Município ↓ UF ↓
- | | | | |
|----------------|--|--|--|
| 1. própria | | | |
| 2. da família | | | |
| 3. era morador | | | |
- 609 Qual era a sua atividade enquanto estava na roça?
 (indicar mais de uma resposta se fez coisas diferentes em diferentes fazendas)
1. lavrador
 2. vaqueiro
 3. juqueira
 4. zelador
 88. outro _____

622 Quantos irmãos e irmãs do chefe estão morando em cidades? _____

623 Quantos irmãos e irmãs da mulher do chefe estão morando em cidades? _____

624 Quantos irmãos e irmãs do chefe estão morando em sítios ou fazendas _____

625 Quantos irmãos e irmãs da mulher do chefe estão morando em sítios ou fazendas? _____

Existe alguém nesta casa que já trabalhou ou trabalha atualmente em

Atividade			Quem	Tempo	Quem	Tempo
616 Garimpo	0. não	1. sim				
617 Carvoaria	0. não	1. sim				
618 Construção de estrada	0. não	1. sim				
619 Construção de barragem	0. não	1. sim				
620 Outras fazendas	0. não	1. sim				

Código para Tempo: 1. seis meses ou menos; 2. de sete a doze meses; 3. de um ano e um mês a dois anos; 4. de dois anos e um mês a três anos; 5. Mais de três anos e um mês; 77. nsi

PARTICIPAÇÃO

700 O chefe participa de alguma cooperativa ou associação de produtores?
0. não 77. nsi 1. sim ⇒ Qual? _____



CASO NÃO VÁ PARA A PERGUNTA 707

000 Se participa de cooperativa ou associação, diga alguma vantagem de fazer parte dela:

000 Na sua opinião, por que essa organização foi criada? _____

706 O chefe está em dia com suas contribuições de sócio da associação/cooperativa?
0. não 1. sim 77. nsi

707 O chefe é sindicalizado? 0. não 1. sim ⇒ Qual? _____



CASO NÃO VÁ PARA A PERGUNTA 710

000 Qual é a sua vantagem em ser sindicalizado? _____

708 O chefe está em dia com suas contribuições de sócio do sindicato?
0. não 1. sim 77. nsi

710 Já participou de algum tipo de mutirão? 0. não 1. sim ⇒ Qual? _____

CONSUMO E RENDA

621 Desde qual idade o chefe trabalha (mesmo que não remunerado)? _____ anos

837 As compras da casa, de comida e material de cozinha, vocês pagam sempre à vista ou também compram à crédito / anotam na caderneta?

1. em dinheiro
2. à crédito / caderneta
3. troca por mercadoria
4. troca por serviços / trabalho
88. outro _____

800 Quais são os produtos que vocês nesta casa compram direto do produtor? _____

801 Vocês recebem comida que vem de fazenda própria, de outra pessoa da família ou mesmo uma fazenda de amigo?
0. não 1. sim

↓

802 Caso SIM, esta comida é dada como forma de contribuição pela hospedagem de alguém?
0. não 1. sim 99. nsa

Trabalho dos Membros da Unidade Doméstica

000	803	804
Relacione todos os membros da família, e outras pessoas que morem na casa, conforme está na tabela à página 2	Qual é o trabalho desta pessoa? 1. Dono de empresa na cidade 2. Empregado em empresa na cidade 3. Dono de pequeno negócio doméstico 4. Ajuda no pequeno negócio doméstico da família 5. Empregado em pequeno negócio doméstico 6. Faz serviços temporários na cidade 7. Funcionário público 8. Proprietário rural 9. Lavrador 10. Vaqueiro 11. Faz serviços temporários em fazendas ou sítios 12. Intermediário agropecuário 13. Emprego doméstico / lavadeira fixa 14. Trabalho doméstico não remunerado 15. Não trabalha 16. Aposentado 77. nsi 88. outro 99. nsa	Esta pessoa trabalha ou já trabalhou com carteira assinada (CA)? 1. Tem CA no momento 2. Não tem agora, mas já teve CA antes 3. Nunca teve CA na vida 77. nsi 99. nsa
Chefe	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 77 88 99	1 2 3 77 99

