THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Grantham Research Institute on Climate Change and the Environment

JUST TRANSITION FINANCE LAB

Sustainable finance for a just transition in India: the role of investors

Sangeeth Raja Selvaraju, Nick Robins and Suranjali Tandon

Policy report

July 2024

The Just Transition Finance Lab was launched in 2024 with the goal of being a centre for experimentation and excellence in the financial solutions needed for a just transition. The Lab is grateful for the core support of its Founding Funders: Antin Infrastructure Partners, Barclays, HSBC and Laudes Foundation.
www.justtransitionfinance.org

The Grantham Research Institute on Climate Change and the Environment hosts the Just Transition Finance Lab. The Institute was established in 2008 at the London School of Economics and Political Science. It brings together international expertise on economics, as well as finance, geography, the environment, international development and political economy to establish a world-leading centre for policy-relevant research, teaching and training in climate change and the environment. It is funded by the Grantham Foundation for the Protection of the Environment, which also funds the Grantham Institute – Climate Change and the Environment at Imperial College London.
www.lse.ac.uk/granthaminstitute

About the authors

Sangeeth Raja Selvaraju is a Sustainable Finance Analyst at the Just Transition Finance Lab and the Grantham Research Institute.

Nick Robins is the Executive Director of the Just Transition Finance Lab and Professor in Practice for Sustainable Finance at the Grantham Research Institute.

Suranjali Tandon is an Associate Professor at the National Institute of Public Finance and Policy, India and a Senior Visiting Fellow at the Grantham Research Institute.

Acknowledgements

The authors thank Anjali Dalmia for her research and analytical support on this report. They are also grateful to Kamya Choudhary, Vaibhav Pratap Singh and Priyanka Dhingra for reviewing the report and their valuable feedback; and Mukund Govind Rajan, Prasad Modak, Reema Nanavaty and Neha Kumar for their comments and guidance. They would like to acknowledge Climate Bonds Initiative for the data on GSS bond issuances in India.

Georgina Kyriacou edited the report.

The views expressed in this report represent those of the authors and do not necessarily represent those of the host institutions or funders. The authors declare no conflict of interest in the preparation of this report.

This report was first published in July 2024 by the Grantham Research Institute on Climate Change and the Environment.
© The authors, 2024

Licensed under CC BY-NC 4.0. Commercial permissions requests should be directed to gri@lse.ac.uk.

Suggested citation: Selvaraju S, Robins N, Tandon S (2024) *Sustainable finance for a just transition in India: the role of investors*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science.

Contents

Summary 4

1. Introduction 6

   The necessity and challenge of financing a just transition in India 6

   Growing momentum behind the just transition in India 7

   Risks from an unjust transition – and opportunities from the green economy 10

   Attracting international capital for the just transition in India 10

   Why focus on private finance and institutional investors? 12

2. The investor role in a just transition for India 13

   Background: how are investors already engaging on the just transition? 13

   How to boost investor engagement with the just transition in India – three levers 14

3. Conclusions and next steps 23

References 24

Summary

Opportunities and challenges from greening India's economy

Building a net zero and climate-resilient economy represents a strategic opportunity for India to deliver inclusive growth and make the country a green jobs superpower. However, there is a need to understand and act upon the potentially profound socioeconomic consequences of the transition. While there is considerable scope for more and better jobs from building a net zero economy, there is also a risk of stranded assets and people in high-carbon sectors such as coal, and of a narrow greening of the economy that does not take people into account. To secure positive results, an unprecedented volume of capital, both public and private, must be mobilised, from domestic sources and internationally. This is the challenge of financing the just transition, a global imperative that is of particular importance to India given its large workforce and its vulnerability to climate change impacts.

Plugging the finance gap for India's just transition

The just transition is becoming increasingly embedded in India's climate policy framework and initial action to make it come alive is underway at the state level, among companies and within civil society. The financial dimension requires particular attention as domestic fiscal and capital resources are currently insufficient to deliver the scale of investment required: India holds just 1% of assets in the global financial system. Estimates suggest that India needs approximately US$200 billion annually in investments up to 2030; in 2023 India had clean tech investments of only US$31.4 billion.[1]

The task is to move from a purely environmental approach to sustainable finance to one that addresses core social priorities for India's citizens in terms of creating decent work and livelihoods (including through skills development), ensuring access, availability and affordability of essential goods, respecting human rights and empowering communities (especially women), enabling their active participation in the transition process.

Within India's financial system, there is an important role for institutional investors to support a just transition to net zero. It involves ensuring that just transition is incorporated across investment strategy, shareholder engagement, capital allocation, policy dialogue and investors' own reporting.

Three levers for investors

At this early stage in the evolution of the just transition agenda in India, we identify three promising levers for investors to develop real-world practice, build confidence and lay the foundations for broad-based adoption in ways that support national priorities:

1. **Encourage companies to use the Indian Business Responsibility and Sustainability Reporting (BRSR) disclosure regime as a homegrown framework for reporting on just transition.**

Reporting on both corporate policies and performance is essential to enable investors to hold companies to account and ensure their portfolios are on track for meeting net zero through a just transition. International reporting frameworks on climate are converging and increasing recognition is being given to the social dimension and the just transition. India already has its BRSR disclosure requirement and although it does not explicitly mention the just transition, its social provisions on integrity, supply chain, employees, stakeholders, human rights, communities and consumers provide a domestically produced framework for companies to show they are connecting the environmental and social dimensions of the transition. In their stewardship and shareholder engagement activities, investors can encourage companies to report on how they are implementing the just transition through the use of the BRSR framework.

[1] Figures from Bloomberg New Energy Finance.

2. **Promote capital allocation towards the just transition by harnessing India's green, social, sustainable and sustainability linked (GSS+) bond market.**

Ultimately, the investor's role is to ensure the efficient and timely allocation of capital to sustainable investments that support the just transition. One asset class that has high potential is the bond market, building on India's growing experience with green, social, sustainable and sustainability-linked issuance. The opportunity is to develop frameworks for issuance that connect the climate aspects of GSS+ bonds with the implications for workers, communities and consumers to generate positive impact as well as value creation. Internationally, ESG bond funds are starting to adopt a dedicated just transition strategy focus, which could provide inspiration for bond investors in India. Finally, social impact bonds could also be used specifically for just transition outcomes, such as retraining activities for workers vulnerable to employment shocks.

3. **Support the integration of just transition principles into transition plans and transition finance.**

India's companies and financial institutions are increasingly adopting net zero targets. To implement these targets, credible, robust and just transition plans are needed that set out how the company will make net zero delivery part of its core business model and governance, how people will be put at the centre (including through stakeholder engagement), and how capital and operating expenditure (CapEX and OpEX) will be allocated to make the just transition to net zero a reality. This topic is a priority for discussion at the 2024 G20 presidency under Brazil, and in Asia the Association of South East Asian Nations (ASEAN) is taking the lead in showing how transition plans can be developed in this way. Domestic and foreign investors in India can accelerate the adoption of these plans through direct shareholder engagement and by supporting market-wide efforts, such as those by the Securities and Exchange Board of India (SEBI) and others.

With these three levers, investors can engage, allocate and plan for financing the just transition activities of businesses in India. Wider efforts are needed in terms of policy reform and mobilising public finance. Investors can engage in productive dialogue with decision-makers to support the Indian Government's efforts to accelerate system-wide action on net zero through a just transition.

1. Introduction

Building a net zero and climate-resilient economy represents a strategic opportunity for India to deliver inclusive growth and make the country a green jobs superpower (Modak et al., 2023). Furthermore, if India does not achieve net zero it will be impossible for the world to reach net zero, which poses specific risks for India as it is the most vulnerable G20 nation and seventh most vulnerable country in the world to the impacts of climate change (Germanwatch, 2021). Action is needed to respond to the potentially profound socioeconomic consequences of net zero, taking efforts to ensure a just transition. Institutional investors have a key supportive role to play here because globally they have been among the first movers in the realm of private finance on climate and transition. They have also made inroads to tackle the just transition through investor-led initiatives. Given the significant share of the assets under management that investors can bring to bear on the just transition, the focus of this report is on their role. We identify levers for investors to develop real-world practice, build confidence and lay the foundations for broad-based adoption in ways that support national priorities.

Before turning to the role of investors and how to harness their engagement in Section 2, we outline in this Introduction the just transition challenge and transition risk facing India, examples of building momentum for action, and the need to attract more international capital.

The necessity and challenge of financing a just transition in India

On the upside, there is considerable potential for more and better jobs from building a net zero, resilient economy in India powered by clean energy, with an electrified transport system, a green hydrogen-enabled industrial sector, a resource-efficient built environment and sustainable agriculture. On the downside, there are risks of stranded assets and stranded people in high-carbon sectors including coal, along with potentially new social risks from a narrow greening of the economy that does not take people into account. Joining these challenges is the task of mobilising unprecedented volumes of capital, both public and private, from domestic sources and internationally. This is the challenge of financing the just transition, a global imperative of particular importance to India and one that we at LSE's new Just Transition Finance Lab aim to support by encouraging pioneering examples that help bring the necessary financial transformation (Robins et al., 2024).

At the UN's 2022 climate conference COP27, India announced its target to reach net zero status by 2070. The implications of the transition transcend high-level net zero targets and could have profound impacts on the socioeconomic fabric of modern India. The transition will be a whole-of-economy and all-of-society undertaking. In India, the transition to date has been most pronounced in the power sector, but all industrial, transport and land-based sectors (especially agriculture) will have to be transformed in the coming decades to meet India's targets of net zero and resilient development by 2070. There is broad acknowledgement among different stakeholders in India that this transition cannot happen without placing people at the centre. This means taking along the people affected by the transition and integrating them into planning for the transition.

Optimising development to address multiple of the UN's Sustainable Development Goals (SDGs) is a longstanding priority in India and is significantly embedded in the Government's social sector priorities, as is evident from its five-year plans (Ministry of Finance, 2021). The state has long taken the role of the regulator in charge of delivering people-centric priorities through government mandates on priority sector lending and corporate social responsibility, and through both these policies it has directed private capital to development goals. Thus, the notion of people-centric development has been part of the conversation for some time, and Indian economic priorities are already aligned with the principles of just transition, so extending this to a people-centric transition to net zero by focusing on sustainable development will not be a conceptual stretch. However, it does raise significant challenges, at the heart of which lie how and where to mobilise and allocate public and private investment, along with getting the governance of finance right to deliver a just transition.

