AIGCC
ASIA INVESTOR GROUP ON CLIMATE CHANGE

Place-Based Just Transition

Policy Baseline and Case Studies

September 2025

About the Asia Investor Group on Climate Change.

Asia Investor Group on Climate Change (AIGCC) is the leading network of investors in Asia focussing on risks and opportunities in climate and nature.

Our 80+ members have a combined AUM of $36 trilion and have headquarters in 11 markets across the region.

We were founded by institutional investors as a not-for-profit to drive action on climate, and bring an evidence driven, long-term focus on climate, nature, and investment across Asia.

Our work is underpinned by science, economics, and a highly effective theory of change that channels the influence of powerful Asian and international institutional investors, integrated across finance, business and policy making towards systemic impact.

We bring deep knowledge and familiarity with Asian markets and dynamics, and play a founding role in global initiatives, making us a trusted force in driving climate-aligned finance across the region and globe.

About This Report

This report examines place-based just transition perspectives emerging in four Asian markets — India, Indonesia, Malaysia and Japan — each with distinct policy baselines, institutional capacities and labour market dynamics.

It offers investors and policymakers an overview of the social transition aspects and nuances in Asian markets as they transition towards a greener economy.

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Executive Summary

Asia's energy transition is unfolding in diverse and uneven contexts. As countries accelerate decarbonisation to meet net zero goals, the social dimensions of transition jobs, livelihoods and local economic resilience need stronger integration into climate strategies.

Place-based transitions refer to strategies for managing economic, social and environmental changes during the shift to a low-carbon economy. They are tailored to the specific needs, characteristics and assets of a particular location or region.[1] Place-based transition planning makes transitions practical, just and fair because they respond to real impacts on real people in real places.

This report examines place-based just transition perspectives emerging in four Asian markets — India, Indonesia, Malaysia and Japan — each with distinct policy baselines, institutional capacities and labour market dynamics. It offers investors and policymakers an overview of the social transition aspects and nuances in Asian markets as they transition towards a greener economy.

Just transition as a policy aspiration

India's Viksit Bharat 2047 vision, Indonesia's Golden Vision 2045, Malaysia's Madani Economy framework and Japan's Green Transformation (GX) policy all reference elements of a just transition. These elements range from energy affordability and income gains for lower-income households to adaptive protection systems and financing for skills development. Across these markets, just transition is a policy aspiration with multiple elements that need to be incorporated into a holistic framework. As such, it requires long institutional lead times. Effective transition planning in Asia will depend on recognising place-specific realities and addressing long-standing gaps in labour security, institutional alignment and equitable financing. Figure 15 shows the market contexts for place-based just transitions

1 Intergovernmental Panel on Climate Change (IPCC). AR6 Climate Change 2022: Mitigation of Climate Change. Working Group III Report. 2022.

Economic diversification pathways have a few early takers

Economic diversification ensures that transition costs and benefits are more evenly shared as workers gain new livelihood options, local communities build resilience, governments secure stable revenues and businesses open up new markets. In practice, this means fewer people left behind, more durable institutions and a stronger social contract to support change.

Several markets have begun exploring economic diversification. India's coal-dependent states are looking at the potential of agro-processing, solar manufacturing and micro, small and medium enterprises (MSMEs). Indonesia is advancing the downstream processing of minerals and launching regional pilots like the Ombilin project. Malaysia's Sarawak Corridor of Renewable Energy (SCORE) initiative promotes investment in renewable energy and high-tech industries. Japan's GX policies and digital transformation strategies support industrial transformation through hydrogen, digitalisation and clean energy deployment.

Social safety nets need to be more deliberate to match the challenge

While high-level commitments to inclusive and equitable transitions are growing, stakeholders with diverse identities are still unacknowledged across markets. Existing climate and development plans often acknowledge distributional concerns, but are limited by a lack of dedicated governance mechanisms, financing structures and protections for vulnerable stakeholders. Social protections like income support, health coverage and targeted aid exist, but they remain misaligned with climate-driven structural shifts. A more deliberate link to the shift and across non-formal stakeholders is needed.

Interventions on adaptation need equal focus

Just transition issues feature more prominently in climate mitigation, with the fossil fuel sector at the forefront. Countries like India and Indonesia have begun integrating social considerations into adaptation, recognising vulnerable groups and operating de facto safety nets. However, they lack formal coordination and funding mechanisms that link adaptation with labour and equity goals. Most adaptation investments, such as Malaysia's flood mitigation and Japan's disaster preparedness, prioritise infrastructure over socio-economic resilience.

Financing requires local insight and new structures

Sustainable investing frameworks often frame social risks as reputational concerns. In contrast, emerging financing strategies integrate these outcomes into the investment case itself. Investors should note that financing just transitions in Asia will not follow a single blueprint. Social outcomes must be integrated into transition finance through blended structures, fiscal alignment and incentives that reach local levels. Yet across markets, the foundation requires a deep understanding of what already exists to help evaluate what should be built and what should be repurposed.

Investor and Corporate Actions for a Just Transition

For Investors	For Corporates
Shape Policy & Frameworks: Work with ministries to embed social safety nets, workforce transition, and community resilience in national and sectoral plans.	**Engage Stakeholders**: Build trust through early, transparent dialogue to balance costs and benefits.
Finance with Intent: Allocate capital to risk-adjusted opportunities, integrate just transition into ESG, and engage corporates early with local context.	**Develop a just transition plan**: Align company policies and processes with just transition principles, and set concrete, measurable, time-bound targets.
Evaluate Impact: Track participation of direct and induced stakeholders of investee companies, jobs and retention, adequacy of social protections, wage parity, grievance systems, and resilience outcomes to build accountability.	**Embed in Business Strategy**: Tie just transition investments to core operations strengthening both competitiveness and social license to operate.
	Plan Through a Dual Lens: Assess every new project or product through both social and climate dimensions to balance risks and spread opportunities more fairly.

Notes. ESG = environmental, social and governance.

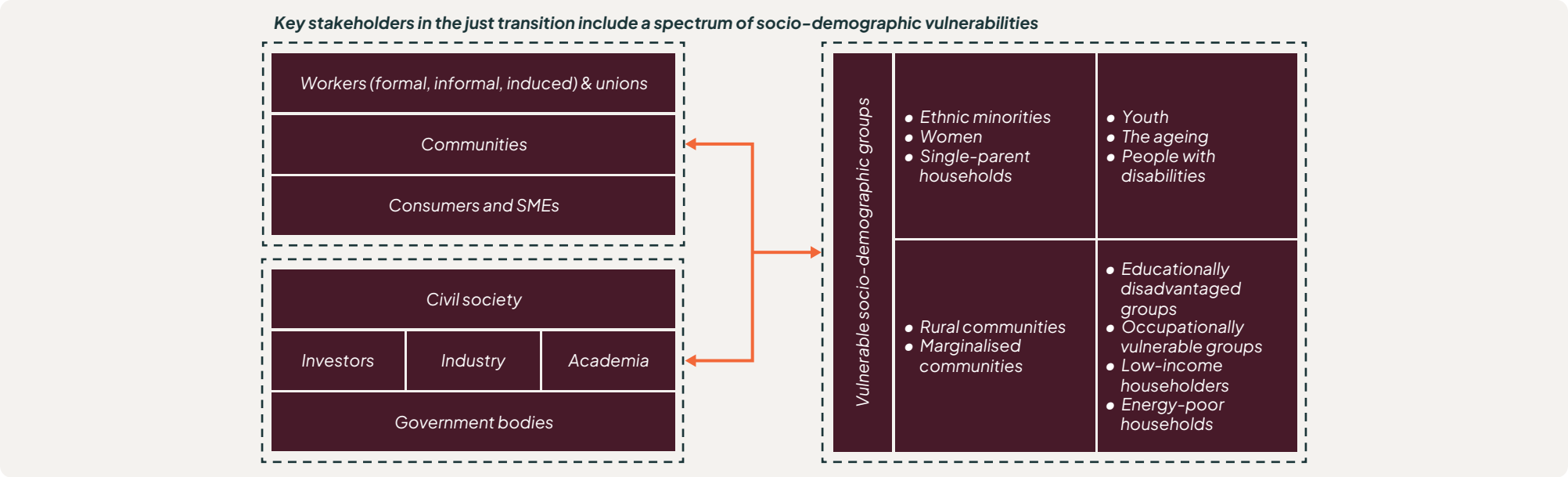
Defining Just Transition in Emerging Markets vs Developed Markets in Asia

Asia Investor Group on Climate Change (AIGCC) reviewed over 50 definitions of just transition. It found the most complete ones referenced foresight and intent to plan for climate transitions across multiple stakeholders. Most definitions recognised the following elements:

- **Inclusive engagement**: All stakeholders, including businesses, investors, governments, workers (especially) and civil society, must be meaningfully engaged. Just transition planning should have roots in these engagements to facilitate decision-making.
- **Equity in outcomes**: Delivering a transition should be on equitable terms.
- **Systemic perspective**: Even if its origins are in environmental sustainability and its social implications, just transition must recognise its interconnectedness with broader economic volatility. It is a unique opportunity to redefine the social dimension of sustainability.

Figure 1 outlines the broad spectrum of key stakeholders relevant to just transition efforts. It indicates the institutional actors and vulnerable socio-demographic groups who may experience disproportionate impacts or barriers during the transition process.

Figure 1. Key stakeholders of the transition



Source: Climate Finance Asia (2025). Facility-level Just Transition for Banks, AIGCC.

Meanings of just transition, like other social concepts framed from a justice perspective, differ depending on their application. The lack of a shared understanding of the just transition concept and its broad scope among Asian countries delays its integration into national policy frameworks. A key challenge lies in framing the concept in ways that resonate with the specific contexts and priorities of countries.[2]

In contrast to developed markets in Asia and elsewhere, emerging markets, are resource-intensive, extractive, susceptible to disruption and economically vulnerable, with entire livelihoods at stake. Development and poverty alleviation are often more urgent concerns than immediate climate mitigation in these markets. Meanwhile, developed markets, which have diversified industrial bases, stronger social safety nets and comparatively resilient economies, prioritise balancing supporting people in declining industries and maintaining high living standards.