↓ ↓

SE MARCOU ALGUM 1 OU 3, FAZER PERGUNTAS 805 A 809, SE NÃO, IR PARA 935

805 Qual é o tipo de atividade da empresa ou do pequeno negócio doméstico? _____

806 A empresa tem todos os registros (inscrição) na Prefeitura ou só o alvará de funcionamento?

1. todos tos registros
2. só o alvará
3. não tem nada
88. outro _____

- 807 Caso a empresa tenha todos os registros, qual é o seu tipo? (ler as opções)
 1. Micro-empresa
 2. Sociedade Civil limitada
 3. Sociedade Anônima
 88. outro _____
 99. nsa
- 808 O que o dono da empresa ou negócio próprio fazia antes de ter essa atividade? _____

- 809 Quais são as suas maiores dificuldades para fazer a empresa crescer? _____

- 935 O chefe ou alguém de sua família confecciona produtos para uso na casa?
 0. não 1. sim ⇒ Produtos? _____
- 833 O senhor (senhora) poderia dizer quanto se gasta aqui por mês, em média, com as despesas de casa?
 _____ reais (somar despesas de ambas as casas, se tiver casa no sertão)
- 933 Houve algum problema de roubo ou outro tipo de crime aqui nesta casa?
 0. não 1. sim ⇒ Qual? _____
- 909 O chefe pensa em comprar uma propriedade rural para ele mesmo ou seus filhos?
 0. não 1. sim
- 936 O chefe pretende continuar morando em Carolina?
 0. não 1. sim ⇒ Por quê? _____
- 943 O chefe e sua mulher querem que os filhos se mudem de Carolina para outra cidade?
 0. não 1. sim ⇒ Qual? _____
- 944 Algum parente ou amigo da sua família já disse que algum filho seu pode ir morar com eles em outra cidade?
 0. não 1. sim ⇒ Quais cidades? _____
- 945 Se o chefe puder escolher, em qual cidade gostaria de morar no futuro?
 1. Carolina 2. outra cidade : _____ 77. nsi
- 937 Caso tenha filhos em alguma outra cidade, eles querem que o chefe ou sua mulher vá para lá morar com eles? _____ 99. nsa
- 941 Caso tenha filhos morado em outras cidades, o chefe pode dizer se a ida deles para lá foi uma decisão que o senhor ou a sua mulher apoiaram ou foram contra? _____ 99. nsa

- 939 Quais são as vantagens de uma pessoa que mora no sertão? _____

- 940 Quais são as vantagens de uma pessoa que mora na cidade? _____

- 942 Quais são os programas de rádio que o chefe mais gosta de ouvir? _____

- (Checar se gosta de ouvir a Voz do Brasil)
- 946 Qual é a coisa mais importante que o chefe acha que é preciso mudar em Carolina para que a cidade fique melhor? _____

FIM DA ENTREVISTA: ____: ____

CONSIDERAR TEMPO USADO PARA PREENCHER ANEXO 1, SE FOR O CASO

QUESTIONÁRIO PARA ESTUDANTES

Para responder, escreva nas linhas ou coloque um X nos quadradinhos.
A numeração das perguntas não significa ordem de importância.

01 Qual é o seu primeiro nome: _____ 02 Sexo: 1. Masc. 2. Fem.

03 Quantos anos você tem hoje: _____ anos

00 Nome da escola _____

04 Sua escola é: 1. Estadual 2. Municipal 3. Particular

05 Você estuda: 1. De manhã 2. À tarde 3. À noite

06 Qual série e grau você está estudando agora? _____

00 É curso supletivo? 0. Não 1. Sim

07 Até qual série você vai estudar?

Se vai parar no Primeiro Grau, marque aqui

1. Quinta 2. Sexta 3. Sétima 4. Oitava 5. Não sei dizer

Se vai parar no Segundo Grau ou depois, marque aqui

6. Primeira 7. Segunda 8. Terceira 9. Adicional 10. Faculdade 11. Não sei dizer

08 Qual é a sua religião?

1. Católica 2. Batista 4. Evangélica 5. Outra (nome) _____

09 Onde você nasceu?

1. Na zona rural de um outro município que não é Carolina
 2. Na zona rural de Carolina 5. Na cidade de Goiatins
 3. Na cidade de Carolina 6. Em outra cidade que não essas (nome) ↓
 4. Na cidade de Filadélfia _____