The Indian economy is set to transform as the country embarks on its mission to decarbonise and this will have output and employment ramifications across all sectors.

A fifth of gross value added (GVA) is currently produced by carbon-exposed sectors including mining, manufacture of metals, electricity and gas, construction and transport (PIB, 2024). Further, a fifth of India's tax revenues comes from fossil fuels (Aggarwal et al., 2022) and there is high employment in carbon-intensive sectors. As India's resource endowment is geographically concentrated in certain regions, including Jharkhand, Odisha and Chhattisgarh, the economic implications of the transition are expected to be geographically uneven. There is a mismatch between these regions and those where renewable energy capacity is currently being established (Mitra and Chandra, 2023). The direct implications of the transition and their timing will vary depending on the sector. While transitioning out of sectors such as fossil power generation and coal mining will likely see thermal plant decommissioning and subsequent mine closures only in the early to mid-2030s (NITI Aayog, 2023), pre-empting and preparing to prevent a disorderly transition with detrimental effects on people – of the kind experienced in many European countries following deindustrialisation – requires that the work starts now. However, the just transition is not exclusively required in the coal sector. It has economy-wide implications for emerging sectors, such as renewables and electric vehicles.

Growing momentum behind the just transition in India

The just transition is mentioned in the 2015 Paris Agreement on Climate Change and the International Labour Organization (ILO) has provided guidance on what a just transition should involve: maximising the social and economic opportunities of climate action, while minimising and carefully managing any challenges, including through effective social dialogue among all groups impacted. In practical terms, the just transition is a bridging concept, one that connects the climate transition with social imperatives. India's 2022 Long-Term Low Emissions Development Strategy (LT LEDS) incorporates the just transition, and is rooted in the principles of equity and climate justice, and points to the importance of making the energy transition just, smooth, sustainable and inclusive. It focuses on reskilling and redeployment of workers (MOEFCC, 2022). At the same time, there is a desire to ensure that India's progress leaves no one behind. The different kinds of impact require strategic thinking about India's energy supply mix and supporting technologies but also a better understanding of the role of finance.

A major catalyst for advancing consideration of the just transition has come through India's presidency of the G20 in 2023. The New Delhi Declaration from G20 leaders stated: "We will pursue development models that implement sustainable, inclusive and just transitions globally while leaving no one behind" (G20 New Delhi Declaration, 2023). The declaration mentions other tenets of the just transition such as addressing the skills gap, promoting decent work, social protection, and the focus on SDG-aligned finance.

Beyond the formal process, the G20 also spurred broad policy and research on how to deliver a just transition in practical terms, including through the T20 (Think Tank 20) process, which prompted academic and policy research into the intersection of transition and social effects. For example, to overcome entrenched gender inequalities in energy poverty, there has been a focus on women's leadership, upskilling through education and using participation as an active agent of change in the adoption of clean energy (de Haan et al., 2023). Additionally, the crucial role of micro-, small and medium-sized enterprises (MSMEs) in facilitating a just transition has come to the fore in the T20 and in wider climate transition literature, pointing to the need for more support for MSMEs by leveraging newly developed fintech platforms, cooperative models to address informality of employment, and digital tools to mitigate the adverse impact of information asymmetry (Dash and Ranjan, 2023; TERI and DIW, 2023).

The T20 process has also noted that the shift to sustainable and renewable energy may disproportionately affect various marginalised groups, young people and informal workers and that fossil fuel subsidies have historically not benefitted the most vulnerable populations. Therefore, a just transition that addresses food, energy and water security, encourages innovation of new technology, builds access to skills development, incorporates inclusive decision-making, and redirects fossil fuel subsidy savings to social protection and clean energy in a transparent and accountable way, is important (Dutta and Rahut, 2023; Bhushan and Banerjee, 2023; Muzondo et al., 2023).

All in all, India's G20 presidency has clearly shown that a successful transition in India needs to be inclusive to ensure that no one is left behind but also to incorporate the leadership and knowledge of women, youth and marginalised communities as a way to strengthen its economy.

Early examples of action on just transition from state government, businesses and civil society are illustrated in Boxes 1.1–1.3 below.

Box 1.1. Just transition action at the state level – example of the Jharkhand Just Transition Task Force (JTTF)

The Jharkhand JTTF is India's first state-level dedicated task force for the just transition. Its goal is to assess coal dependency in Jharkhand, make recommendations to the Government, and create a roadmap for a just transition to cleaner energy sources by the end of 2024 (Kumar, 2023). The Government of Jharkhand established the JTTF in collaboration with the Centre for Environment and Energy Development (CEED, 2022). The Task Force was created in light of India's net zero targets to address the impacts on Jharkhand, which hosts about 40% of India's mineral wealth (ibid.).

The JTTF recognises that a phase-out of fossil fuels could potentially lead to social upheaval, job losses (from 1.5 million direct jobs), unemployment and knock-on negative impacts on the local economy, particularly in the many coal-centric districts (Bhushan et al., 2021). Therefore, the JTTF, with CEED, is working on developing policy guidelines, district-level action plans and cross-sectoral frameworks (immediate, short- and long-term) designed to minimise the socioeconomic burden of the transition, explore alternative livelihoods and social security measures for workers in coal mining, and remain cognisant of ethnicity, culture and geography by consulting elected representatives, traditional leaders in tribal areas and other main stakeholders (CEED, 2022; Kumar, 2023).

The JTTF involves 17 state departments and agencies and addresses eight thematic areas through plans under development: livelihood transition, energy transition, decarbonisation pathways, coal transition, sustainable mobility transition, institutional framework (capacity building), investment and finance, and green hydrogen mission (Government of Jharkhand and CEED, 2023). Its establishment is a crucial milestone for the Indian conversation on just transition and indicates its mainstreaming at the sub-national level.

A financing strategy for Jharkhand's just transition is currently under development and is likely to be published by the end of 2024 (CPI, 2023).

Box 1.2. Just transition action at the corporate level – examples of NTPC and Ayana Renewable Power

National Thermal Power Corporation (NTPC)

NTPC is India's leading energy producer, owned by the Government of India. It has not yet set a timeline for reaching net zero emissions, but its most recent annual report states that the company is collaborating with the government think tank NITI Aayog to prepare a net zero strategy in alignment with India's net zero by 2070 target (NTPC, 2023).

NTPC has set ambitious targets including for renewables and green hydrogen. It recognises the potential adverse impacts of the sudden retirement of thermal power plants on socioeconomic equity. Therefore, to make the energy transition just and equitable, its decarbonisation strategy adopts a balanced approach that combines efficient thermal power with cleaner renewable energy sources until a viable long-term alternative to fossil power generation becomes feasible. NTPC is also focusing on reskilling the workforce for their transition to renewable energy, collaborating with the Government's Skill India Mission for employment- and entrepreneurship-linked skills development programmes (NTPC, 2023). As India's largest power utility, NTPC's focus on transitioning to clean energy sources in a just and equitable manner sets a strong example for the industry and its attempt at reskilling its workforce can be used to inspire skilling programmes and just transition roadmaps across the board, including in other industries.

Ayana Renewable Power

Ayana was established by British International Investment (BII) as a platform to generate commercial returns and social impact by expanding clean energy. It is now majority owned by India's National Infrastructure Investment Fund (NIIF) Limited. Ayana is applying environmental, social and governance (ESG) practices to its rollout of clean energy projects across India, and its Community Development Framework sets out how it engages with stakeholders to support the just transition. It worked with BII to develop a just transition programme focusing on community engagement and skills development. Initially, these efforts were grant assisted, but they have become mainstreamed and are now supported by Ayana's core resources.

This example demonstrates how development finance institutions like BII can help make the just transition a core part of clean energy expansion, applying just transition principles at the company level within specific policy contexts. For clean energy developers, it also shows how developing skilled employment (including for women) can overcome labour constraints on expansion.
For more information, see the Lab's case study on Ayana (Just Transition Finance Lab, 2024).

Box 1.3. Just transition action within civil society – example of SEWA and the Swachh Aakash Campaign

The Self-Employed Women's Association (SEWA) is one of India's largest trade unions and is formed exclusively of women workers from informal/unorganised sectors. SEWA represents more than 2.9 million women from 18 states. Since its foundation in 1972, SEWA has engaged in several projects to empower women from socially and economically deprived backgrounds and just transition principles are embedded in much of its work. It has trained women for potential employment in solar parks (in operations and maintenance skills), digital literacy and job readiness to facilitate their employment in emerging sectors in India.

In 2022, SEWA celebrated its 50th anniversary by launching the Swachh Aakash Campaign (Clean Sky Programme) which is aimed at addressing "aspects such as the climate catastrophe ..., our fast paced-largescale-collective actions towards adaptation and mitigation, inclusion of informal sector women workers like us to fostering green livelihood and build SEWA into a Green Union" (SEWA, 2022). The programme centres on issues of environment, livelihood, food and social security and recognises that climate change will act as a threat multiplier for poor and vulnerable communities who are already facing challenges concerning education, health, insufficient nutrition, lack of childcare, lack of social support and more. The programme encourages projects that will promote sustainable wellness, resilience and just transition, such as in clean cooking fuel, climate-resilient livelihoods, skilling for green jobs, livelihood support in the context of extreme heat, women-owned and operated solar parks, and energy farming.
The programme recognises just transition as one of the key challenges arising from climate change along with the economic restructuring needed to address it. This represents a crucial development for mainstreaming just transition within India's civil society (ibid.).

Risks from an unjust transition – and opportunities from the green economy

The political economy of India will make the transition very challenging unless the transition is just. The large, emissions-intensive incumbent sectors are deeply embedded within many regional and national institutions and sectors, such as the railways, and in resource-rich states, which can create further challenges in untangling the effects of transition. Further, the impacts of climate change will be severe in India, which will increase the need for a just transition.

An unjust transition would be a missed strategic opportunity, given the promise of skills and work in the global green economy. The potential number of new jobs in India's green economy is estimated to be 35 million by 2047 (the centenary year of independence), according to a report by Skills Council and Sattva Consulting (2023). These jobs will encompass both the traditional sectors and emerging technology sectors like renewable energy, waste management, electric vehicles, battery manufacturing and green construction, which the report identifies as being interwoven with the just transition. It uses the ILO's framing, which puts green jobs at the intersection of decent work opportunities and environmental sustainability, and finds that as India transitions into the green economy, there is great potential to exploit its demographic dividend of a large working-age population (ibid.).