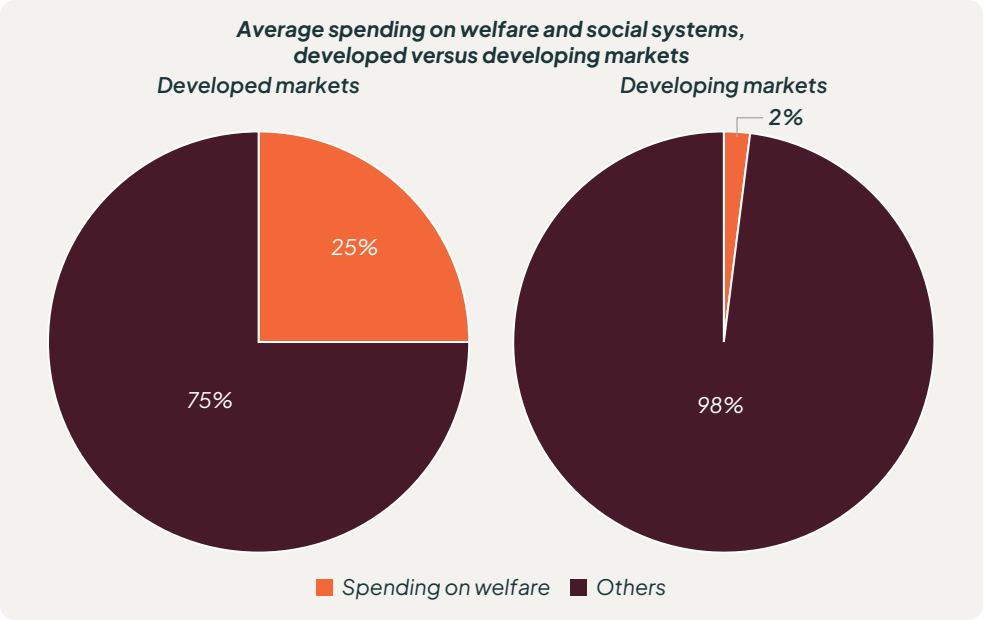
The challenge is greater for emerging markets: they need to decarbonise while simultaneously increasing energy access, modernising infrastructure and industrialising. At the same time, they are more vulnerable to climate hazards. Just transition in emerging markets must reconcile development priorities such as energy access, employment and fiscal dependence with climate goals, often in contexts of informality, institutional weakness and social inequity. Developed markets focus on managing decline in legacy sectors with well-established welfare and planning systems. It is important to acknowledge this framing of a just transition.

For example, developed markets spend around 25% of gross domestic product (GDP) on welfare. This creates a redistribution system largely inaccessible to markets where social spending hovers at just 2% (see Figure 2).[3]

2 Glynn et al. Incorporating Just Transition Strategies in Developing Countries Nationally Determined Contributions. 2021.

3 The Seville model of investible development, Daniela Gabor.

Figure 2. Differences in average welfare spending between developed and emerging markets



Source: The Seville Model of Investible Development, Daniela Gabor.

Traditionally, just transition is framed around job losses from fossil fuel phase-outs, reflecting its labour rights origins and the central role of unions (transition-out). But it is equally relevant for sectors that are scaling up, where decent work, wage parity, migration, displacement and social protections must be designed from the outset (transition-in).

Place-based transitions refer to strategies that manage economic, social and environmental changes in the shift to a low-carbon economy. They are tailored to a particular location or region's specific needs, characteristics and assets.[4] Place-based transitions are an application of the just transition. They refer to efforts to contextualise just transition principles for specific geographies, and recognise that the impacts, opportunities and solutions associated with transition depend on local economic structures, social dynamics and natural resources. Place-based transition planning makes transitions practical, just and fair because they respond to real impacts on real people in real places.

4 IPCC. AR6 Climate Change 2022: Mitigation of Climate Change. Working Group III Report. 2022.

Evaluating Just Transition Policies: Market-Level Analysis

To support a just and inclusive energy transition across Asia, it is essential to examine the baseline policy architecture that governs place-based transitions, particularly those affecting stakeholders vulnerable to structural shifts. Given the long lead times needed for economic diversification, skills development and institutional alignment, just transition planning should start as early as possible, ideally well before a region anticipates peak emissions. This allows workers, industries and communities the time needed to adapt and thrive in a low-carbon economy.

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Figure 3. Assessment categories for a framework to evaluate just transition policy baselines

AIGCC developed a framework (see Annexure 1) using a multidimensional lens to evaluate people-centric levers of just transition in key Asian markets. This framework is structured across policy integration, institutional readiness, social protections, workforce resilience, financial mobilisation and climate adaptation. AIGCC selected these topics based on what is most actionable from an investor perspective and where targeted engagement with policymakers can help unlock enabling conditions for a fair and inclusive transition. This framework evaluates just transition policy baselines and is a toolkit for investors to assess key dimensions. The summary categories are outlined in Figure 3, and the full framework is in Annexure 1.

The analysis captures critical enablers such as the presence (or lack of) of national and subnational just transition targets, strategies, their integration into developmental policies and economic diversification planning, to name a few.

A just and robust structural transition needs coordinated action across all areas of government: no one ministry can drive the scale of change needed for net zero. Each ministry must address just transition within its mandate under a whole-of-government approach. Figure 4 maps key functions across the just transition policy cycle and typical ministry responsibilities.[5]

5 Macquarie et al. Just and robust transitions to net zero: A framework to guide national policy. University College London, Grantham Research Institute on Climate Change and the Environment, ClimLaw: Graz, Centre for Climate Law and Sustainability Studies, Center for International Climate Research. 2023.

Figure 4. Illustrative responsibilities for national government ministries or departments

Function	Climate/ environment	Sectoral line ministries	Finance/central planning	Labour/welfare/ social inclusion	Business/ economy	Regional development	Education
Develop national and sector transition plans	✓	✓	✓	✓	✓	✓	✓
Access economic and distributive impacts	✓	✓	✓	✓		✓	
Create processes for public participation	✓	✓		✓		✓	
Convene industrial stakeholders for participation (unions and firms)	✓	✓		✓	✓	✓	
Design policies to support consumers, workers and marginalised groups	✓	✓	✓	✓		✓	
Assess and update skills and education policies		✓		✓			✓
Design policies to raise investment	✓	✓	✓		✓	✓	
Encourage private sector just transition using regulation and public procurement policies	✓	✓	✓				
Draft new and update existing legislation	✓	✓					
Monitor impacts and evaluate policies	✓	✓	✓	✓	✓	✓	✓

Source: See n5 (p 10).

India, Indonesia, Malaysia, and Japan were selected as focus markets to reflect the diverse economic structures, governance models and transition trajectories Asia-wide.

- India and Indonesia represent large emerging economies with coal-dependent regions and communities and a high proportion of informal labour, where just transition is both a developmental and climate imperative.
- Malaysia offers insights into institutional coordination in middle-income contexts.
- Japan provides a view into advanced-economy transitions coupled with industrial sector restructuring.

Together, these markets give a differentiated understanding of place-based just transition challenges and opportunities.

India

India pledged to achieve net zero greenhouse gas emissions by 2070 at COP26. In the short term (by 2030), the country has targets to reduce its GDP emissions intensity by 45% from 2005 levels, and 50% non-fossil fuel power capacity. Figure 5 details the key indicators of India's just transition.

Figure 5. Key employment and social contextual indicators of India's just transition

India	
Labour force (millions)	487.34
Unionisation (%)	19.8
Collective bargaining coverage (%)	8.0
Informality (%)	88.8
Indigenous people (%)	8.6
Social protection coverage (%)	24.4
Female labour force (%)	37
Poverty headcount (%)	21.9

Source: International Work Group for Indigenous Affairs (IWGIA). Labour Rights Index. 2022.

Policy Vision and Institutional Architecture

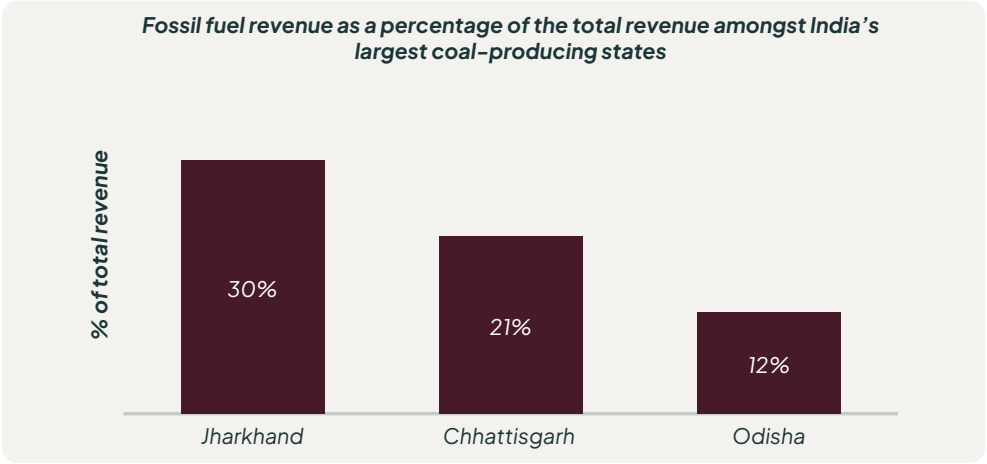
India's Viksit Bharat 2047 (Advanced India) vision supports several just transition priorities, particularly energy affordability, human capital development and balanced regional growth. The government's policy think tank, NITI Aayog, which is leading the development of this vision, has established six thematic working groups to guide the country's net zero transition, one of which is focused on addressing the social impacts of decarbonisation.

The Ministry of Coal, the Ministry of Power and NITI Aayog have initiated department-level efforts on just transition by forming the Sustainability and Just Transition Division, State-Level Energy Transition Committees and an Inter-Ministerial Committee on Just Transition from Coal. While India lacks a centralised agency or coordination mechanism for national implementation, groundwork is underway at the subnational level, particularly in coal-dependent states where initiatives include economic diversification strategies and skill development assessments.

Subnational Initiatives and Economic Diversification

Jharkhand, a state located in eastern India, has formulated a State Livelihood Action Plan aimed at promoting economic diversification in its coal-dependent districts by developing potential sectors such as agro-based industries, non-coal MSMEs, pisciculture and solar manufacturing. Similarly, the states of Odisha and Chhattisgarh are in various stages of assessing potential sectors for diversification. The fossil fuel revenue as a percentage of the total revenue for Jharkhand, Chhattisgarh and Odisha was 30%, 21% and 12%, respectively, in FY2021 (see Figure 6).[6] These three states account for most coal-related jobs in India, with an estimated 2.6 million workers, 70% of which are in the informal sector.

Figure 6. Fossil fuel revenue for India's leading coal-producing states



Source: Upadhyay & Agarwal. (2024). Navigating the fiscal implications of a just transition.

6 Upadhyay, G & Agarwa, V. (2024). Navigating the Fiscal Implications of a Just Transition. Institute for Energy Economics & Financial Analysis (IEEFA).

Labour Informality and Social Protection Gaps

The high level of informality (>80%) in India is a critical factor when assessing access to social protections. India has launched skilling initiatives like the Skill Council for Green Jobs, which spans 15 renewable-related sectors and targets 30–35 million new jobs by 2047, with 0.1 million facilitated so far.