10 Onde você mora?

1. Na casa dos pais 2. Na casa de pessoas que não são da sua família
 3. Na casa de parentes 4. Outra situação: _____

11 Você trabalha na casa onde mora?

0. Não 1. Sim ⇒ Qual trabalho você faz e quanto dinheiro você recebe por ele?

12 Onde mora o seu pai?

1. Em Carolina 2. Na roça 3. Noutra cidade 4. Não tenho pai

13 Onde mora a sua mãe?

1. Em Carolina 2. Na roça 3. Noutra cidade 4. Não tenho mãe

14 Qual é o trabalho do seu pai?

1. Lavrador 6. É dono de um comércio
 2. É vaqueiro ou faz juquira 7. Trabalha em uma loja
 3. Funcionário público 8. Trabalha com o Pipes
 4. Não sei dizer 9. Trabalha por conta própria
 5. Não tenho pai 10. É aposentado
 11. Outro trabalho: _____

- 15** Qual é o trabalho da sua mãe?
 1. Só cuida da casa 2. Cuida da casa e ajuda o pai na roça 3. É aposentada
 4. Cuida da casa e trabalha ⇒ qual trabalho _____
 5. Não tenho mãe
- 16** O salário do seu pai é:
 1. Menor do que um salário mínimo 3. Não sei dizer 4. Não tenho pai
 2. Maior do que um salário mínimo
- 17** Seu pai é proprietário de terra?
 0. Não 1. Sim 3. Não sei dizer 4. Não tenho pai
- 18** Você já morou na zona rural?
 0. Não ⇒ pule para a pergunta número 20
 1. Sim ⇒ escreva quanto tempo: _____
- 19** Por que você saiu do sertão e veio morar em Carolina? (pode marcar mais de uma alternativa)
 1. Não tinha mais o que estudar no sertão
 2. Achava o ensino fraco no sertão
 3. Meus pais se mudaram para Carolina
 4. A escola que eu estava no sertão fechou
 5. Eu não queria mais morar no sertão
 6. Queria ou precisava trabalhar para ganhar dinheiro
 7. Outra razão ⇒ Qual? _____
- 20** Você está trabalhando agora, ou alguma vez você já trabalhou para ganhar dinheiro?
 1. Sim ⇒ responda a próxima pergunta
 0. Não ⇒ pule para a pergunta número 23
- 21** Que tipo de trabalho? _____
- 22** Alguma vez você já trabalhou com a carteira de trabalho assinada? 0. Não 1. Sim
- 23** Você tem irmãos ou irmãs morando em outras cidades?
 0. Não 1. Sim ⇒ Quais cidades? _____
- 24** Você pretende continuar morando em Carolina depois que parar de estudar aqui?
 0. Não 1. Sim 2. Ainda não sei
- 25** Seus pai e sua mãe querem que você se mude de Carolina para outra cidade?
 0. Não 1. Sim 2. Não sei dizer 3. Não tenho pai e mãe
- 26** Você acha que no futuro você pode ir morar ou trabalhar na roça?
 0. Não 1. Sim 3. Sim, se meu pai ou mãe pedirem
 4. Sim, se eu me casar com alguém que mora na roça 5. Não sei dizer
- 27** Algum parente ou amigo da sua família já disse que você pode ir morar com eles em outra cidade?
- 28** 0. Não 1. Sim ⇒ Quais cidades? _____
- 29** Se você puder escolher, em qual cidade você gostaria de morar no futuro?
 1. Carolina 2. Outra cidade : _____ 3. Não sei dizer
- 30** Diga qual é a coisa mais importante que você acha que é preciso mudar em Carolina para que a cidade fique melhor? _____

PARA USO DO ENTREVISTADOR - NÃO PREENCHER

Código do Grupo: _____ Número da Fita: _____

ANNEX B - SOURCES OF DATA-TABLES

Source of data for Data-table 5.3 - Harvest area (in hectares) for selected annual crops in Carolina, various years (1950 = 100)

	50	60	75	80	91	95
Rice	2,034	3,903	4,670	7,424	2,200	4,596
Beans	313	151	155	164	80	65
Maize	854	770	1,215	1,495	990	700
Manioc	12,119	7,489	6,999	4,178	2,800	1,650

Source: IBGE (various years)