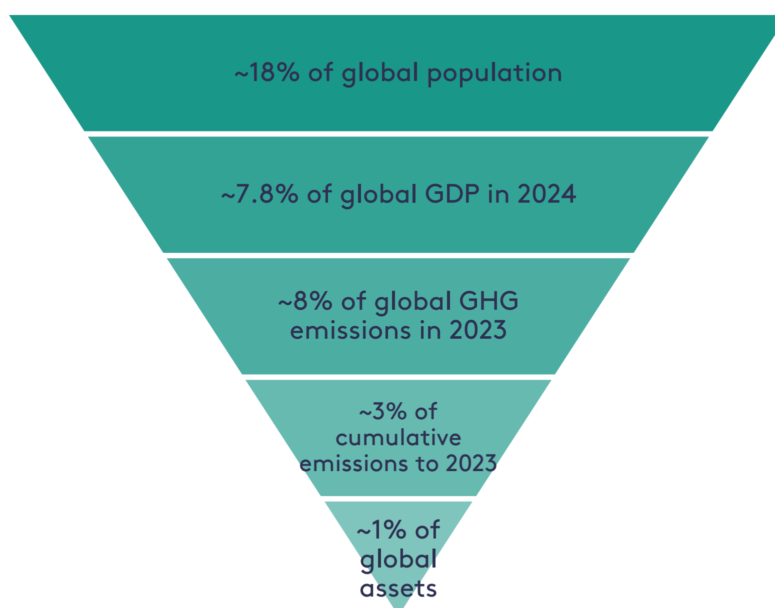
The International Forum for Environment, Sustainability & Technology (iForest) estimates that presently there are 20 million workers engaged in fossil fuel and fossil fuel-dependent sectors in India, of which informal workers account for a substantial portion (Bhushan et al., 2021). Another estimate pegs the number of individuals directly dependent on coal for jobs at 5 million (Outlook Planet Desk, 2023). New jobs in the green economy will be crucial for absorbing these workers, who will lose their jobs in the coal sector as the transition progresses. Additionally, it will be important for the Government, as well as companies, to ensure that these new jobs are made accessible to those left most vulnerable by the transition – particularly Dalit and female workers (Banerjee, 2022). Focused skills-building programmes and redirecting funding towards social protection and upskilling are two ways in which this can be attempted (Nayak, 2024).

A coordinated approach to the just transition will be critical. A mapping of current industries and industries of the future can help states assess skill gaps to ensure that the workforce is future-ready. There are institutions such as the National Institute of Wind Energy and the National Institute of Solar Energy that with the support of the Ministry of New and Renewable Energy offer skill development across functions within industry. Pursuing holistic strategies for a just transition is essential for the private sector to prevent financial and social insecurity, disruption to supply chains, and legal or reputational risks. Companies that want to capitalise on the commercial opportunities arising from the transition need to change rapidly and plan for, manage and optimise the operational and reputational effects of cutting emissions, simultaneously developing innovation and technology, improving workforce relations, and increasing responsible resource productivity (Just Transition Centre and The B Team, 2018).

Attracting international capital for the just transition in India

Increasing the quantity and enhancing the quality of investment in emerging markets and developing economies (EMDEs) such as India is paramount for a just transition. The bulk of financial assets reside in high-income countries. Flows to EMDEs from public and private finance have failed to meet both longstanding policy agreements such as the commitment for developed countries to provide US$100 billion in annual climate finance by 2020 and actual climate and sustainable development needs. India's position is particularly acute, with a large share of global population, but small shares of per capita emissions and financial resources (see Figure 1.1 below).

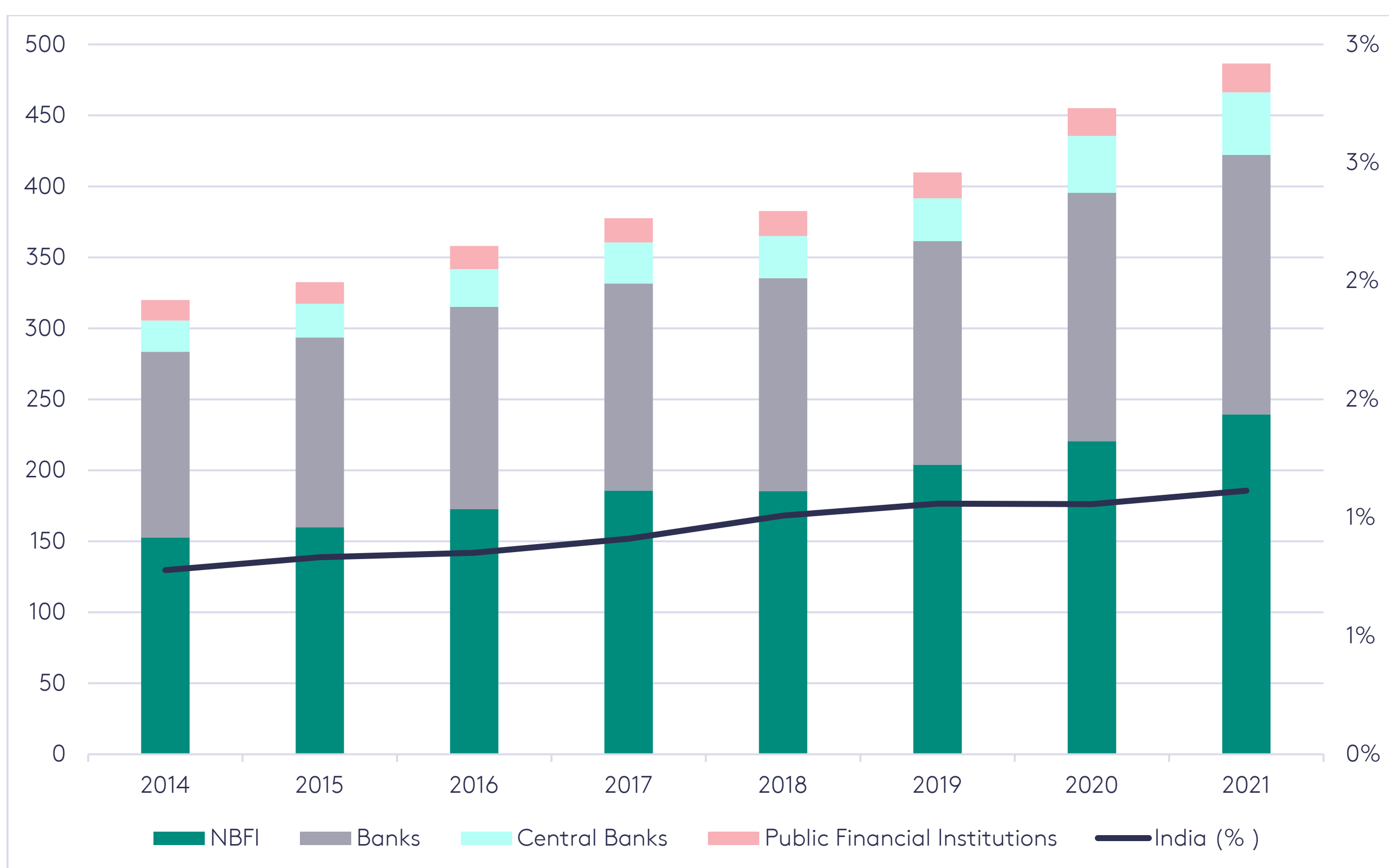
Figure 1.1. The inverted pyramid of India's climate finance challenge



Sources: Financial Stability Board, 2023; IMF, 2024; The Economic Times, 2023; IEA, 2023; Worldometer, 2024

Figure 1.2 provides further context by illustrating the very small share of global financial assets held by EMDEs including India across non-bank financial institutions, banks, central banks and public financial institutions.

Figure 1.2. Total global financial assets (US$ trillion; left axis) and share of assets (%; right axis) in India



Notes: NBFI = non-banking financial institutions.
Source: Financial Stability Board, 2023

Against this backdrop, the International High-Level Expert Group on Climate Finance has estimated that EMDEs need US$2.4 trillion in sustainable finance to meet their climate and nature goals, of which US$1 trillion a year needs to come from external public and private sources (Songwe et al., 2022). In its submission on the negotiation of the UNFCCC's New Collective Quantified Goal (NCQG) for climate finance (which is meant to be adopted at COP29 later in 2024), the Government of India has stated that developing countries need US$1 trillion a year in concessional and grant funding from developed countries to meet climate goals (UNFCCC, 2024).

Estimates for the climate finance needed for net zero in India vary depending on the timelines, scenarios and sectors the analysis focuses on. Table 1.1 presents an indicative selection of leading financing estimates for different sectors and time periods. A considerable share of this will need to come in the form of external public and private finance, all of which will need to deliver net zero goals and in ways that generate socioeconomic benefits to produce a just transition.

Table 1.1. Financing needs for India's net zero target under different estimates

Source	Estimate
Reserve Bank of India (RBI, 2023)	2.5% of GDP per year till 2030
International Energy Agency (Birol and Kant, 2022)	US$160 billion per year in clean energy till 2030
Council on Energy, Environment and Water (Sidhu and Singh, 2021)	~US$200 billion per year till 2070
Climate Policy Initiative (Khanna and Purkayastha, 2022)	US$170 billion per year till 2030

Why focus on private finance and institutional investors?

In Section 2 of this report we identify levers that could prove salient for international investors to encourage greater capital flows for an inclusive transition and just transition in India. While public finance is also key, our focus is on private, because currently private transition finance is insufficient. For the 2020 financial year, the latest estimates suggest that India received US$15 billion in climate finance from domestic public sources, US$3.9 billion from international public sources, US$22 billion from domestic private sources and US$2.6 billion from international private sources, the latter made up of US$1.3 billion from foreign direct investment (FDI), US$0.9 billion from commercial finance institutions, US$0.37 billion from companies and US$0.04 billion from philanthropy (Khanna and Purkayastha, 2022). Given the limited amount of private climate finance flows to India the need for a focus on private transition finance will be crucial and is the focus of this report.