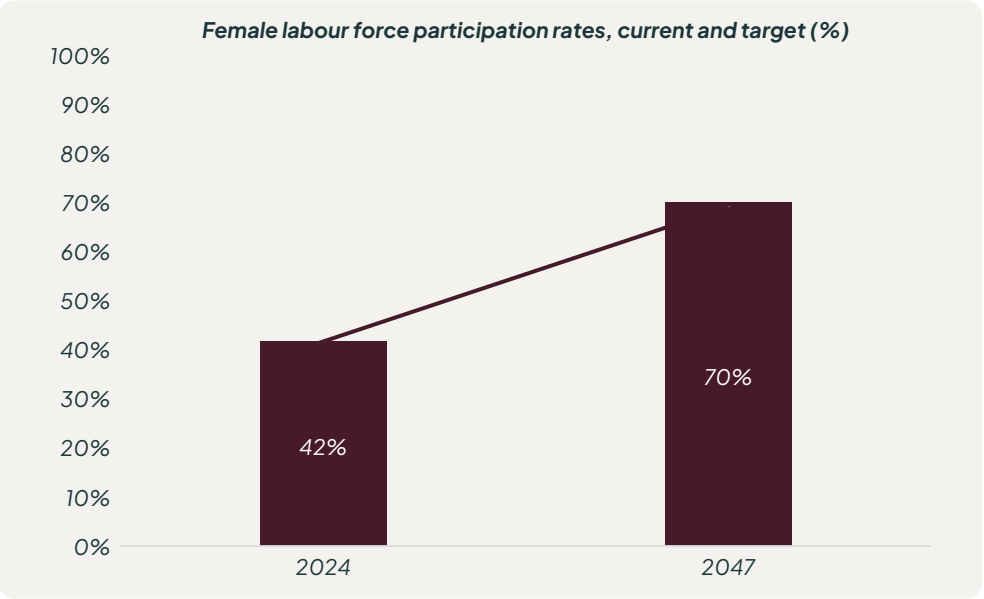
Formal coal sector workers have access to benefits like provident fund and healthcare through statutory schemes such as the Employees' State Insurance Scheme and are entitled to retrenchment compensation. In contrast, a large informal and contract workforce, comprising contract miners, manual labourers and transporters, has minimal coverage beyond general poverty alleviation schemes and ad-hoc company support. This gap between the formal and informal workforce exists across several sectors.

India's existing labour laws do not account for precautionary measures in case of large-scale closures, particularly for informal workers. The National Coal Transition Committee has recommended aligning just transition efforts with existing government programmes such as the Mahatma Gandhi National Rural Employment Guarantee Act, the National Rural Livelihoods Mission (NRLM) and the National Rural Health Mission to provide development support in affected areas. Together, the schemes have sizeable reach, but their low funding ceilings, non-indexed wages, and lack of specialised care limit their effectiveness. They require programmatic adjustments to address demographic, regional and scale-specific challenges.

Female Labour Force Participation (FLFP) in India is 41%, with a target of 70% by 2047 (see Figure 7). Provisions exist for self-help groups to promote self-employment in mining areas, supporting women's alternative livelihoods under the Ministry of Rural Development's flagship scheme: the NRLM.

India has an established legal framework governing land rights, consent[7] and resettlement, and some public-sector entities are adopting stronger internal resettlement and rehabilitation policies. Still, implementation remains inconsistent, especially in tribal areas.

Figure 7. FLFP rates, current and target (%)



Source: PLFS 2023–24, PIB 2025.

Funding Mechanisms and Financial Instruments

There is currently no dedicated transition funding in national budgets. However, potential financing sources include the Coal Mines Closure Fund,[8] District Mineral Foundation (DMF) funds, corporate social responsibility allocations, and the Urban Challenge Fund. Some states have also adopted Climate Budget Tagging to align fiscal planning with climate goals that could help streamline funding for just transition.

DMF funds, financed through mining royalties, are legally mandated to support welfare in mining-affected regions, covering areas such as health, education and livelihood training. In coal-heavy states, DMF funds can act as a de facto social protection mechanism during the transition. However, studies on the fund's usage fund[9] note inadequate implementation and a bias towards infrastructure spending. Further, support for human capital and livelihoods is limited.

7 Forest Rights Act (FRA) 2006, the Panchayats (Extension to Scheduled Areas) Act (PESA), 1996 and the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (LARR), 2013.

8 Under the 2025 Guidelines for Mining Plan and Mine Closure Plan/Reclaim framework.

9 Bhushan et al. (2025). District Mineral Foundation and Pradhan Mantri Khanij Kshetra Kalyan Yojana: A Decadal Assessment. International Forum for Environment, Sustainability and Technology (iFOREST). New Delhi, India.

As of 2025, India's national database for informal workers, the e-Shram portal, has registered over 307 million informal workers and links to 13 central welfare schemes. While it aims to streamline social protection delivery, it currently lacks climate resilience or transition-specific provisions. However, the database offers strong potential for targeting support to climate transition–affected workers.

Since 2020, India has introduced targeted energy subsidies as interim social protection for vulnerable groups during its energy transition. Key measures include LPG subsidies under Pradhan Mantri (PM) Ujjwala Yojana, rooftop solar support via the PM Surya Ghar scheme, and state-led free cylinder programmes in Uttar Pradesh, Andhra Pradesh and Maharashtra. These efforts aim to cushion rising energy costs and promote cleaner energy use among low-income households.

Adaptation and Resilience Measures

India's climate adaptation policies partially recognise vulnerable groups but do not yet integrate just transition planning. While no dedicated fund exists for just adaptation/ resilience, the PM Fasal Bima Yojana (a crop insurance scheme protecting farmers against weather-related losses) and the National Social Assistance Programme (supports vulnerable populations, e.g. the elderly and widows, during extreme weather events) act as de facto safety nets. Both offer climate-resilient livelihoods and basic protection against climate shocks. Some pilot efforts, such as natural resource management jobs, are emerging under rural development initiatives.

Endnote

India presents a unique contrast in its energy transition journey. It is rapidly expanding renewable energy capacity while simultaneously commissioning new coal-based power assets. This dual pathway reflects the country's developmental imperatives: securing energy access and reliability for a growing population, while also meeting climate commitments.

India's Business Responsibility Sustainability Reporting, mandatory for the top 1,000 listed companies, requires them to report ESG practices annually. It is noted for its potential to bring about an inclusive and just socio-economic transition. The indicators can be a good starting point for stakeholders who are keen to engage Indian companies on the just transition.[10]

By aligning its clean energy ambitions with stronger safeguards for affected communities, including robust planning, targeted funding and institutional coordination in mitigation and adaptation, India can ensure a more inclusive and equitable energy transition.

Although significant strides have been made in renewable energy deployment and targeted social protection measures for vulnerable communities, integrating just transition principles, especially in climate adaptation, livelihood resilience and informal worker coverage, is fragmented and underfunded. By aligning its clean energy ambitions with stronger safeguards for affected communities, including robust planning, targeted funding and institutional coordination in mitigation and adaptation, India can ensure a more inclusive and equitable energy transition.

10 Selvaraju, S. Promoting a Transition with Inclusion in India: The Role of Business Responsibility and Sustainability Reporting (BRSR). Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. 2025.

Indonesia

Indonesia aims to cut greenhouse gas emissions by 32% by 2030 through renewable energy and carbon trading as part of its Net-Zero Emissions 2060 strategy, potentially earlier with global support. Figure 8 details the key indicators of Indonesia's just transition.

Figure 8. Key employment and social contextual indicators of Indonesia's just transition

Indonesia	
Labour force (million)	140.84
Unionisation (%)	13
Collective bargaining coverage (%)	N/A
Informality (%)	60
Indigenous people (%)	18–26
Social protection coverage (%)	28
Female labour force (%)	54
Poverty headcount (%)	9.80

Source: Labour Rights Index 202, Ballard brief, Statistics Indonesia (BPS).

Development Planning and Economic Diversification

Indonesia's Golden Vision 2045 aims for high-income status through social transformation, including strategies for vulnerable workers and equitable energy transition. This aspiration is supported by the National Long-Term Development Plan (RPJPN). While 'just transition' isn't explicitly used, the plan integrates equity by shifting from static welfare to adaptive social protection. Indonesia is also guided by its 2022 Just Energy Transition Partnership (JETP) framework.

Pending regulatory codification, the framework has its ninth standard as 'economic diversification and transformation'. The government proposes mineral downstreaming, like processing nickel into battery chemicals to build value-added industries that could absorb workers from declining extractive sectors (Ombilin project). The Ministry of State-Owned Enterprises has directed state-owned firms to 'build adjacent businesses as a green economy ecosystem' and diversify beyond pure fossil fuel operations. Coal-dependent regions like South Sumatra, South Kalimantan and East Kalimantan stand to benefit directly.

Social Protection Systems

Social protections in Indonesia include the Jaminan Kehilangan Pekerjaan (JKP) programme. Introduced in 2022, it provides short-term cash benefits and job placement services to formally employed workers who are laid off. The Comprehensive Investment and Policy Plan (CIPP) document under the JETP foresees expanding this coverage of unemployment benefits specifically to include workers and contractors displaced by the closure of coal-fired power plants and other high-carbon businesses. This is yet to be formalised. Based on International Labour Organization data, the scheme is observed to cover less than 26% of employees, or 13 million employees. At present, the coverage excludes many workers in microenterprises.

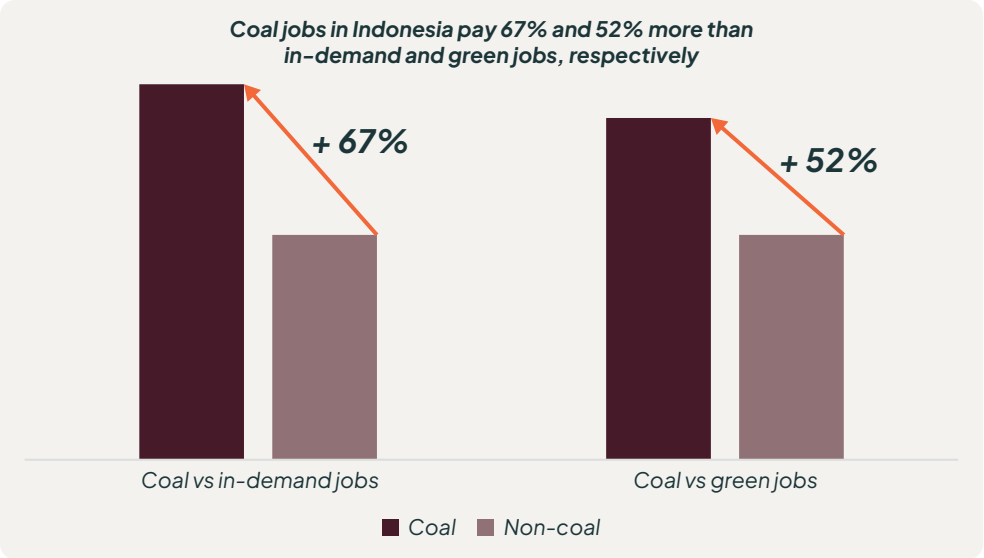
Indonesia has a near-universal health insurance programme (BPJS Kesehatan) and mandatory employment social security (BPJS Ketenagakerjaan) JKP programme, which offers short-term cash and job placement for laid-off formal workers. BPJS Kesehatan provides near-universal health coverage, while BPJS Ketenagakerjaan offers old-age savings and injury compensation for formal employees. The Penerima Bantuan Iuran scheme subsidises coverage for the poor. However, informal workers often miss out due to irregular incomes, weak enforcement, low awareness and affordability issues.