Source of data for Data-table 5.4 - Production of selected perennial crops in Carolina (in 1,000 units), various years (1950 = 100)

	Unit	50	60	75	80	91	95
Banana	1,000 bunches	201	95	141	135	144	176
Coconut	1000 units	7,6	12,4	26,2	13,5	23,0	13,0
Orange	1,000 units	1,092	1,315	4,905	4,012	585	210

Source: IBGE (various years)

Source of data for Data-table 5.5 - Animal raising (number of animals) in Carolina, various years (1950 = 100)

	50	60	75	80	91	95
Cattle	34,056	56,679	65,970	85,782	77,721	78,393
Pork	23,089	17,161	16,492	12,206	7,320	5,700
Horse	3,306	9,126	10,661	5,538	2,287	1,800
Goat	1,802	1,621	729	934	1,115	1,100

Source: IBGE (various years)

ANNEX C - INTERVIEWEE LIST

Name	Professional activity
Azanha, Gilberto	Anthropologist, CTI general co-ordinator.
Bezeirra, Júlio César	Economist, SEBRAE manager for the south of Maranhão state.
Cardoso, Salomão	Accountant, manager of the Bank of Brazil branch in Carolina.
César, Iracema	Sociologist, president of Carolina's Workers' Party, teacher in the local medium level state school.
Conceição dos Santos, Manuel	Trade-unionist leader, politician affiliated to the Workers' Party, co-ordinator of CENTRU's office for Maranhão state.
Costa, Vanduir Domingos	Agronomist, EMATER co-ordinator in Carolina.
Costa-Rodrigues, José Carlos	Agricultural extensionist working for the Frutos do Cerrado project in Carolina.
Dias, Maria Aglair C.F.	Secretary of Education for the Municipality of Carolina.
Dias dos Santos, Arão	Small rural producer, first president of the AAPPC, member of the local Rural Producers' Trade Union, and Workers' Party.
Diwald, Christopher	World Bank's PD/A task manager for the PD/A at the bank's office in Brasília.
Fatheuer, Thomas	Sociologist, FASE adviser for capacity building projects.
Garrison II, John W.	World Bank's liaison officer for NGOs and social movements.
Gonçalves de Carvalho, Alípio	Economist, former programme manager for Paraná state Development Bank, large rural producer and cattle-rancher in Carolina.
Leroy, Jean Pierre	Sociologist, FASE adviser for Environment and Development issues, co-ordinator of the Brazilian Forum of NGOs.
Loßack, Harald	GTZ (German development agency) representative for the PD/A Technical Secretariat in Brasília.
Martins, João	Small-scale rural producer, manager of the Frutos do Cerrado processing unit in Carolina, waiter.
Medeiros-Rego, João Odolfo	Large-scale cattle-rancher, Secretary of Tourism and former major for the municipality of Carolina.
Moraes, Mário	PD/A technical secretary in Brasília.
Moura, José Francisco	Small-scale rural producer in Carolina, AAPPC co-ordinator.
Rocha, Aurélio	Large-scale cattle-rancher in Carolina.
Rodrigues, Écio	Forestry engineer (MSc), co-ordinator of the Centre for Amazonian Workers (an NGO), member of the PD/A Projects' Evaluation Committee.
Serrão, Adilson	Director of EMBRAPA in Belém, Pará state.
Siqueira, Jaime	Antropologist, co-ordinator of CTI office in Carolina.
Souza-Carvalho, Joaquim	Small-scale rural producer and entrepreneur in Carolina, AAPPC co-ordinator, president of the STR.
Souza-Carvalho, Olegário	Small-scale rural producer and entrepreneur in Carolina, second president of the AAPPC, member of the local Rural Producers' Trade Union, and Workers' Party.
Teodoro, Adauto	Small-scale, producer of irrigated fruits and owner of a small-scale fruit processing unit.
Teodoro, Teo Marcolino	Large-scale cattle-rancher and land dealer in Carolina and south Maranhão.
Vaz de Lima, Fábio	Agronomist, GTA National Secretary in Brasília.
Wenz, Dietmar	KFW (German Development Bank) representative for the Pilot Programme in Brasília.
Zimmermann, Jorg	Agronomist, environment and development issues project co-ordinator for UNICEF office in Brasília.