Beyond high-level agreements within the UNFCCC, global markets increasingly expect companies to meet climate, sustainability and social standards along global value chains, including in terms of the just transition. Demonstrating proactive approaches to net zero and its implications for workers and communities could increasingly attract international investment. Conversely, failing to provide a just transition may lead to reduced investor appetite and a competitive disadvantage in export markets. The European Union, for example, has introduced a comprehensive sustainable finance regulatory framework to shape business strategy and transition planning, boost green and sustainability-linked bonds, loans and investment funds, and deliver system-wide transparency and assurance (EU Platform on Sustainable Finance, 2024). Key measures include the EU Taxonomy, the Sustainable Finance Disclosure Regulation (SFDR), the Corporate Sustainability Reporting Directive (CSRD), the Green Bond Standard and the Corporate Sustainability Due Diligence Directive (CSDDD). Cutting across these EU requirements is a strategic emphasis on the just transition as part of its Green Deal and efforts to scale up sustainable finance for EMDEs (HLEG, 2024). The task is to ensure that these international expectations reinforce rather than undermine India's own path to a just transition.

2. The investor role in a just transition for India

Background: how are investors already engaging on the just transition?

Achieving net zero through a just transition is an imperative for a growing number of investors across the world. Investors started to recognise the need for a just transition around 2018, since when understanding has developed and spread.

The International Labour Organization and LSE's Grantham Research Institute set out a series of steps for investors in their *Just Transition Finance Tool for Banking and Investing Activities* (ILO and Grantham Research Institute, 2022). Five steps in particular stand out for investor action:

1. Plan: include just transition principles in investors' own net zero plans.
2. Engage: make just transition part of investors' stewardship dialogue with companies.
3. Allocate: channel investment to assets with just transition priorities.
4. Advocate: press for government policies to mobilise public and private finance.
5. Disclose: be accountable for just transition in reporting.

A leading example of how the just transition is being embedded for some investors' practice today is the investor-led Climate Action 100+ (CA100+) initiative. CA100+ is designed to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change. It has developed a Net Zero Company Benchmark which sets out investor expectations, against which it assesses 170 firms worldwide, as a basis for collective shareholder engagement. The 2023 assessment included just transition for the first as the ninth of 10 CA100+ assessment indicators (with others including long-term emission reduction targets, capital allocation and decarbonisation strategy). That assessment found that only 3% of the 170 firms had developed just transition plans in consultation with stakeholders. This small proportion is perhaps to be expected given the relative novelty of the just transition for companies and investors. Table 2.1 details the components of the CA100+ just transition metrics.

Table 2.1. Climate Action 100+ indicator 9, just transition – metrics

Sub-indicator 9.1 – Commitment to just transition principles
Metric 9.1.a – The company has committed to decarbonise in line with defined just transition principles, recognising the social impacts of its decarbonisation efforts.
Metric 9.1.b – The company has committed to retain, retrain, redeploy and/or compensate workers affected by its decarbonisation efforts.
Metric 9.1.c – The company has committed that new projects associated with its decarbonisation efforts are developed in consultation with affected communities and will seek their consent.
Sub-indicator 9.2 – Just transition planning and monitoring
Metric 9.2.a – The company has developed a just transition plan for how it aims to support workers and communities negatively affected by its decarbonisation efforts.
Metric 9.2.b – The company's just transition plan was developed in consultation with workers, communities and other key stakeholders affected by its decarbonisation efforts.
Metric 9.2.c – The company discloses the quantified key performance indicators it uses to track its progress towards the objectives of its just transition plan.

Source: Ashraf et al., 2024

Just transition investor performance in EMDEs

Overall, tools for assessing companies' progress on the low-carbon transition are generally insufficiently nuanced when it comes to their suitability for entities operating in India and other EMDEs. While understanding and use of the term 'just transition' is growing in high-income countries, it has only very recently come to the fore in EMDEs. As a result, companies based in these countries may not explicitly disclose their progress on the just transition but they may still be engaged in relevant activities there.

Making just transition commitments entails greater challenges for companies based in EMDEs compared with those in wealthier countries due to the different political economy considerations, varying net zero target timelines and competing development priorities. Using the same framework and criteria for all companies worldwide may therefore produce skewed results indicating EMDE companies to be poor performers, without accounting for the additional constraints they face.

Among the 150 companies assessed by CA100+, 15 are headquartered in emerging economies. Seven of these are located in India: Coal India, Tata Steel, National Thermal Power Corporation (NTPC), Oil and Natural Gas Corporation (ONGC), Reliance Industries, Vedanta and Ultratech Cement. A further three are headquartered in Brazil; three in Indonesia; two in South Africa; and one in Nigeria. Currently, none of these meet the criteria for the CA100+ just transition indicator apart from one of the Indian companies, NTPC (meeting the criteria partially), plus South Africa's Eskom Holdings and Sasol (Ashraf et al., 2024).

How to boost investor engagement with the just transition in India – three levers

It is early days for making the just transition a recognised part of India's sustainable finance agenda. Deeper adoption of good practice on the just transition is expected to emerge through corporate strategy, financial materiality, stakeholder expectations and government policy.

To support this practice further, we have identified three high-potential levers which investors can deploy in the Indian context:

- Encourage companies to use Business Responsibility and Sustainability Reporting requirements as a framework for reporting on just transition.
- Promote capital allocation towards the just transition by harnessing India's Green, Social, Sustainable and Sustainability-linked (GSS+) market.
- Support the integration of just transition principles into corporate transition plans.

1. Boosting corporate disclosure on just transition via Business Responsibility and Sustainability Reporting

A first step for investors is to gain a better understanding of just transition risks and opportunities, policies and performance from the companies they hold: this requires better corporate disclosure. In 2021, the Securities and Exchange Board of India (SEBI) mandated new disclosure requirements for the top 1,000 listed companies in India via Business Responsibility and Sustainability Reporting (BRSR). Although BRSR does not explicitly use the term 'just transition', it provides an excellent framework, rooted in India's economic conditions, for companies to consider and then disclose the social factors that a just transition involves. Using the BRSR is a step towards making the just transition tangible for companies and their investors in ways that are consistent with India's goals for ESG and sustainable development. Using this domestically devised regime shows that disclosing on the just transition does not have to mean 'reinventing the wheel' but rather can involve starting with existing frameworks to show the interconnections between climate action and social impact.

To show how BRSR compares with other leading disclosures, policy and market regimes on just transition-relevant metrics, we have assessed it alongside 11 further international examples, shown in Figure 2.1 below. This 'heatmap' identifies the degree to which these initiatives contain existing metrics that can be used to assess and disclose on the key dimensions of the just transition in terms of the priorities of maximising social opportunities, minimising social risks and ensuring effective social dialogue across workers, suppliers, communities and consumers. It also examines the potential for disclosure on leadership for system-level transformation.

The analysis is divided into market-specific disclosure regimes (of which the BRSR is one), global voluntary frameworks, and examples of national approaches that have just transition components. The numbers in each cell represent the aggregate quantity of separate metrics identified by the authors. Each framework is dedicated to a specific stakeholder group under each priority action.

Figure 2.1. Heatmap of just transition metrics across 12 international examples

		Market-specific financial disclosures			*Global voluntary financial disclosure frameworks*			*Just transition/environmental justice frameworks*						
		EU ESRS	EU SFDR	India BRSR	IFRS	TNFD	GRI	ILO	WBA	III	UNGP	South Africa TIPS	Spain	US IRA
Maximise opportunities	Workers	9	3	8	0	0	7	6	10	8	0	4	9	3
	Suppliers	8	0	3	0	0	1	4	1	2	0	7	3	5
	Communities	10	0	3	0	2	1	2	1	3	0	10	4	22
	Consumers	9	0	0	0	0	1	2	0	2	0	2	1	8
Minimise risks	Workers	48	24	22	1	4	26	1	31	7	15	0	1	1
	Suppliers	16	7	6	1	6	11	0	16	1	15	0	0	1
	Communities	18	7	3	1	10	4	1	15	7	16	0	2	8
	Consumers	17	1	3	1	0	2	1	14	3	15	0	2	0
Effective social dialogue	Workers	15	2	1	0	0	7	2	4	4	9	0	1	0
	Suppliers	8	0	1	0	0	4	2	2	0	9	0	2	0
	Communities	5	0	5	0	4	4	2	2	15	9	0	3	1
	Consumers	7	0	0	0	0	4	2	2	2	9	0	0	0
Optional Leadership: System-level transformation	Workers	0	0	0	0	0	0	0	0	1	0	1	5	2
	Suppliers	0	0	0	0	0	0	0	0	0	0	0	3	0
	Communities	0	0	0	0	1	0	0	0	2	0	3	3	4
	Consumers	0	0	0	0	0	0	0	0	0	0	0	4	1

Abbreviations: ESRS = European Sustainability Reporting Standards; SFDR = Sustainable Finance Disclosure Regulation; BRSR = Business Responsibility and Sustainability Reporting; IFRS = International Financial Reporting Standards, S2; TNFD = Taskforce for Nature-Related Financial Disclosures – recommendations; GRI = Global Reporting Initiative; ILO = International Labour Organization; WBA = World Benchmarking Alliance; UNGP = United Nations Guiding Principles on Business and Human Rights; TIPS = Trade and Industrial Policy Strategies ; US IRA = United States Inflation Reduction Act.

Source: Transition Plan Taskforce, 2024

The heatmap illustrates some commonality across the 12 frameworks, but also highlights that different actions and prioritisation are needed to address place-based concerns in specific locations and regions. From this assessment, the BRSR does reasonably well, particularly in terms of worker-related disclosure requirements, although social dialogue is one area for further attention. In general, the BRSR provides Indian real economy and financial corporates with the foundations to address the possible downside risks of the transition as well as the upside potential.

When the BRSR was adopted in 2021, its coverage was made broader in scope and more quantifiable than its previous iteration, the Business Responsibility Reporting (BRR). The mandate requires the top 1,000 listed firms to start making disclosures from fiscal year 2024 but asks the disclosures to be assured in a phased manner starting with 150 firms in FY 2024 and expanding to all the firms by FY 2028.