Wage Gap and Labour Market Transitions

Indonesia's policies do not directly address wage suppression from the energy transition. However, a BAPPENAS (Indonesia's Ministry of National Development Planning) seminar noted that coal jobs pay 67% and 52% more than in-demand and green jobs, making lower wages a key barrier to local job transitions (see Figure 9). Trade union density was around 13% of wage and salary earners, equivalent to around 7.5 million[11] members. While there is no explicit growth target, expanding coverage, especially among informal workers, is a stated priority under JETP frameworks.

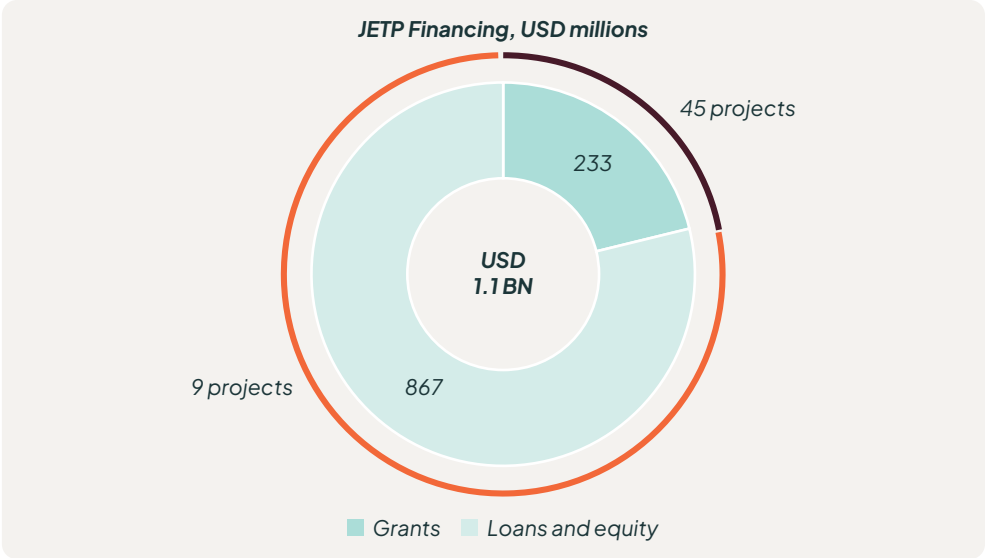
11 Danish Trade Union Development Agency. Indonesia Labour Market Profile. 2025.

Figure 9. Wage differences between coal jobs and non-coal jobs



Source: Indonesia Social Protection Technical Seminar: Skills for Energy Transition, 2024.

Figure 10. JETP financing by type, USD millions



Source: S&P Global (commodity) Insights.

Public and International Financing

Indonesia funds just transition mainly through domestic budgets, though not explicitly labelled. The Ministry of Manpower allocates resources for job training and labour migration, increasingly targeting regions undergoing industrial shifts. Climate-related spending reached USD6.3 billion in 2023, tracked through a budget-tagging system. Green sukuks – shariah-compliant green bonds – have also financed job creation and community-focused social forestry.

Internationally, just transition financing includes the USD20 billion JETP and Climate Investment Fund's ACT programme. The JETP package blends grants, concessional loans and private capital, coordinated by a Joint Secretariat. So far, 54 projects have secured USD1.1 billion of financing, of which USD233 million has been allocated as grants across 45 projects (see Figure 10). The remaining USD867 million is allocated as loans or equity across nine projects. Actual disbursement remains low at 6%–7% of pledged funds. Grants and technical assistance — vital for social components — remain under USD250 million.

Climate Adaptation and Resilience

The Disaster Pooling Fund (Dana Bersama), managed by the Ministry of Finance, provides temporary cash aid during climate disasters. Indonesia's climate adaptation strategy (National Action Plan for Climate Change Adaptation) aims to build climate-resilient livelihoods, with the RPJPN noting just adaptation for coastal areas. The just transition roadmap recommends expanding social insurance to cover climate risks.

Endnote

Indonesia, as a JETP country, has elevated its just transition profile through CIPP. The JETP model shows how civil society, coalitions, and public–private collaboration can support the transition while allowing governments to secure international finance. Still, financing remains limited, and short of the full cost of a just energy transition. Many envisioned domestic policies are at the planning stage and emphasise the research, technical and financial aspects of the transition. Next steps to support a more just and equitable transition could include a greater focus on community-level and out-of-energy sector impacts of key domestic policies.

Malaysia

Malaysia aims to reach net zero emissions by 2050, outlined in its Twelfth Malaysia Plan. The National Energy Policy and National Energy Transition Roadmap (NETR) align energy reforms with this goal, targeting 70% renewable energy by 2050. Figure 11 details the key indicators of Malaysia's just transition.

Figure 11. Key employment and social contextual indicators of Malaysia's just transition

Malaysia	
Labour force (millions)	16.5
Unionisation (%)	9
Collective bargaining coverage (%)	0.4
Informality (%)	22
Indigenous people (%)	11
Social protection coverage (%)	27
Female labour force (%)	51
Poverty headcount (%)	8

Source: IWGIA. Labour Rights Index. 2022.

Development Frameworks and Institutional Governance

Malaysia's policy foundation for a just transition is growing steadily. The backdrop for Malaysia's climate transition is its developmental goals outlined in the Madani Economy,[12] the 2023 government economic framework. This also houses plans to narrow the developmental gap between states within Malaysia through the New Industrial Masterplan (NIMP) 2030, which identifies and promotes strategic growth areas for each state. Other key initiatives, such as the NETR and Malaysia's National Climate Change Policy (NCCP) 2.0, acknowledge the importance of aligning socio-economic development with climate action. A just, inclusive and cost-effective transition is one of the four guiding principles under the Madani Economy. The roadmap contains specific targets to raise the labour income share to 45% and the FLFP to 60%.

Malaysia has no single designated apex body or interministerial body that oversees the country's just transition. However, there are references to a multi-agency approach to integrate just transition principles into its broader sustainability and economic development frameworks as part of the NCCP 2.0.

Economic Diversification and Subnational Strategies

Malaysia relies heavily on oil and gas revenue. The sector contributes to 31% of national income and 13%[13] of total export value. The NETR roadmap outlines opportunities for energy diversification focused on renewable energy, energy efficiency, hydrogen, bioenergy, green mobility and carbon capture usage and storage. Similarly, the NIMP emphasises economic diversification by promoting renewable energy, EV manufacturing and AI hubs, and creating high-value job opportunities. However, currently no comprehensive national strategy exists for broader economic diversification; varying efforts exist at the state level. The impacts of economic diversification will be felt more strongly in single-industry

Recently, Sarawak launched its Sustainability Blueprint 2030, covering 10 strategic pillars, paired with 48 strategies and 111 action plans. The blueprint sectors such as energy transition, sustainable agriculture, green cities, tourism, circular economy, mining, manufacturing and conservation.

12 Malaysian Government. Madani Economy framework. n.d.

13 Ministry of Economy, Malaysia. NETR. 2023.

towns and in regions shaped by rentier economic structures, but this presents less of an issue in Malaysia. The SCORE initiative managed by the Regional Corridor Development Authority in Malaysia has implemented various financial and policy incentives to promote economic diversification, particularly in central Sarawak. Recently, Sarawak launched its Sustainability Blueprint 2030, covering 10 strategic pillars, paired with 48 strategies and 111 action plans. The blueprint sectors such as energy transition, sustainable agriculture, green cities, tourism, circular economy, mining, manufacturing and conservation. Beyond these, subnational efforts on diversification are limited or yet to be clearly articulated.

The oil and gas sector contributes to

31% *Of national income*

13% *Of net export value*

Financing and Labour Transition Measures

The anticipated energy system targets entail a financing need of RM1.2–1.3 trillion (USD272–295 billion) until 2050 and RM210–240 billion (USD48–55 billion) in the short term (2023–2029).

Establishing an RM2 billion (≈ USD450 million) National Energy Transition Facility (NETF) that projects to create 310,000 green jobs by 2050 shows the government's intent to link decarbonisation with inclusive growth.

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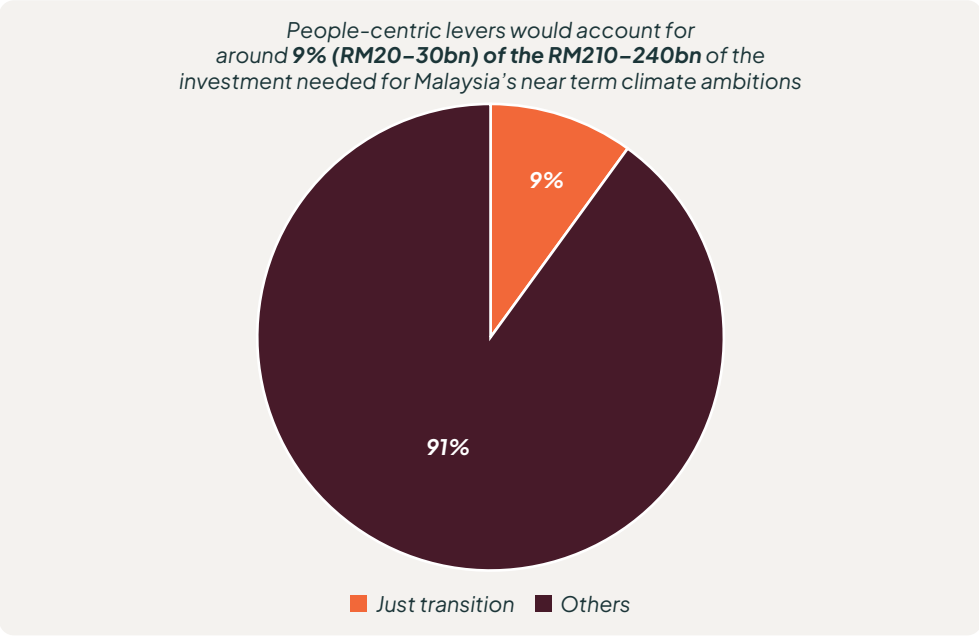
Further, Budget 2025's expansion of cash transfers and ongoing fuel subsidy rationalisation represent a shift towards more targeted, equitable public spending. However, the scale and structure of current interventions, particularly in workforce development, suggest room for greater focus. For instance, green skilling remains modest; only 7,000 workers have trained as of 2025. The NETR highlights at least 9%[14] of the mid-term climate investment (RM210–240 billion, ≈ USD48–55 billion) will need to be directed towards people-centric transition levers, i.e. upskilling and reskilling programmes for the impacted workforce, public transportation, infrastructure build-out and grid infrastructure reinforcement (see Figure 12). Malaysia's just transition approach emphasises reskilling and job placement, assuming green growth will drive better jobs. While there's intent to move towards higher-value skills, no policy ensures wage parity between old and new sectors. A 2025 Klima Action Malaysia report warns that new green jobs may risk being low-wage and low-skill, raising concerns about wage progression.