The BRSR incorporates several social aspects of high relevance to the just transition, including employee wellbeing, labour rights and work conditions, human rights, the community, and consumers. The framework is based on the nine categories within the National Guidelines on Responsible Business Conduct (NGRBC) principles: Table 2.2 below draws out the just transition-relevant factors in the NGRBC and corresponding metrics in the BRSR.

Table 2.2. Just transition-relevant aspects of the National Guidelines on Responsible Business Conduct principles and aligning BRSR metrics

NGRBC – just transition-relevant principles	BRSR metrics
Businesses should conduct and govern themselves with integrity, and in a manner that is ethical, transparent and accountable.	Reporting on: training programmes; anti-corruption and bribery; conflict resolution; legal compliance.
Businesses should provide goods and services in a manner that is sustainable and safe.	Reporting on: technology development; sustainable supply and value chains; extended producer responsibility; life cycle assessment.
Businesses should respect and promote the wellbeing of all employees, including those in their value chains.	Reporting on: employee wellbeing benefits; disabled accessibility; maternity benefits; grievance redressal mechanism; union membership; health and safety; corrective measures; value chain employment conditions.
Businesses should respect the interests of and be responsive to all their stakeholders.	Reporting on: stakeholder identification; consultation with stakeholders; and engagement with marginalised and vulnerable people.
Businesses should respect and promote human rights.	Reporting on: minimum wages and salaries; training; human rights grievance and corrective mechanisms; sexual harassment; plants and office assessment.
Businesses should respect and make efforts to protect and restore the environment.	Reporting on: energy and water consumption; greenhouse gas, including Scope 3, and other emissions; liquid discharge and waste management; environmental approvals and legal compliance; disaster management; value chain impacts.
Businesses should promote inclusive growth and equitable development.	Reporting on: rehabilitation and resettlement; social impact assessments; micro, small and medium sized enterprise (MSME) sourcing; community grievance mechanisms; corporate social responsibility (CSR); job creation; intellectual property; corrective measures.
Businesses should engage with and provide value to their consumers in a responsible manner.	Reporting on: consumer complaints; cyber security; data protection; product/service information accessibility; corrective measures.

To examine the just transition readiness of Indian companies, we will be publishing results from a qualitative assessment of using the BRSR, which we have developed expanding on Table 2.2 above (Selvaraju, 2024 forthcoming). The BRSR emerges as a useful tool. Some early examples of Indian steel and power sector initiatives that are moving towards just transition, reported by companies through the BRSR, include supplier due diligence, ethics and training sessions for value chain partners, preferential procurement from marginalised groups and MSMEs, online upskilling and training programmes in health and safety, and optional social impact assessments (ibid.).

Looking ahead, BRSR disclosures could provide credible data for investors to start assessing Indian companies as they work on strategies for a people-inclusive transition. In addition, the BRSR can be used by progressive Indian companies to elucidate their existing focus on just transition principles. In their engagement with companies, investors could therefore encourage management to use BRSR requirements as a framework for reporting on just transition.

2. Stimulating capital allocation for the just transition through the bond market

The next step for investors after improving disclosure is to stimulate capital for the just transition: the bond market could be a promising arena for this.

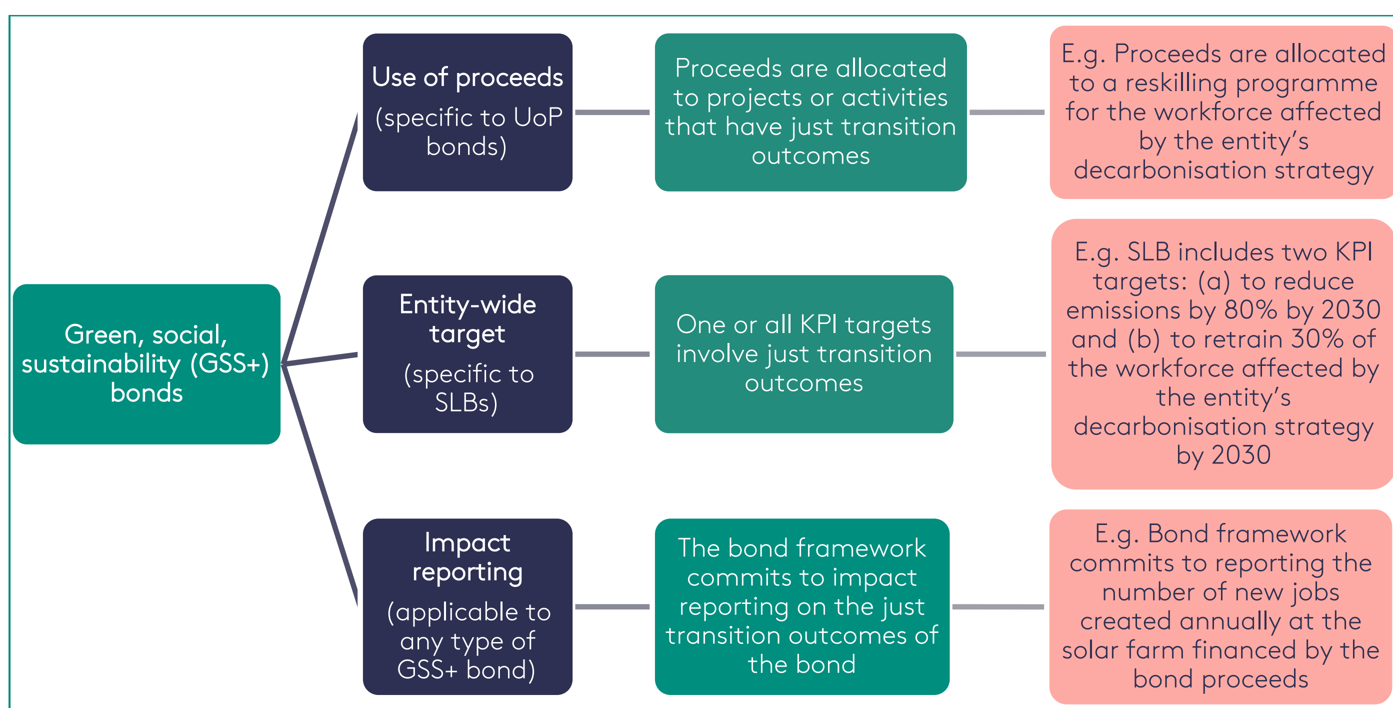
The just transition influences the way that capital is allocated and deployed across the risk-return spectrum, from market rate to blended and public finance as well as social impact. In the bond market, we see three possible pathways for innovation: building on the GSS+ market, developing bond funds, and impact bonds, addressed in turn below.

Building on the GSS+ market for a just transition[2]

Internationally, the Green, Social, Sustainable and Sustainability-Linked (GSS+) bond market has been at the forefront of sustainable finance in the last 10 years. Overall, issuance has now grown to well over US$5 trillion and has diversified in ways that are potentially relevant for ensuring just transition principles are applied and investment is channelled to key transition expenditures affecting stakeholders (such as skills development for workers) (World Bank, 2024). The bond market has a diverse range of issuers, from large companies to sovereigns, municipalities and public financial institutions, each of which has a specific role in the just transition. Internationally, standard setters, issuers and investors are now exploring how the GSS+ market can be a lever for mobilising finance for the just transition.

Figure 2.2 indicates how GSS+ bonds might be used for a just transition in terms of use of proceeds, entity-wide measures (such as sustainability-linked bonds [SLBs]) and impact reporting. Note that just transition outcomes can be *either* those that harness the social benefits *or* those that manage the social costs of the low-carbon transition.

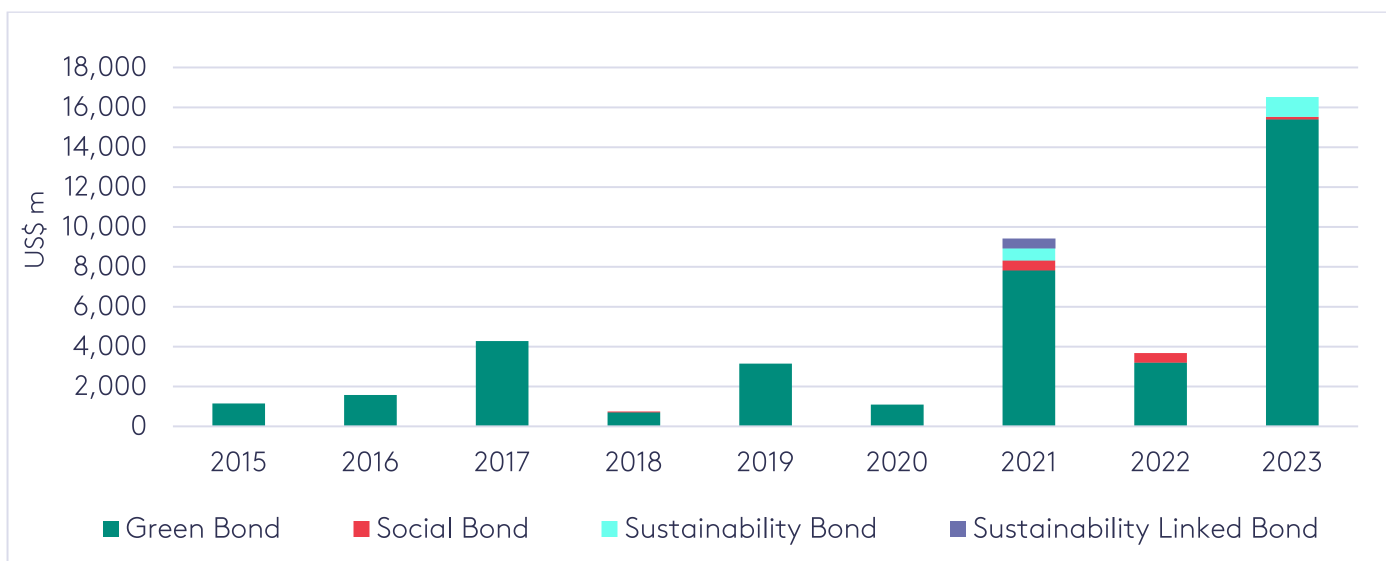
Figure 2.2. How GSS+ bonds could support a just transition



[2] Climate Bonds Initiative and the Grantham Research Institute have formed a research partnership to explore the barriers and opportunities to mobilising the global debt markets for a just transition and published a first report in December 2023 (Robins and Curran, 2023).

In India, the cumulative issuance of GSS+ bond issuances had touched US$21 billion by February 2023 (see Figure 2.3). India's landmark sovereign green bond programme offers future potential to link public spending on environmental priorities with positive social outcomes. India's companies and municipalities are also gaining experience with the issuance of green bonds and sustainability-linked bonds with social KPIs. Going forward they could connect their climate and environmental bond-raising with social priorities, too. Investors could encourage and work with issuers in India to start incorporating just transition priorities.

Figure 2.3. GSS+ bond issuance by Indian entities, 2015–2023 (US$ million)



Source: Climate Bonds Initiative (2024)

Developing bond funds that support the just transition

Institutional investors can also take action by integrating the just transition into the design of fixed income funds. Two Europe-based funds, from Amundi and Ostrum, whose portfolios are focused on developed market sovereigns and companies, provide lessons for potential fund design in India and other emerging markets (see Boxes 2.1 and 2.2).

Box 2.1. Amundi Responsible Investing – Just Transition for Climate Fund

Amundi is a French-based manager that in 2017 launched a bond fund called the Amundi Responsible Investing – Just Transition for Climate fund. The fund is domiciled in France and as of 31 March 2024 had a size of £466.9 million. The fund is benchmarked against the Bloomberg Barclays Euro Aggregate Corporate Index and aims to have a 20% lower emissions intensity than that index. The fund is available in France, Germany, Italy, Switzerland and the UK. The overarching objective of this sector-neutral fund is to push companies to start or accelerate their low-carbon transitions while fully accounting for the social impacts of those transitions.

The fund combines climate and social indicators to assess which bonds can be part of it. On the climate side, the fund uses classic carbon reduction and carbon intensity data for Scopes 1, 2 and 3 emissions. On the social side, the fund uses social criteria such as employee repurposing within the business as a result of the transition, affordability of prices of goods for consumers, and the inclusion or presence of local communities and constructive stakeholder dialogue. The fund generates a score with a 50% weight to the worker-related criteria and the remaining three criteria are weighted for the other 50%. This produces a just transition indicator for the companies in which it invests (PRI, 2021). Among the fund's top 10 holdings as of April 2024 were bonds issued by companies such as Iberdrola and Vestas, plus CaixaBank and Siemens Energy.

Box 2.2. Ostrum Asset Management Climate and Social Impact Bond

Ostrum is a French asset manager that provides a range of ESG funds. In 2022 it launched a bond fund called the Ostrum Climate and Social Impact Bond, to replace the Ostrum Global Sustainable Transition Bond. The Climate and Social Impact Bond is a thematic fund investing in the just transition, with environmental, social and local objectives. The fund defines just transition as "a transition to a low carbon world that seeks to be respectful of the environment and biodiversity while being inclusive from a social and territories' point of view" (Ostrum, 2022). The fund invests in sustainable bonds (green, social and sustainability) and at the end of 2022 had 98% of its holdings in sustainable bonds and less than 2% in sustainability-linked bonds. For a bond to be selected it must include KPIs in its use of proceeds or framework that are related to health and wellbeing, inclusive development, sustainable agriculture/food and biodiversity (ibid.).

The fund has integrated just transition at the issuer level by using a just transition indicator. The indicator is based on a methodology using two data providers: the SDG index, which provides data on sovereign and quasi-sovereign issuers and the GREaT methodology, a multi-source model that analyses companies concerning sustainable development issues and is used by the La Banque Postale Asset Management. GREaT stands for responsible Governance, sustainable Resource management, Energy transition and Territorial (local) development. The fund uses the scoring on sustainable resource management and local development for just transition to select bonds of companies and uses the SDG methodology for sovereign and quasi-sovereign bonds. About 44% of the fund in 2022 was invested in sovereigns and equivalents; it includes bonds such as the Chile green bond, International Bank for Reconstruction and Development (IBRD) sustainability bond and the Iberdrola green bond.

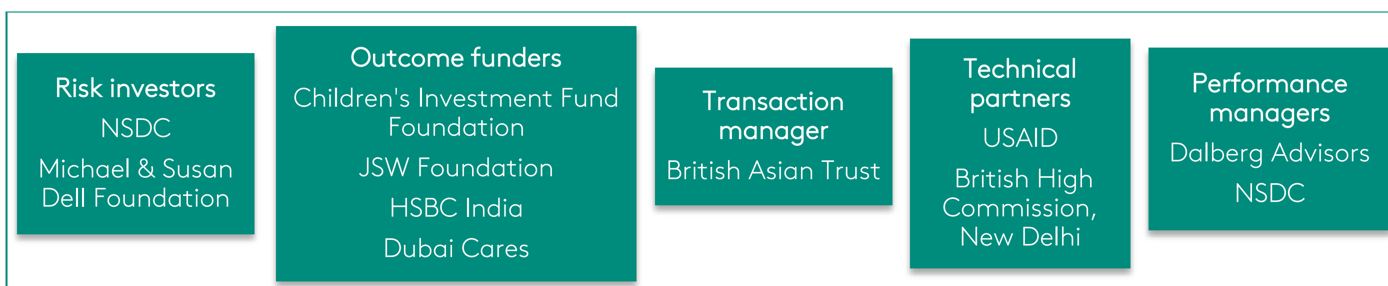
Bond funds such as those described above could be an additional route for capital allocation for just transition finance. If Indian companies were able to demonstrate that they credibly met the just transition criteria for these bond funds, they could be included in global or emerging market bond funds. Similarly, if Indian sovereign and quasi-sovereign bond frameworks met just transition criteria, they too could be included in similar bond funds. While these bond funds highlight that such funds exist, they are not the benchmark. We want to highlight emerging practice and acknowledge that these bond funds are but a first step and an important tool available for investors who can encourage issuance via bond funds.

The potential for impact bonds: the case of India's Skill Impact Bond

Impact bonds provide another possible vehicle for channelling capital to just transition priorities. In India, the Skill Impact Bond (SIB) was launched in 2021, aimed at enabling young people, especially women, to find employment opportunities in the COVID-19 recovery period, in sectors including retail, apparel, healthcare and logistics (British Asian Trust, 2023). The programme provided candidates with training and paid employment. The bond set a target of upskilling 50,000 young people, 60% of whom were to be women and girls.

The SIB involves a consortium of risk investors, outcome funders, a transaction manager, technical partners and performance managers (Figure 2.4).

Figure 2.4. Skill Impact Bond consortium



Source: NSDC, 2021

As risk investors, the National Skill Development Corporation (NSDC) and Michael & Susan Dell Foundation (MSDF) provided the working capital of US$4 million upfront to the service providers to implement the programme, which ran over four years from 2020–2023. Training was provided by NSDC-affiliated organisations including Apollo Medskills Ltd., Gram Tarang Employability Training Services Pvt. Ltd., Learnet Skills Ltd., Magic Bus Foundation, PanIIT Alumni Foundation and Tata STRIVE. The outcome payers (also known as commissioners) agreed to pay the risk investors' initial investment for each positive outcome achieved at up to US$14.4 million over the four years. Up to 31 May 2023, more than 18,000 enrolments were reported, of which more than 70% were women, in 13 sectors and 18 states, including Jharkhand and Chattisgarh which are vulnerable to net zero transition risk. The selection of candidates under the programme was based on economic and educational attainment. For example, Magic Bus trains individuals who are not in education, employment or training, have 12 Standard passes[3] and annual income less than INR 120,000 (around £1,178) (Magic Bus India Foundation, n.d.)

Early assessments indicate some success for the SIB. Half of the women who enrolled in the training continued to work in waged employment for at least three months. Part of the reason for this success is post-placement tracking and guidance, including regular check-ins and migratory assistance to help recipients seek employment in different parts of the country. The instrument has helped towards meeting some of the SDGs that are aligned with the principles of just transition – see Table 2.3.

Table 2.3. Features of the Skill Impact Bond

Risk profile	High risk: in cases where the outcome is not achieved, outcome payers may not pay risk investors
Investor profile	Philanthropy, bank and government
Time horizon	Short to medium term (four years)
Relevant SDGs	4: Quality education; 5: Gender equality; 8: Decent work and economic growth
Just transition principles	• Employment in sectors such as healthcare that are transition-compatible • A gender lens on employment • Regional inclusion
Definition of outcomes and evaluation	Clearly defined outcomes. Evaluated by third parties.

Source: British Asian Trust, 2021

As the GSS+ market grows in India, investors can encourage issuance and set the tone for where capital can be made available. Incorporating just transition criteria for bonds directly and in bond funds across their portfolios will give issuers a clear signal that they can access capital for just transition in India.

3. Integrating just transition principles into transition plans and transition finance

Investors have a vital role to play in capital allocation and efforts they make to show their interest in funding just transition activities can also help companies to start planning for their own just transition pathways through tools like transition plans. Transition plans are strategic frameworks that set out how a business or institution will implement net zero and other targets and the human and social dimensions are critical to their success. These plans are becoming a key tool globally to accelerate credible action on net zero through a just transition.

[3] This is the High School Pass in India, known as the senior secondary education certificate.

Transition plans were given a particular spotlight by the Taskforce on Climate-Related Financial Disclosures (TCFD) in its October 2021 status update (TCFD, 2021). This set out that a transition plan should include high-level targets, interim milestones (with short- and long-term goals), actionable steps for meeting stated targets, and transition governance measures. The TCFD created an international framework for entities to disclose how they considered and responded to climate-related transition risks and opportunities, which also paved the way towards the publication of the International Financial Reporting Standards (IFRS) S1 and S2 standards. The momentum behind transition plans has been deepened by the work of the Glasgow Financial Alliance for Net Zero (GFANZ), which has published voluntary guidance on how real economy firms and financial institutions should develop transition plans (GFANZ, 2022). The GFANZ guidance identified five key components for effective transition plans – foundations, implementation strategy, engagement strategy, metrics and governance – which are now becoming widely adopted internationally. GFANZ also highlighted the importance of incorporating just transition into the planning process for real economy firms and financial institutions (ibid.). The Grantham Research Institute has also set out guidance on how to make transition plans just (Curran et al., 2022).

Within Asia, the Association of South East Asian Nations (ASEAN) has moved ahead with sustainable finance guidance by providing a comprehensive taxonomy that brings together core environmental goals with social requirements, as set out in Box 2.3 – an approach that India could draw on.