Figure 12. Just transition allocation in the NETR's climate investment plans



Source: Khazanah Research Institute.

Budget 2025 allocates RM14.9 billion (≈ USD3.53 billion) to climate and environment initiatives, with 87% directed towards disaster risk management, mainly flood mitigation, infrastructure upgrades, and drainage to build adaptive capacity. However, specific adaptation-focused social protection details remain under development.

14 Khoo Wei Yang. Climate Policy: An Equitable Approach. Khazanah Research Institute, Kuala Lumpur. 2023.

Social Protection Gaps and Inclusivity

Malaysia has a relatively comprehensive social protection system that includes public assistance, social and universal health insurance, contributory pension schemes and labour market development programmes. Recent initiatives like the Employment Insurance System (EIS), PeKa B40 and Upskill Malaysia reflect a commitment to inclusive development. The government also expanded its Employment Injury Scheme in 2019 to include foreign workers. However, there are still gaps in social protection, particularly when it comes to coverage for self-employed workers and workers in the informal sector. Further, these programmes are not yet tailored to address the specific risks of economic restructuring from climate policies. As such, informal workers and vulnerable groups like women and Indigenous communities could face barriers to full participation and protection in the transition process unless prioritised through systemic policies and approaches.

While the government has planned to adopt a multi-agency approach, the absence of a central coordinating body has led to fragmented implementation across federal and state levels. Similarly, while SUHAKAM has emphasised the importance of free, prior and informed consent (FPIC),[15] key financing mechanisms like Bank Negara Malaysia's Low Carbon Transition Facility[16] and NETF do not yet formally incorporate such safeguards. This represents an opportunity to be addressed moving forward.

The country's trade union membership exceeded 1.03 million, and the government aims to grow this to 2 million by the end of 2025. Of the 762 unions registered, only 31% have collective agreements. Awareness among unions about climate change and the impacts of economic transitions remains very low, limiting their ability to engage meaningfully in just transition planning.

Endnote

The EIS insures against involuntary employment losses for private sector employees, PeKa B40 provides healthcare to the bottom 40% of earners and Upskill Malaysia is a skills development programme run by various ministries. A more deliberate alignment with just transition objectives can make these systems more responsive to and resilient against the unique challenges posed by climate-driven structural shifts.

15 Under the UN Declaration on the Rights of Indigenous Peoples.

16 A financing facility established to encourage and support SMEs to transition to low carbon operations by adopting sustainability practices for business resilience.

Japan

Japan targets net zero by 2050, with interim targets of a 46% reduction by 2030, 60% by 2035, and 73% by 2040 (all from 2013 levels). To achieve this, Japan plans to raise renewable energy's share to 40%–50% and nuclear energy's share to around 20% of electricity generation by 2040. Over 87% of its energy still comes from imports.[17] Figure 13 details the key indicators of Japan's just transition.

Japan's unique characteristics include former coal regions, like Yubari, that show how past transitions unfolded where economic support followed fossil fuel decline. This highlights the need to prioritise place-based transition planning.[18]

Figure 13. Key employment and social contextual indicators of Japan's just transition

Japan	
Labour force (millions)	68.02
Unionisation (%)	16.8
Collective bargaining coverage (%)	16.8
Informality (%)	N/A
Indigenous people (%)	<1
Social protection coverage (%)	98
Female labour force (%)	53
Poverty headcount (%)	N/A

Source: IWGIA. Labour Rights Index. 2022.

GX and DX: Policy Drivers of Economic Transformation

Japan is undergoing a major transformation, driven by government and corporate efforts to green and digitise the economy. Central to this shift are the GX and DX (Digital Transformation) policy agendas. GX is embedded in Japan's 7th Strategic Energy Plan and backed by a JPY150 trillion (≈ USD1.02 trillion) investment over the next decade, combining public funds with private capital. Key enablers include a new carbon levy and a mandatory emissions trading system under a 'Pro-Growth Carbon Pricing' model. The GX Promotion Act calls for close coordination between government and industry to address just transition priorities. Just transition principles feature in the GX2040 Vision, Japan's Climate Transition Bond Framework, and corporate planning via the Climate Transition Finance Guidelines.

GX is embedded in Japan's 7th Strategic Energy Plan and backed by a JPY150 trillion (≈ USD1.02 trillion) investment over the next decade, combining public funds with private capital.

Japan has no central authority dedicated to just transition. The GX Implementation Council leads interministerial coordination on sectoral investment and strategy, but does not explicitly centre just transition. The GX League's Human Resources Working Group focuses on skill creation aligned with GX needs, not comprehensive labour or social protections.

17 International Energy Agency. Japan's Energy Mix. 2025.

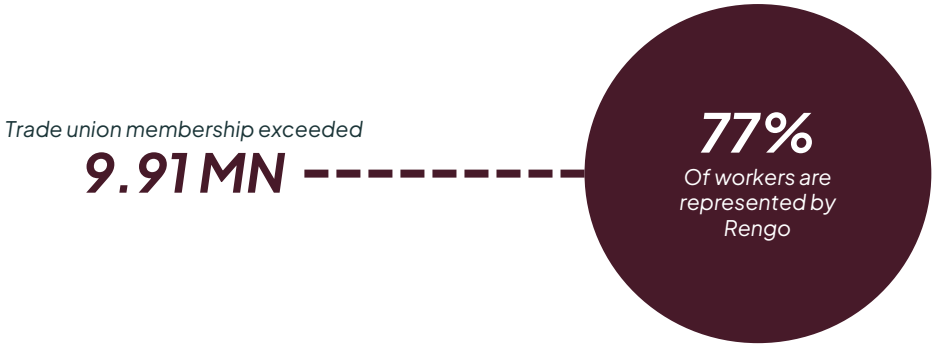
18 The British Academy. Just Transitions in Japan. 2022.

Sectoral Strategies and Place-Based Vulnerabilities

Japan's GX and DX policies drive economic transformation. Sectoral transition roadmaps guide investments in hydrogen, ammonia, carbon capture and storage and Perovskite solar, to name a few. While fossil fuel jobs are limited nationally, thermal power-dependent municipalities face economic vulnerability due to the revenue that thermal power plants accrue. Its government emphasises long-term green growth, but some clean technologies like ammonia co-firing may extend fossil fuel import dependence. For example, high-risk, high-opportunity regions like Tohoku, Kyushu and Hokuriku face both job loss from fossil fuel decline and potential gain from renewable growth, demanding nuanced policy coordination.

Workforce Transition and Reskilling Initiatives

The Ministry of Health, Labour and Welfare provides strong workforce safety nets such as vocational training, unemployment insurance and corporate-led reskilling. To support labour shifts, the Ministry of Economy, Trade and Industry has allocated JPY1 trillion (≈ USD 6.8 billion) over five years for reskilling programmes aimed at green sectors. Local governments like Iwaki City certify renewable energy skills and J-Power's labour union initiative reskill employees to help them shift to the renewable energy sector. The country's trade union membership exceeded 9.91 million,[19] of which its largest union group, Rengo,[20] represents about 77% workers, driving wage negotiations. No membership growth target has been announced.



Transition In the Automotive Sector

The automotive industry employs a large portion of the population in Japan, with nearly 6 million working in the sector.[21] While other industries, such as the power sector, rely heavily on government direction and support, some are more likely to receive public support measures. On the other hand, the automotive industry comprises primarily private companies, which may result in the private sector implementing limited just transition support measures. The automotive sector also faces other external pressures, such as the shift to EVs and strong competition from China's EV industry.[22] This shows how certain sectors will require public-private coordination for effective just transition strategies and support mechanisms.

Historical Lessons from Coal Transition

Historical precedents from the 1960s coal phase-out show Japan's experience in managing labour transitions through early pensions, relocation support and retraining. Local engagement is a priority, with compensation for impacted sectors. For example, offshore wind projects now include compensation for affected fisheries. Some see transition projects as a way to revive remote areas.

Labour Rights and Social Dialogue

Japan's labour laws restrict layoffs, pushing employers towards reassignments and early retirements. Article 28 of its Constitution protects union rights, but formal government-union engagement on just transition remains minimal. Labour markets may also be strained by rural depopulation and an ageing workforce, further complicating workforce transitions. In contrast to just transition origins in labour unions, non-governmental organisations and local governments primarily shape Japan's just transition discourse, with limited national-level coordination.

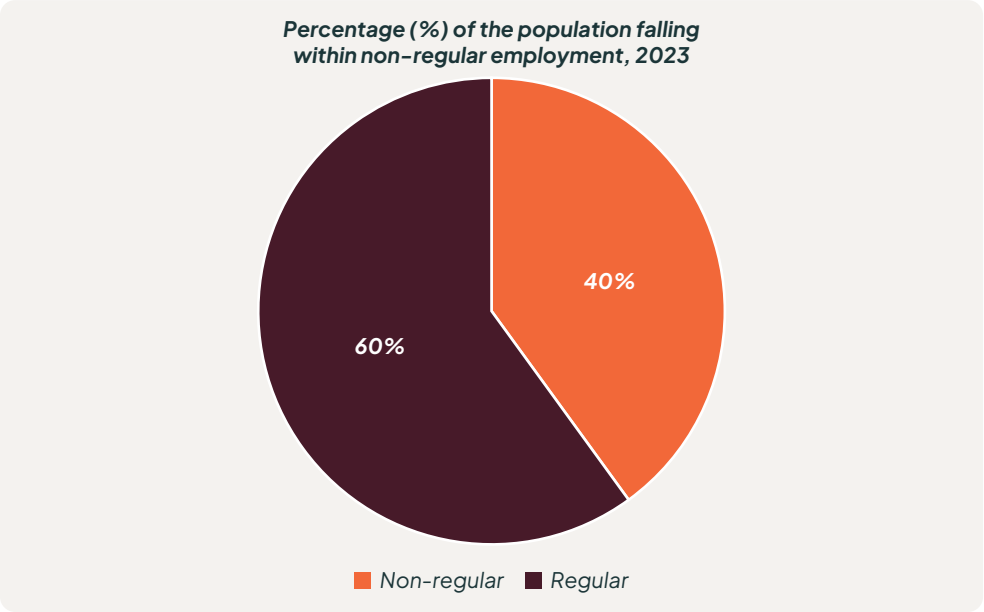
19 Japan International Labour Foundation. Basic Survey of Trade Unions: Japan. 2024.

20 Makiko Yamazaki and Kentaro Sugiyama, Reuters, Japan's largest union group sees biggest wage hike demand in over 30 years, 2025.

21 Japan Automobile Manufacturers Association. The Motor Industry of Japan 2024. September, 2024.

22 Nikkei Asia. Chinese EVs Chip Away at Japan Automakers' Dominance in Indonesia. March, 2025.

Figure 14. Non-regular employment



Source: The Japan Institute for Labour Policy and Training, 2023.