Box 2.3. ASEAN moves ahead with guidance on sustainable finance and just transition

In March 2024, the ASEAN Taxonomy Board released the third version of its Taxonomy for Sustainable Finance, which was first launched in 2021 at the ASEAN Finance Ministers' and Central Bank Governors' Meeting (ASEAN, Taxonomy Board, 2024). The ASEAN Taxonomy is envisioned as a guide "to enable a just transition towards sustainable finance adoption" by standardising data and making it credible, and developing a common language for sustainable finance in the region (ibid.). Efforts to grow just transition-focused sustainable finance have already accelerated across ASEAN member states, with Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam having developed or in the process of developing their national taxonomies, consistent with the ASEAN Taxonomy (ibid.).

The Taxonomy itself aims to provide a structured approach to assessing whether activities support four Essential Objectives (EOs): climate change mitigation; climate change adaptation; protection of healthy ecosystems and biodiversity; and resource resilience and the transition to a circular economy (ibid.). To be classified under the ASEAN Taxonomy, the activity must demonstrate that it contributes to at least one of these EOs and does not have any adverse effects on other EOs. The Taxonomy also requires the activity to fulfil three Essential Criteria, which are fundamentally related to a just transition: do no significant harm, remedial measures for the transition, and social aspects (ibid.). The criteria for the social aspects involve the promotion and protection of human rights, the prevention of forced labour and protection of children's rights, and managing the impact on people living close to investments.

Additionally, in October 2023 the ASEAN Capital Markets Forum released the ASEAN Transition Finance Guidance (ATFG), to serve as a common standard for what constitutes a credible, transparent and inclusive just transition based on best practice, with a focus on aligned and aligning transition finance opportunities (TheEdge, 2023; ASEAN Capital Markets Forum, 2023). The ATFG builds on the ASEAN Taxonomy by creating an approach to assess the forward-looking plans of companies and facilitate investor support for those companies (ACMF, 2023). It is particularly sensitive to the ASEAN context and recognises the need to address the 70 million-plus MSMEs in the region. The ATFG addresses the need for clear guidance to ASEAN companies on which activities meet transition expectations, possible transition pathways, and a framework for providers of capital on making informed financial decisions (ibid.). It places particular emphasis on the need for a just transition throughout the document, stating that for any transition plan to be considered robust, it must incorporate a just transition.

Several other G20 countries are moving to introduce mandatory requirements for the disclosure of transition plans. In the UK, for example, the Transition Plan Taskforce (TPT) has published an internationally interoperable framework which is consistent with the International Sustainability Standards Board (ISSB) and which incorporates just transition principles as core features across the five-component framework first developed by GFANZ.

The TPT was informed by a multi-stakeholder Just Transition Advisory Group which published its own guidance to show how people can be put at the heart of transition plans, as illustrated in Table 2.4.

Table 2.4. Integrating the just transition at each stage of a transition plan – guidance from UK Transition Plan Taskforce

Transition plan category	Just transition priorities
Foundations	The Plan's strategic ambition needs to show how it has identified, assessed and taken into account international commitments and "the impacts and dependencies of the transition plan on its stakeholders (e.g. its workforce, value chain counterparts, customers) and society (e.g. local communities)".
Implementation strategy	The implementation strategy needs to address any "workforce adjustments" and set out the policies and conditions to be applied including in terms of "human rights, labour standards and advancing social equity or addressing potential adverse social impacts (e.g. on communities)".
Engagement strategy	The engagement strategy should set out engagement and collaborative activities with value chain, industry counterparts, trade unions, government, stakeholders and civil society to deliver the strategic ambition (e.g. to assess potential social impacts of its transition plan).
Metrics and targets	Potential metrics identified by the Just Transition Advisory Group include the percentage of employee base reskilled, percentage of consumers benefitting from affordability programmes and plans, extent of application of Free Prior and Informed Consent and Do No Harm principles to carbon credits.
Governance	The governance section should set out how it plans to align its corporate culture with the strategic ambition (e.g. company values and purpose, workforce engagement) and the steps being taken to "increase the availability of key skills and knowledge while ensuring an inclusive and equitable transition (e.g. re-skilling and upskilling measures)".

Source: Transition Plan Taskforce, 2024

In India, transition plans were identified by SEBI as an important mechanism in its circular on transition bonds released in May 2023. Where SEBI mentions transition plans in the context of transition bonds, it states that the transition plan should contain the following:

- Details of interim targets/milestones along with an indicative timeline for achieving the targets (interim targets should also reflect the indicative figure of the quantity of emissions the issuer is envisaging to reduce).
- Brief outline of the project implementation strategy.
- Details regarding the use of technology for project implementation.
- Details of the mechanism to oversee the utilisation of the funds raised through transition bonds and the implementation of the transition plan (issuers may form a committee to oversee the implementation and ensure the timely completion of the defined targets).

We are yet to see any transition bond issuances in India. However, domestic and international momentum behind the development of transition plans and the integration of just transition features into those plans can only grow. Following India's successful G20, Brazil, taking forward the presidency, has identified "advancing credible, robust and just transition plans" as a key priority for the G20 Sustainable Finance Working Group in 2024 (G20, 2024). At this critical juncture, investors can work with companies to develop transition plans that effectively incorporate the social opportunities and risks of net zero and the importance of meaningful dialogue and stakeholder engagement.

3. Conclusions and next steps

In this report, we have focused on the role that institutional investors can play in advancing the just transition as being both necessary for Indian society and also commercially smart due to its long-term value creation. Given the vast capital that institutional investors can bring to bear and the attractiveness of the Indian economy to foreign portfolio investments, these institutional investors will have an increasing role to play in one of the world's fastest-growing economies and in India's just transition. We have highlighted various levers that investors could use. But we acknowledge that investors do not operate in a vacuum and other actors have a more structural role include policymakers and regulators, banks and companies, along with civil society.

The sustainable finance discourse in India is already starting to show how companies and regulators can proactively engage in just transition through existing regimes and practices and incorporate just transition into future planning and regulations. Investors can play a role in this ecosystem not just as agents of change through capital allocation and company engagement but also by supporting policy action and working with other private and public financial actors.

Looking ahead, coordinated action will be needed to implement the just transition across the financial, national and sub-national policy ecosystems. To be fully effective, this must be part of a system-wide approach that involves public policy, public and development finance and other stakeholders. The regional inequalities of the transition, given the uneven distribution of fossil fuels and renewables, and their impact on state fiscal resources, will continue to be a challenge for public finance. The regions that are home to fossil fuel-based and heavy industries will stand to lose significant state revenues, while other states will gain significantly through the fiscal revenues generated. Anticipating the transition and its fiscal implications will require extensive public policy and planning to mobilise public money, build state capacity and invest in other state revenue-generating opportunities. As the research and discourse on domestic and international public finance for the just transition evolve in India, investors will have a role to play in partnering in the blended finance structures being mobilised by public monies.

But financing the just transition in India needs to consider more than the regional implications of fossil fuel and renewables revenue to the state and national exchequer. The public finance elements will involve many other components, from skills development to more inclusive business practice in the renewables industry. Future research will need to explore the role of public and development finance in a just transition and how it can unlock more private capital from institutional investors for sub-national actors and delve into sectoral specificity.

The levers highlighted in this report are a work in progress and we hope that relevant stakeholders engage and collaborate with the Just Transition Finance Lab to achieve positive impact.

References

ACMF, ASEAN Capital Markets Forum (2023) *Media Release*. https://afcwp.asean.org/wp-content/uploads/2023/11/16.-The-38th-Chairs-Meeting-Press-Release-20-March-2023.pdf

Aggarwal WP, Goel S, Laan T, et al. (2022) *Mapping India's Energy Policy 2022*. International Institute for Sustainable Development. https://www.iisd.org/system/files/2022-05/mapping-india-energy-policy-2022.pdf

ASEAN Capital Markets Forum (2023) *ASEAN Transition Finance Guidance*. https://www.sfinstitute.asia/wp-content/uploads/2023/10/ASEAN_TransitionFG_V1.pdf

ASEAN Taxonomy Board (2024) *ASEAN Taxonomy for Sustainable Finance*. https://www.sfinstitute.asia/wp-content/uploads/2024/03/ASEAN-Taxonomy-Version-3.pdf

Ashraf S, Scheer A, Selvaraju S (2024) *From just transition pledges to practice: companies under the CA100+ microscope*. Grantham Research Institute on Climate Change and the Environment. https://www.lse.ac.uk/granthaminstitute/news/from-just-transition-pledges-to-practice-companies-under-the-ca100-microscope/

Banerjee S (2022) *Just Transition and Informal Workers in Coal Regions in India*. iForest. https://www.ijtc.org.in/wp-content/uploads/2022/05/Informal-workers-in-coal-regions-in-India.pdf

Bhushan C and Banerjee S (2023) *Principles and Guidelines for a Just and Inclusive Energy Transition*. T20 India. https://t20ind.org/wp-content/uploads/2023/06/T20_PolicyBrief_TF4_422_Just-Inclusive-EnergyTransition.pdf

Bhushan C, Banerjee S, Agarwal S (2021) *Just Transition in Coal: A Perspective from Jharkhand*. iForest. https://iforest.global/2021/07/just-transition-in-coal-a-perspective-from-jharkhand/

Birol F and Kant A (2022) *India's clean energy transition is rapidly underway, benefiting the entire world*. IEA. https://www.iea.org/commentaries/india-s-clean-energy-transition-is-rapidly-underway-benefiting-the-entire-world

Bloomberg New Energy Finance [BNEF] (2024) *Energy Transition Investment Trends 2024*. https://about.bnef.com/energy-transition-investment/#toc-report

British Asian Trust (2021) *Skill Impact Bond*. https://www.britishasiantrust.org/our-work/social-finance/skill-impact-bond/

CEED (2022) *Future-Ready Jharkhand: Making Just Transition a Reality*. https://ceedindia.org/wp-content/uploads/2022/09/Report_-Making-Just-Transition-a-Reality-in-Jharkhand-14.09.2022_compressed.pdf

Climate Action 100+ (2023) *Climate Action 100+*. https://www.climateaction100.org/