Non-Regular Employees

As a substantial portion of the population holds non-regular employment, this segment of the population is more vulnerable to the risks of disorderly transition. As of 2023, nearly 40% of the population falls within non-regular employment (see Figure 14).[23] While protections exist for regular and non-regular employees, there are disparities between the two: the latter typically receives lower wages, more limited benefits and higher employer insecurity.[24] It is likely these non-regular employees risk being excluded from just transition support strategies and schemes. Although legal reforms such as 'equal pay for equal work' have started to address these disparities, structural barriers remain. This suggests a significant risk that non-regular employees could be left behind in the transition.

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Adaptation and Disaster Resilience Systems

As an import-dependent and disaster-prone country, Japan links energy security with climate resilience. Japan has built strong social protections for natural disasters, including disaster relief funds, reconstruction financing, community-based risk reduction programmes and international knowledge sharing on disaster management. These systems form the existing disaster-related social protection systems, which could be adapted for climate and transition risks.

Endnote

Japan's just transition approach reflects a reactive, decentralised and place-sensitive approach shaped by legacy industrial patterns and a strong civil society presence. This contrasts with a centralised, anticipatory framework.

23 Takahashi, Koji. Non-Regular Employment Measures in Japan. 2023.

24 Takahashi, Koji. Changes and Continuity in Non-Regular Employment in Japan. July, 2024.

Asia's Just Transition: Unique and Emerging Baseline

Figure 15. Market-specific context for place-based just transitions

Market	Main drivers of just transition	Big challenge	Unique trait
India	Inclusive growth via job creation and improving quality of life	Reconciling informal economy to build inclusive livelihoods	**Employment**: Development-linked transition model rooted in employment schemes and grassroots delivery systems
Indonesia	Seizing transition opportunities and phasing in sustainable energy across coal-rich provinces	Strong subnational dependence on coal for jobs and local budgets	**Community**: Emphasis on 'just' decentralisation, requiring community buy-in and compensation in affected provinces
Malaysia	Advancing energy transition while addressing historical development gaps in the Peninsular regions	Fiscal dependence on oil and gas revenue, with uneven state capacity	**Equity**: Emphasis on distributional justice through partially implementing living wage, and budding ideas around wage progression
Japan	Using technological innovation to drive secure and competitive low-carbon growth	Rapid ageing and rural depopulation strain labour markets	**Technology**: Civil society leadership, technological optimism and past transition lessons

Asia's just transition landscape is diverse. Each market shows early progress, yet gaps remain in local governance, social protection and funding alignment. Market readiness for just transition financing depends on the strength of institutions, the quality of local governance and the alignment of climate ambition with social equity.

This landscape review is not a verdict — it is a baseline. Future transition success hinges on how these gaps are addressed, how coordination is institutionalised and how social outcomes are embedded into investment decision-making.

Investors must ground strategies in local realities to enable scalable, inclusive transitions. This analysis sets the baseline for targeted, place-based engagement. Figure 15 highlights the distinct drivers and challenges each market faces in integrating just transition principles across energy, labour, environmental and financial policies.

The 'big challenge' and 'main drivers' highlighted in Figure 15 are socio-economic issues that carry tangible risks for investors if left unmitigated. In India, for instance, failing to integrate the vast informal economy into the green transition could lead to 'profound' economic fallout that fuels social instability. In Indonesia and Malaysia, where economies lean heavily on fossil fuels (coal, oil and gas, respectively), a mismanaged shift from these industries could strand assets and slash government revenues. This may strain public finances and potentially spark unrest. Meanwhile, Japan's rapidly ageing and shrinking workforce is already causing acute labour shortages that drive up costs and could even pose a business continuity risk — a clear warning sign for long-term investments.

While it's impossible to quantify these threats precisely, their impact could be enormous, from dampened economic growth and fiscal stress to social upheaval. Investors need to factor them into risk assessments and engage locally to help mitigate them.

Ultimately, the success of just transition in Asia hinges not only on government ambition but also on how investors choose to understand and respond to these challenges. The latter carries real financial, social and reputational consequences if overlooked. By approaching these markets with a place-based lens, aligning capital with inclusive growth and engaging proactively with policymakers and communities, investors can help reduce systemic risks while capturing opportunities from the transition. The path forward is complex, but the cost of inaction is far greater: missed growth, destabilised markets, diminished long-term value.

By approaching these markets with a place-based lens, aligning capital with inclusive growth and engaging proactively with policymakers and communities, investors can help reduce systemic risks while capturing opportunities from the transition.

Future Policy Pathways

Asia's just transition policy architecture continues to evolve, albeit in a fragmented way. The opportunity lies in grounding climate policy in local realities, aligning finance with social outcomes and stakeholder participation in lived experience. Governments and investors can co-lead this shift from sectoral decarbonisation to regional regeneration. Given current gaps, the following policy pathways can strengthen just transition efforts across Asia.

High-level commitment to just transition: Establish clear national mandates or strategies that prioritise 'just transition' principles at the highest policy level, signalling long-term political will.

Integrated climate–development planning: Create cross-departmental coordination bodies to align climate action with development goals. This ensures ministries and agencies work from a unified transition plan.

Data platforms with local detail: Improve transition data systems to include place-based social and economic indicators, not just aggregate emission metrics, to ensure that planning captures community realities. Identifying and empowering the different stakeholders, apart from governments, that can effectively contribute useful information on such social and economic indicators would be a good starting point for this process.

Inclusive stakeholder engagement: Map all relevant stakeholders — e.g. workers (formal and informal), local communities, unions, micro and small enterprises and marginalised groups — and involve them through transparent, coordinated consultation processes.

Effective strategy communication: Clearly communicate government transition plans and progress to the public and investors to build trust, manage expectations and maintain confidence in the transition.

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Targeted transition funding: Coordinate funding from international, regional and national sources to support just transition projects (e.g. reskilling programmes, community revitalisation, green industries), with financing tied to social outcomes.

Robust monitoring and support: Establish indicators and monitoring frameworks to track transition progress (jobs created, compensation delivered, training provided), ensuring accountability and enabling course corrections.

Prioritising the following could help ensure the success of integrated policy responses.

Conflicting priorities demand policy integration

Several Asian economies are navigating a delicate balancing act — committing to long-term decarbonisation while needing to ensure energy security and progress on development priorities by creating decent work and quality jobs. Misaligning climate commitments with development goals weakens investor confidence and delays structural shifts.

A recent United Nations Framework Convention on Climate Change (UNFCCC) report assessed countries' nationally determined contributions (NDCs) and long-term low-emission development strategies. It highlighted case studies of institutional structures and processes that governments have used to start developing integrated policy responses for the just transition. A key lesson is that a place-based approach is needed so governments can map out and ensure an inclusive process. Specifically, some case studies pointed to the value of creating a multistakeholder body comprising representatives from relevant government departments, corporates, financial institutions, labour unions, community groups, academia, civil society and research institutions. Further, these institutional structures and processes prioritised mechanisms for stakeholder consultations, training, education and compensation, etc.

Transition data platforms often discount the lived realities of transition

Transition planning and related data platforms often prioritise identifying carbon-intensive hubs and potential growth areas. Still, they overlook the place-based dimensions of transition. Transitions reshape not just economies, but also lived environments, identities and community ties.

To be effective, policymaking must move beyond aggregate data and engage with these local, social realities. For example, the local government in Collie, Western Australia,[25] conducted in-depth community engagement alongside economic modelling to understand not just job losses from coal closures but also impacts on local identity and intergenerational aspirations. This engagement informed more holistic regeneration plans.

Key stakeholders are missing from the table

Just transition dialogue is currently centred around formal workforce transformation. Informal workers, induced labour, unions, households and the wider local communities are underrepresented or absent in transition governance. Dialogue between government, and labour unions is limited, with local voices often engaged late or symbolically. Further, while transition policies aspire to inclusivity, they rarely consider the intersectional barriers that women face, especially from marginalised caste, class or rural backgrounds.

Policymakers could pilot co-created transition plans with equal advisory power for underrepresented groups. Inclusive participation is essential to avoid deepening existing inequities.

Cross-sectoral policy planning together with stakeholder engagement could help: (1) map fossil and green investments with clear transition timelines and repurposing and (2) trigger place-based ripple effects that integrate social and economic transition measures.

Wage progression and informality are deterrents to green jobs

In addition to skill and green job-related geographical mismatches, access for historically underrepresented communities is a key consideration . The quality of wages may also be a material deterrent to the uptake of green jobs. Green job strategies across markets emphasise quantity, or net employment gains, over quality. Explicit wage guarantees or parity clauses in transition sectors are not the norm, yet.

This issue is exacerbated particularly for informal workers who dominate the labour force in high-emission sectors, as safeguards for them remain underdeveloped. While 'decent work' and 'no one left behind' are guiding principles to a just transition, they are yet to be codified into enforceable safeguards. Governments could link skilling programmes to wage outcomes to ensure transition jobs offer lasting, not just short-term, livelihoods. Further, governments should also aim to decouple access to social protection from formal employment.

Local governments lack the capacity to deliver place-based transitions

Just transition success hinges on local governments' ability to act as frontline implementers, especially in regions facing the greatest disruption. However, subnational actors in India, Indonesia and Malaysia often lack funding, staff and planning tools. This capacity gap delays or dilutes implementing transition measures. Policy reform must embed decentralised resourcing and technical support to empower local governments to lead regional transition strategies effectively.

25 Institute for Human Rights and Business (IHRB) & Just Stories. Collie's Just Transition: A Blueprint for the World's Eight Million Coal Workers? February 2025.

Case Studies: Place-Based Transitions

While the principle of a just transition is universal, its implementation varies depending on the location, stakeholders and sectors involved.[26] As a result, the socio-economic impacts of a net zero transition differ based on several factors:

- Geographical context (e.g. communities heavily dependent on carbon-intensive industries will be more affected than those with lower reliance)
- Stakeholders involved (e.g. challenges that SMEs face differ from those that workers encounter)
- Sectors (e.g. energy sector transitions unfold differently from those in agriculture).

Through this multiplicity, we can evaluate case studies on what constitutes 'best practice' in planning and delivering just transition.

The best practice cited reflects a specific aspect of the project, such as stakeholder dialogue, completeness, financing, people-centricity or addressing inequalities. It should not be read as an endorsement of the entire initiative. Its inclusion highlights a replicable element within a complex and context-specific implementation of place-based transition.

Case studies are powerful tools to illuminate how the goals of a low-carbon transition, such as balancing economic ambition, social legitimacy and environmental responsibility, can intersect in real-world contexts. However, best practices in just transition are rarely linear success stories.

Even the most technically sound or socially innovative projects often face resistance, scepticism or conflict. This is particularly so where historical grievances, environmental risks or unequal power dynamics exist. In many cases, early opposition from civil society or affected communities reflects not only concerns about direct impacts but also deeper questions about trust, process and long-term accountability.

Acknowledging the complexity and contestation in transition investments is key to identifying truly replicable, equitable and durable models. These cases are not endorsements but learning opportunities for policymakers, investors and practitioners navigating just transitions.

By documenting the enabling conditions and pressure points within each case study, we hope to support a deeper understanding of what it takes to build transition pathways that are financially viable as well as socially legitimate and environmentally just. AIGCC drafted the following case studies without specific input from company representatives.

26 Popovic et al. Mapping Socioeconomic Risks in the Transition to Net-Zero: The Role of Financial Institutions in a Just Transition. Centre for Climate Finance. 2024.

Case Study 1: Schroders

Type	Investor
Example of leading practice	**Integrating climate adaptation with social equity in supply chains**
Transition period	2022 onwards
Sector	Textile/apparel
Current Stage	Early to mid-stage: Risk assessments initiated, stakeholder engagement underway, adaptation standards emerging
Location	Supplier regions in Bangladesh, India, Cambodia, Vietnam and Pakistan
Transaction/funding	Investor engagement-driven; adaptation measures primarily funded by brand owners
Company/ Government body	Multiple apparel companies' supply chains
Description or key features	• Schroders and the Global Labour Institute at Cornell University have collaborated in developing investor expectations and engaging with investee companies on the topic of just resilience.[27] This aims to raise awareness of the social implications of physical climate risk and adaptation, and identify good practice for action. The apparel industry faces acute challenges, with heat stress and flooding projected to cause substantial GDP losses in countries like Bangladesh, Cambodia, Pakistan and Vietnam by 2030. • In 2024, Schroders engaged with key apparel sector holdings on exposure to physical climate risks in Asian supply chains. An engagement with a UK-based apparel company to identify sites within its Indian supply chain already facing material physical climate impacts, specifically from recent heatwaves, prompted a broader dialogue on the need to integrate Just Resilience principles into climate adaptation efforts. The company was encouraged to deepen its climate risk assessment beyond operational disruptions by explicitly considering worker exposure, supply chain resilience and the differentiated impact on vulnerable communities. Another European company has since developed a heat standard guide for suppliers to address risks of worker heat stress. • In parallel, in 2024, Schroders provided formal comments on the US Occupational Safety and Health Administration's proposed regulation to protect workers from heat-related hazards. The submission emphasised the investment risks of heat stress, including the increased likelihood of occupational injuries and the adverse effects on workforce productivity. Support was expressed for economically feasible mitigation strategies that balance worker protection with business sustainability. • Investor dialogues revealed a growing recognition of the 'just resilience' imperative where climate adaptation efforts must integrate distributive fairness, procedural inclusion and recognise vulnerable groups. This is especially so in regions marked by informal work, low social protection and limited climate safety infrastructure. Schroders has also released a toolkit highlighting how investors can engage with investee companies to understand the implications of climate physical risks for people and portfolios.

27 Just resilience refers to the equitable distribution of resources and opportunities to strengthen resilience against climate impacts, ensuring vulnerable and marginalised communities are not disproportionately affected. It integrates social justice principles with climate resilience efforts, emphasising inclusivity and fairness.

Case Study 1: Schroders

Lessons for replication	• Climate adaptation can be integrated into ESG engagements when framed through supply chain risk and labour productivity. Companies that integrated social indicators into physical risk frameworks were better positioned to develop meaningful adaptation plans. Targeted investor engagement, when paired with structured toolkits, can nudge companies towards a justice lens in climate risk governance. Many companies treat climate resilience as an environmental or logistics issue, sidelining workforce impacts. • This case illustrates how investor-led engagement framed around supply chain disruption and labour productivity can begin shifting corporate attention towards just resilience. While some companies have initiated Taskforce for Climate-related Financial Disclosures–aligned disclosures and piloted supplier standards on heat risk, these remain fragmented and top-down. • The lessons from this case show that without inclusive planning, social dialogue and shared responsibility for adaptation costs, climate action in the sector risks reinforcing existing inequities rather than addressing them.

Case Study 2: Maharlika Investment Corporation (MIC)

Type	Investor
Example of leading practice	**Initiating early dialogue with Indigenous communities to ensure inclusive, realistic, and adaptive planning**
Transition period	2023 onwards
Sector	Mining
Current Stage	Pre-construction/engineering and community investment phase
Location	Barangay Balatoc, Municipality of Pasil, Cordillera Administrative Region, Philippines
Transaction/funding	USD76.4 million bridge loan facility
Company/ government body	Makilala Mining Company Inc. (MMCI), supported by MIC
Description or key features	• MIC has positioned responsible, integrated mining as a key economic driver in its strategic vision for the Philippines by targeting up to a 5% contribution to GDP by establishing a model through the Makilala (MCB) Project. MIC committed support through a USD 76.4 million bridge loan facility to accelerate readiness. Beyond governance, economic viability and environmental safeguards, the project incorporated social licence and benefit sharing. These elements are rarely formalised in transition investments in the region. • As a foundational step, the project prioritised early sustained dialogue with the Balatoc Indigenous Cultural Community, starting over five years before implementation. This led to formal FPIC, certified by the National Commission on Indigenous Peoples. Crucially, the project avoided any household resettlement, reinforcing respect for ancestral lands and helping prevent social conflict. • Community consent translated into tangible benefits: a contractual 1.25% royalty on gross output, a dedicated trust fund and potential future equity participation. The Social Development and Management Program (1.5% of annual operating costs, ≈ PHP64 million/year, ≈ USD1.10 million/year) supports locally defined development goals. The project is also expected to uplift local government revenues, create about 1,200 jobs and deliver shared infrastructure. This shows that early engagement can enable inclusive planning, sustained support and community co-ownership.
Lessons for replication	• This case illustrates how initiating early dialogue and securing formal community consent can lay the foundation for a socially responsive transition investment. • While the project incorporates strong elements of environmental management, benefit sharing and governance oversight, its reception has been mixed. This highlights the importance of sustained community trust, transparent public financing and adaptive planning. • The lessons from this case show that even well-structured projects must navigate local concerns and institutional accountability to achieve truly just and durable transition outcomes.

Case Study 3: Eskom Ltd

Type	Corporate
Example of leading practice	**Decoupling repurposing and repowering initiatives from decommissioning schedules**
Transition period	2017–ongoing
Sector	Energy
Current stage	Repowering and repurposing projects are underway, with full implementation planned for 2026–27
Location	Komati, Mpumalanga Province, South Africa
Transaction/funding	Eskom's Just Energy Transition is backed by a USD497 million World Bank–led package. It is supplemented by KfW grants and is part of South Africa's broader USD8.5 billion JETP commitment.
Company/ government body	Eskom Holdings SOC Ltd
Description or key features	• Komati is the first large-scale coal plant transition project in South Africa with a phased shutdown from 2018 to 2022. Socio-economic impact studies conducted at Komati showed that the USD92.34 million GDP was at risk from the site shutdown, along with impacts to about 4,166 jobs at risk (257 direct and 3,909 indirect jobs) and loss of sustainable income to 38 households. • The station's closure was included in the Integrated Resource Plan and communicated before 2019. Staff engagement started early that year, and broader community consultations began in October 2019. To mitigate these impacts, Eskom has a two-pronged approach to stabilise the Mpumalanga region's economy. The approach focuses on repowering and repurposing deliberately decoupled from the decommissioning schedule. As of May 2025, Phase 1 of the repowering stage is underway with the following configuration: 72 MW solar PV and 150 MW x 4hr battery energy storage system with all regulatory approvals secured; procurement in progress with commercial operation expected in Q3 2026. • The Phase 2 configuration will be similar from a technology perspective and include one synchronous condenser. This will proceed after site rehabilitation. • Eskom's repurposing initiatives at Komati are progressing steadily. The AgriVoltaics pilot, including a 500 kW PV plant and aquaponics facility, is now complete. Three containerised microgrid assembly lines are operational, with plans to manufacture 30 more units in 2025. A welding training centre with 24 cubicles has been established, with seven community members currently in training. Community engagement remains active through structured forums. Employment at the site has transitioned from a peak of 393 Eskom employees to 160, and from 543 service providers (plus 411 Eskom Rotek Industries, a subsidiary (ERI) to 237 (plus 23 ERI)). Looking ahead, the initiative is expected to create 363 permanent and 2,733 temporary jobs.

Case Study 3: Eskom Ltd

Lessons for replication	• Eskom's experience at Komati has provided valuable lessons that are now shaping Just Energy Transition (JET) initiatives at other power stations. Early planning and implementation have proven crucial, with upfront preparatory work essential for identifying impacts and informing project design. As a result, Eskom is decoupling repurposing and repowering from station operations and has approved JET strategies for Hendrina, Camden and Grootvlei, and is advancing them for Arnot and Kriel. • A key lesson is that while repowering provides short-term construction jobs, economic diversification through repurposing is vital for long-term socio-economic development. • Further, renewable energy alone was recognised as insufficient to stimulate the local economy. This highlights the need to develop complementary sectors for broader regional revitalisation. Initiatives such as a horticulture centre at Grootvlei and ash beneficiation centres for activities like brickmaking, personal protective equipment, steel manufacturing and copper recycling are being implemented. • Eskom also emphasises the importance of social dialogue and co-creation, ensuring communities actively engage in the transition. Stakeholder engagements have begun in Grootvlei and are expanding to Hendrina, Camden and Arnot. • Training has also emerged as a core pillar, with staff and community upskilling underway through Technical and Vocational Education and Training collaborations to expand training reach and integrate relevant curricula. Funding was initially secured post-shutdown at Komati, but Eskom is now engaging multilateral development banks early to ensure upfront financing at other sites. • Finally, recognising that the transition is broader than Eskom alone, partnerships across sectors and stakeholders are being mobilised.

Case Study 4: Ayana Renewable Power

Type	Corporate
Example of leading practice	**Embedding community livelihood programmes into renewable project development**
Transition period	2017–ongoing
Sector	Energy
Current Stage	Providing skills programmes at renewable energy sites
Location	Projects across Andhra Pradesh, Rajasthan, Karnataka and Tamil Nadu, India.
Transaction/funding	Ayana Renewable Power was founded by British International Investment (BII) (32.2% share) and is majority owned by India's National Investment and Infrastructure Fund Limited (NIIFL) (51% share), with extra investment from the Green Growth Equity Fund (GGEF) (16.8% share).
Company/ government body	Ayana Renewable Power Private Limited
Description or key features	• Ayana Renewable Power is one of India's leading renewable energy independent power producers. It is headquartered in Bengaluru and was founded by BII in 2017 with initial grant funding. It operates around 4GW of solar and wind-powered capacity across Andhra Pradesh, Rajasthan, Karnataka and Tamil Nadu. Ayana plans to add 2GW of renewable energy capacity annually. • In 2019, NIIFL and GGEF joined as investors and acquired 25.5% stakes in Ayana. The Indian Government backs NIIFL and is a collaborative investment platform for international and Indian investors. GGEF is a climate-focused private equity fund managed by Eversource Capital. In 2021, NIIFL increased its stake in Ayana to 51%, with BII taking 32.2% and GGEP taking 16.8%. • Ayana has been developing skills development programmes for local communities living in and around their renewable energy project sites. Their Community Development Framework underpins their community engagements and approach to just transition. The framework sets out five key pillars: energy access (providing decentralised clean energy to neighbouring communities), skills training, location (place-based approach to just transition work), collaboration and implementation (beginning any project plan with a community needs assessment and follow through accordingly). • ESG principles are core to Ayana's strategy and business model. Institutional Shareholder Services awarded the company an A-rating for its ESG performance. Beyond this, its procurement process for renewable energy project land acquisition follows international best practices outlined by the IFC. • Their skills development work began with the Skills for a Solarised Future pilot project in 2019 in NP Kunta Village and the Sri Satya Sai District in Andhra Pradesh. It was funded through grant financing and trained 184 individuals, including 84 women. In 2023, they expanded their efforts to build a skills development centre in Karnataka.