Climate Policy Initiative [CPI] (2023) *Just Energy Transition: Economic Implications for Jharkhand*. https://www.climatepolicyinitiative.org/wp-content/uploads/2023/11/Just-Energy-Transition-Economic-Implications-for-Jharkhand-1.pdf

Curran B, Robins N, Muller S, Subramoni A and Tickell S (2022) *Making Transition Plans Just: How to embed the just transition into financial sector net zero transition plans*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. https://www.lse.ac.uk/granthaminstitute/publication/making-transition-plans-just-how-to-embed-the-just-transition-into-financial-sector-net-zero-plans/

Dash P and Ranjan R (2023) *Addressing MSMEs' Financing Challenges Through G20 Action*. G20. https://t20ind.org/research/addressing-msmes-financing-challenges-through-g20-action/

de Haan A, Dupar M, Jeuland M, et al. (2023) *Making Clean Energy Transitions More Inclusive: Evidence, Knowledge GAPS, and Policy Options in Low- Income Economies*. https://t20ind.org/research/making-clean-energy-transitions-more-inclusive/

Dutta A and Rahut DB (2023) *Boosting Just Energy Transitions in G20's Emerging Economies*. G20. https://t20ind.org/research/boosting-just-energy-transitions-in-g20s-emerging-economies/

Economic Times (2023) *India's per capita emissions less than half of global average in 2022: Report*. 5 December. https://economictimes.indiatimes.com/news/india/indias-per-capita-emissions-less-than-half-of-global-average-in-2022-report/articleshow/105751233.cms?from=mdr

EU Platform on Sustainable Finance (2024) *A Compendium of Market Practices*. https://finance.ec.europa.eu/document/download/ff44591e-9d83-4027-a079-f3fe23bbaf41_en?filename=240129-sf-platform-report-market-practices-compendium-report_en.pdf

Financial Stability Board (2023). *Global monitoring report on non-bank financial intermediation 2023*. https://www.fsb.org/2023/12/global-monitoring-report-on-non-bank-financial-intermediation-2023/

G20 (2023) *G20 New Delhi Leaders' Declaration*. www.consilium.europa.eu/media/66739/g20-new-delhi-leaders-declaration.pdf

G20 (2024) *G20 Sustainable Finance Working Group Presidency and Co-chairs Note on Agenda Priorities*. https://g20sfwg.org/wp-content/uploads/2024/02/2024-G20-SFWG-NAP.pdf

Germanwatch (2021) *Global Climate Risk Index*. https://www.germanwatch.org/en/cri

GFANZ (2022) *Actions to Mobilize Capital to Emerging Markets and Developing Economies*. https://assets.bbhub.io/company/sites/63/2022/10/GFANZ-Actions-to-Mobilize-Capital-to-Emerging-Markets-Developing-Economies.pdf

High-Level Expert Group [HLEG] on scaling up sustainable finance in low- and middle-income countries (2024) *Final Recommendations*. https://international-partnerships.ec.europa.eu/scaling-sustainable-finance-low-and-middle-income-countries-high-level-expert-group_en#recommendations

IMF (2024), GDP based on PPP, share of the world, https://www.imf.org/external/datamapper/PPPSH@WEO/OEMDC/ADVEC/WEOWORLD

International Labour Organization and Grantham Research Institute (2022) *Just Transition Finance Tool for banking and investing activities*. ILO. https://webapps.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_860182.pdf

Just Transition Centre, and The B Team (2018) *Just Transition: A Business Guide*. https://the-bteam.files.svdcdn.com/production/assets/reports/Just-Transition-A-Business-Guide.pdf

Just Transition Finance Lab (2024) *Ayana – building a skills base for India's clean energy transition*. https://justtransitionfinance.org/casestudy/ayana-building-a-skills-base-for-indias-clean-energy-transition/

Khanna N and Purkayastha D (2022) *Landscape of Green Finance in India 2022*. CPI. https://www.climatepolicyinitiative.org/publication/landscape-of-green-finance-in-india-2022/

Kumar M (2023) [Interview] *Ajay Kumar Rastogi on Leading India's First Just Transition Task Force*. Mongabay India. https://india.mongabay.com/2023/02/interview-ajay-kumar-rastogi-on-leading-indias-first-just-transition-task-force/

Magic Bus India Foundation (n.d.). *Adolescent Program*. https://www.magicbus.org/adolescent.php

Ministry of Finance (2021) *Sustainable Development Core to India's Development Strategy*. https://pib.gov.in/Pressreleaseshare.aspx?PRID=1693181

Mitra S and Chandra R (2023) *Deep de-carbonization and regional equity*. National Institute of Public Finance and Policy.

Modak P, Robins N, Tandon S, Muller S, Subramaniam S, Curran B (2023) Just Finance India: Mobilising Investment for a just transition to net zero in India, BII Insights Report. https://assets.bii.co.uk/wp-content/uploads/2023/02/27193944/JustFinanceIndia_report.pdf

MOEFCC (2022) *India's long-term low-carbon development strategy, Submission to the United Nations Framework Convention on Climate Change*.

National Thermal Power Corporation (2023) *47th Integrated Annual Report 2022-23*. https://www.ntpc.co.in/sites/default/files/annual-report/complete-reports/47th%20Annual%20Report%20of%20NTPC%202022-2023%20New.pdf

Nayak S (2024) *Intergenerational Labour and Just Transition in Coalfields*. The India Forum. https://www.theindiaforum.in/caste/intergenerational-labour-just-transition-coalfields

NITI Aayog (2023) *Report of the Inter-ministerial Committee on Just Transition from Coal*. https://www.niti.gov.in/sites/default/files/2023-02/Report_Just-Transition-Committee_compressed.pdf

NSDC (2021) *India's First Skill Impact Bond*. NSDC India. https://nsdcindia.org/sib

Ostrum (2022) *Why is the Just Transition a Key Element of Climate Strategies?* https://www.ostrum.com/sites/default/files/1-ostrum-mediatheque/Insights/202210%20-%20Ostrum_PointsOfView-%20JustTransition_EN.pdf

Outlook Planet Desk (2023) *Global Energy Employment Soars In 2022, Led By Clean Energy Growth*. https://planet.outlookindia.com/news/global-energy-employment-soars-in-2022-led-by-clean-energy-growth-news-416321

Press Information Bureau [PIB] (2024) *First advance estimates of national income, 2023-24*. https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1993550

Principles for Responsible Investment, PRI (2021) *Assessment Report: Amundi*. https://www.amundietf.fr/pdfDocuments/2021_pri_assessmentreport_amundi-1.pdf

Regulation (EU) 2020/852 (2020) *EU Taxonomy*.

Reserve Bank of India (2023) *Reserve Bank of India - Report on Currency and Finance*. https://www.rbi.org.in/scripts/AnnualPublications.aspx?head=Report%20on%20Currency%20and%20Finance

Robins N, Curran B, Plyska O, Selvaraju S, Tickell S, W J-A (2024) *The just transition: transforming the financial system to deliver action*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. https://justtransitionfinance.org/publication/the-just-transition-transforming-the-financial-system-to-deliver-action/

Robins N, Curran B, Plyska O, Burge L and Van Coppenolle M (2023) *Mobilising global debt markets for a just transition*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. https://www.lse.ac.uk/granthaminstitute/publication/mobilising-global-debt-markets-for-a-just-transition/

Selvaraju S (2024) *Using the BRSR as a Just Transition Engagement Tool.* London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science (forthcoming)

Muzondo C, Beaton C, French G, Gerbase L, Sharma S (2023) *Financing a Fair Energy Transition through Fossil Fuel Subsidy Reform*. G20 India. https://t20ind.org/research/financing-a-fair-energy-transition-through-fossil-fuel-subsidy-reform/

SEWA (2022) *SEWA – Swach Aakash Strategy*, SEWA Report, www.sewa.org

Sidhu G and Singh VP (2021) *Investment Sizing India's 2070 Net-Zero Target*. CEEW. https://www.ceew.in/cef/publications/investment-sizing-india-s-2070-net-zero-target

Skills Council and Sattva Consulting (2023) *Gearing up the Indian workforce for a green economy. Mapping Skills Landscape for Green Jobs in India*. https://sscgj.in/wp-content/uploads/2023/05/Skills-Lanscape-for-Green-Jobs-Report.pdf

Songwe V, Stern N and Bhattacharya A (2022) *Finance for climate action: scaling up investment for climate and development*. Report of the Independent High-Level Expert Group on Climate Finance. https://www.lse.ac.uk/granthaminstitute/publication/finance-for-climate-action-scaling-up-investment-for-climate-and-development/

Task Force on Climate-related Financial Disclosures [TCFD] (2021) *Status Report*. https://www.fsb.org/wp-content/uploads/P141021-1.pdf

TERI and DIW (2023*) Financing Decarbonisation of the Secondary Steel Sector in India*. The Energy and Resources Institute & DIW, Berlin. https://www.teriin.org/sites/default/files/2023-12/SNAPFI%20Steel%20Report%202023.pdf

The Economic Times (2023) *India's per capita emissions less than half of global average in 2022*. https://economictimes.indiatimes.com/news/india/indias-per-capita-emissions-less-than-half-of-global-average-in-2022-report/articleshow/105751233.cms?from=mdr.

TheEdge (2023) *ACMF endorses Asean transition finance guidance at its 39th Chairs' Meeting*. https://www.klsescreener.com/v2/news/view/1218247/acmf-endorses-asean-transition-finance-guidance-at-its-39th-chairs-meeting

Transition Plan Taskforce (2024) *Putting People at the Heart of Transition Plans: key steps and metrics for issuers*. https://transitiontaskforce.net/wp-content/uploads/2024/04/Just-Transition.pdf

UNFCCC (2024) *India's submission on the New Collective Quantified Goal* (NCQG).

World Bank (2024) *Green, Social, Sustainability, and Sustainability-Linked (GSSS) Bonds: Market Update*. IBRD, IDA. https://thedocs.worldbank.org/en/doc/2fa215f2779f95d970ef0601aa551cbc-0340012024/original/GSSS-Quarterly-Newsletter-Issue-No-7.pdf

World Benchmarking Alliance (2023) *Oil and Gas Benchmark.* https://www.worldbenchmarkingalliance.org/publication/oil-and-gas/

Worldometer (2024) India Population, web page. https://www.worldometers.info/world-population/india-population/