Case Study 4: Ayana Renewable Power

Lessons for replication	• Ayana's business model was designed with ESG considerations and just transition principles from the onset, ensuring that they feature prominently in the company's decision-making processes. The community development framework was developed with the company's establishment, embedding its just transition programmes into the core company strategy. Beyond this, ESG considerations are fully integrated into the company's decision-making practices, and new investments are not cleared or checked for financial feasibility unless they pass Ayana's ESG business integrity standards first. • Ayana's success in developing community development programmes alongside its core business activities highlights the value of alignment between the company and its investors. It also shows the role of grant and development funding in catalysing more long-term, private sector investments. • Ayana was strategic in linking its just transition programmes for community development and local community inclusion to a real business need for skilled labour as well as a national demand for a greater clean energy workforce. This alignment between the just transition, a business case and a national policy objective ensures long-term project viability and business model sustainability. It also strengthens the value of Ayana's just transition programmes as a core feature of its business model, rather than an add-on. • Ayana's work shows the value of just transition planning for the clean energy transition. Including local communities and meaningful training programmes has helped avoid local community opposition that can characterise clean energy projects. • Piloting can be effective in testing the impact and value of a company's just transition programming. Ayana began its just transition programmes through piloting (the 2019 Skills for a Solarised Future project) before establishing a permanent facility (a skills development centre in Karnataka).

Financing Just Transition: Key Considerations

Just Transition has become a crucial consideration for investors to identify and allocate capital towards investment opportunities that balance managed risks with optimised rewards.[28]

Core principles for funding just transitions include government-led coordination to align sectors; place-based strategies tailored to local economies; inclusive planning with workers, communities and businesses; long-term funding aligned with phased industry transitions and transparent, adaptable mechanisms responsive to changing needs and feedback.

Financing a just transition would mean allocating to majorly non-commercial activities; for example, worker reskilling, Indigenous self-determination, energy security and community resilience. That is, a deliberate integration of social equity goals into finance strategies. A just transition requires participatory governance, long-term public investment and institutions that can align industrial and climate goals with social equity. This approach may be incompatible with market-first strategies.

Sustainable investing frameworks often frame social risks as reputational concerns. In contrast, emerging financing strategies integrate these outcomes into the investment case itself. For example, MSME development and sustaining regional livelihoods are not side initiatives; they are conditions for political and operational feasibility.

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[28] IGCC. (2024). Investor Expectations for Corporate Just Transition Planning.

Private investors can already take steps to finance the just transition through five main avenues. First, they should revise their investment strategies and capital allocation decisions in way that incorporate climate risk management as part of their fiduciary duty. Second, increasing disclosure requirements and reporting frameworks on climate-related financial risks and material social risks. Third, actively engaging with companies on just transition planning, protocols and capital allocations. Fourth, engaging in advocacy efforts with policymakers and partnerships with other industry leaders. And fifth, reflecting social and climate considerations in their broader impact metrics.[29]

Further, with public finances under strain, a consensus has emerged that governments must partner with financial institutions to mobilise needed resources. Traditional development finance, often framed through 'derisking' approaches, positions governments as backstops for private capital,[30] a clear reflection of financial realities in funding the global transition. This model, a while providing scale, needs a refresh incorporating more strategic public finance, concessional capital and community considerations.

Several features characterise the evolving just transition finance framework:

- **Mix of public, private, and blended Instruments**: Just transition financing spans a 'spectrum of capital'[31] from public to private and often combines them. Blended finance is particularly prominent. Design-financing structures, where risk is more evenly shared among public, private and concessional players, are part of this framework.
- **Concessional capital for social components**: A distinguishing element of just transition financing is acknowledging that certain just transition activities are not immediately profit-generating and need concessional support. In practice, this means a just transition instrument might pair a market-rate loan for a new clean energy facility with grant funding or soft loans for community reskilling and social protection measures. Both parts are planned together to ensure the overall transition is equitable.
- **Explicit social and governance criteria**: Structuring instruments with the intentional inclusion of social outcomes and governance considerations as core criteria for investment. Practically, this means investors are required to evaluate how projects impact workers, communities, households and/or consumers and have strong social clauses, transparent monitoring, reporting and verification systems, and enforceable local benefit sharing.

In summary, emerging finance models broaden the mandate of traditional instruments by aiming to achieve climate goals in tandem with positive social outcomes. They still leverage markets and protect investors to an extent, but also add layers of conditionality, social investment and stakeholder engagement that address some equity and sustainability concerns. However, these models are young, and many just transition financing structures remain pilot concepts or small in scale. Thus, a critical analysis from an investor perspective is: What further changes are needed to make these models truly effective for long-term investors and aligned with systemic transition goals?

Just transition financing models are young, and many just transition financing structures remain pilot concepts or small in scale. Thus, a critical analysis from an investor perspective is: What further changes are needed to make these models truly effective for long-term investors and aligned with systemic transition goals?

29 IGCC. Empowering Communities: How Investors Can Support an Equitable Transition to Net Zero. 2021.

30 UN Trade & Development (UNCTAD). Financing A Global Green New Deal. 2019.

31 IHRB & Just Transition Finance Lab (JTFL). White Paper: Leveraging the Spectrum of Finance for Just Transitions. December, 2024.

Recommendations for Investors and Corporates

Investors recognise that the transition to net zero must be beneficial for the whole economy, and failure to prioritise this may lead to negative consequences for their portfolio.

Building on our findings and future policy pathways, we recommend that investors and corporates across Asian markets prioritise the following near-term actions. A shared responsibility for both is to raise awareness on place-based just transition and embed it in their stakeholder engagement.

For Investors:

- **Engage in policy and emerging frameworks**: Work with sectoral line ministries, and finance and labour ministries (see Figure 4) to embed social safety nets that directly respond to climate-driven structural shifts (alongside workforce transition measures and community resilience) into national and sectoral transition plans. Collaborate with policymakers on emerging frameworks to ensure just transition outcomes are intentional and embedded rather than as byproducts of existing policies.
- **Seeking just transition financing opportunities**: Allocate capital to risk-adjusted opportunities that deliver just transition outcomes through existing or new financing structures (see evolving just transition finance framework), integrate just transition risks and opportunities into investment frameworks, and engage early with corporates to set expectations and to ground investments in the local context.
- **Evaluate impact**: Build accountability and track progress with indicators tied to jobs created, coverage and adequacy of social protections, wage parity, grievance mechanisms and resilience outcomes. (see Annexure 1). Utilise assessments of companies' just transition efforts through initiatives such as Climate Action 100+.[32]

For Corporates:

- **Prioritise engagements and constructive dialogue with all stakeholders relevant to the transition**: Early engagement and transparent communication about transition plans and projects can reduce social risks and ensure a more even distribution of costs and benefits (see Figure 1 and Case Studies 2 and 3).
- **Develop a just transition plan**: Ensure company policies and processes align with just transition principles, and set concrete, measurable, time-bound targets to manage the social impacts and risks of the company's transition plans.
- **Link just transition investments to business operations**: Reskilling programmes that build a skilled labour force can support business needs. As the case studies highlighted (see Case Study 1 and 4), actions to support a just transition can be good business, and local skills development efforts can support a business's social licence to operate.
- **Assess risks and opportunities from a social and climate lens**: Accounting for the social and climate risks and opportunities of new projects, products and/or activities helps companies plan and distribute risks and opportunities more evenly.

[32] Climate Action 100+. A need for robust Just Transition Planning. June 2022.

Conclusion and Way Forward

A just transition at the regional scale requires a clear-eyed assessment of the current social and institutional architecture behind policy and implementation. It also requires a fundamental shift in the development finance paradigm centred on derisking private capital. We cannot build just futures on unjust foundations.

This report's market analysis provides a starting point: mapping what exists as part of the foundation of just transition policy, what is missing and how investors can meaningfully engage crucial stakeholders. It highlights the role of policymakers in setting direction and safeguards, and of investors in building towards capital allocation decisions with equitable outcomes.

The framework used in the report (see Annexure 1) is a way for investors to integrate social outcomes into transition planning with investee companies. It helps identify where targeted engagement with policymakers and corporates can unlock the regulatory, financial and institutional conditions needed for a fair and inclusive transition.

Going forward, improving the quality of corporate awareness and disclosures on just transition risks and opportunities is indispensable, aligning with the role of investors in shaping better information flows and driving corporate behaviour.

The way forward lies in understanding and enabling place-based strategies that prioritise people, strengthen local institutions and enable coordinated action. Grounded in accountability and inclusion, this approach can help shape a transition that is not only low carbon, but also just and lasting.

Annexure 1

Framework for evaluating place-based just transition policies

Assessment category	Metrics
Policy commitment and integration	Integration in the nation's development plans
	Existence of a national just transition strategy
	Just transition integration in NDCs and long-term strategy
Governance and institutional mechanisms	Dedicated institutions overseeing just transition
Assessment of economic diversification opportunities	Existence of regional or national plans for economic diversification & identification of priority sectors for diversification

Assessment category	Metrics
Social protections	Affected workers covered by reskilling programmes
	Existence of social safety nets (e.g. income support, pensions)
	Preparedness to address wage suppression
	Portability of benefits for displaced workers
	Access to healthcare and insurance for transitioning workers
	Targeted support for informal workers or coverage of high-risk regions or sectors
	Availability of grievance redressal mechanisms

Assessment category	Metrics
Workforce resilience	Labour rights and protections for transitioning workers
	Coverage of collective bargaining rights
	Government–union coordination on transition plans
	Flexibility and upskilling opportunities for mid-career workers
Financing just transition	Annual funding allocation for just transition
	Availability of financial or policy incentives for sectoral shifts
	Targeted energy subsidies as interim social protection
Equity and inclusivity	Focus on marginalised workers and communities, and the inclusion of local stakeholder consultations
	Gender considerations
	Land rights/FPIC
Climate resilience linkages	Integration of just transition in climate adaptation policies
	Support for climate-resilient livelihoods
	Funding allocation for resilience-building as part of just transition
	Programmes linking social protection with climate shocks
Global and regional cooperation	Participation in international transition initiatives

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www.aigcc.net

linkedin.com/company/asia-investor-group-on-climate-change/

info@aigcc.net

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