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Gender Responsive Transition Finance Framework

Risks and opportunities within coal industries of emerging markets

Authors

Prepared by the auctusESG team

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In partnership with Foreign, Commonwealth & Development Office (FCDO), UK Government

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FOREWORD

David Mathews
First Secretary, Head of Financial Services,
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The UK Government is working in partnership with countries around the world to deliver on our climate change ambition. Our work with India to tackle climate change is hugely important, in particular supporting India's emissions reduction ambitions. In addition to our formal partnership on climate and energy under the UK-India 2030 Roadmap, we work closely with thought leaders which here include auctusESG.

I would like to congratulate auctusESG on their research into the important topics covered in this report around decoding net zero for emerging markets. Supporting the energy transition to sustainable sectors will be a key part of the net zero transition. And the financial sector will play an important role in delivering the transition. I welcome this research as a hugely useful contribution into how to unlock the transition to net zero going forward in important markets such as India.

EXECUTIVE SUMMARY

Namita Vikas
Founder & Managing Director,
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Global decarbonization goals and net zero pledges to limit the impacts of climate change demand a rapid transitioning of hard-to-abate sectors, such as steel, cement, transport energy and aviation. Coal being the largest single source of carbon emissions, is therefore exposed to significant transition risks driven by regulatory environment and advancement of renewable energy technologies. According to the Global Energy Monitor, 37.8 gigawatts (GW) of coal-fired power capacity was retired globally in 2020, while only 34.1 GW of new coal capacity was added. This represents a net decrease in coal capacity for the first time in decades. In addition, more than 100 companies have committed to retire their coal-fired power plants, according to the RE100 initiative. Declining coal consumption, increasing investment in renewables, coal phase-out pledges, coal retirements, and the cost competitiveness of renewables - all point towards a future where phasing out of coal is possible.

Emerging markets are expected to account for most of the growth in global energy demand in the coming decades, driven by population growth, urbanization, and economic development. Many of these countries rely heavily on coal for their energy needs. A study by Carbon Tracker and Council on Energy, Environment and Water estimated that emerging markets shall account for 88% of the increase in electricity demand from 2019 to 2040.

A transition of such a large scale requires huge capital outlays. According to an estimate by UNFCCC at COP27, an annual investment of $8 to $10 trillion is needed globally until 2030 including in renewable energy, technology and infrastructure for low-carbon transitioning of economies and achieving net-zero emissions by 2050. The huge transition financing gap can be bridged by policy interventions and incentivisation of the financial community to redirect capital towards low-carbon transition initiatives.

Transitioning away from coal will disrupt local economies in terms of loss of jobs and livelihoods and labour displacement. Therefore, economies are recognizing the need to manage the transition to a low-carbon economy in a way that is fair and equitable for workers, communities, and other stakeholders. A just transition can create new opportunities for workers and communities, further local economic development, promote social inclusion and support sections of society who may be negatively impacted by the shifting away from coal. Evidence also suggests that women are disproportionately affected by coal transition, especially in emerging economies where women's roles are often concentrated in informal, indirect, and low-wage jobs, with little job security and benefits across the coal value chain. Women also face several social and cultural barriers such as lack of access to education and training, financial inclusivity, and property rights. Domestic violence, sexual harassment, alcohol-fuelled abuse and forced prostitution are seen to increase during coal mine closures. Women also experienced heightened levels of mental stress and anxiety due to increased household burden and the necessity to find alternative sources of income to support families. It is therefore critical to engender transition policies and net zero strategies, and mainstream gender parameters in financial decisions.

This paper provides a guidance framework for stakeholders to accelerate just transition from a gender lens in a coal transition scenario. The paper establishes four key cross-cutting pillars: (i) gender-just transition policies, (ii) role of financial institutions in just transition, (iii) use of alternative finance mechanisms to redirect capital towards decarbonization goals and (iv) women-centric community level interventions.

- **Gender-just transition policies** need to set the context at the national and sector levels that drive impacts at the grassroots level. Coherence in governance structures across sectors and levels of government can enable specifying roles and responsibilities with accountability for gender-specific impacts. Policies supported by incentives to the financing community can help in redirecting capital flows towards a just transition. Other key elements of policy include mandating periodic measurement and reporting of key indicators, which enhance transparency and performance

- **Mainstreaming of gender parameters by financial institutions (FIs)** by integrating gender metrics in their due diligence and financing decisions can help bridge gender inequities in a coal transition. FIs have a crucial role in promoting gender-just transition to a low-carbon economy. There is a strong need to build awareness and institutional capabilities at FIs towards gender issues and related risks. As providers of capital, FIs can take on an active role in providing solutions by embedding gender-just considerations into strategy and decision-making process. Creating women-centric transition products, engaging with portfolio companies to demand performance on gender-related metrics, and implementing place-based solutions that address the unique needs of local communities are important ways in which FIs can become key partners in facilitating a gender-just transition

- **Innovative financing solutions** which focus on accelerating financial inclusivity and upskilling of women in technology and renewable sectors can help mitigate gender inequities in a coal transition. Use of gender bonds, impact bonds and other sustainability-linked instruments that empower women with financial services, skill development opportunities and alternate livelihood options can further help in achievement of gender-just goals and a just transition

- **Engaging with local women stakeholders as agents of change** to educate and create awareness about the impacts of mine closures is crucial for success of just transition initiatives. Consulting relevant stakeholders and promoting local livelihood opportunities and social protection schemes are equally important. Social protection and assistance schemes should address the unique socio-cultural barriers that constrain women from access to education, upskilling in innovative technologies and green jobs, entrepreneurship, and self-employment. Developing women's technical and engineering skills can create alternative employment options in smart energy solutions

To conclude, this paper emphasizes the significance of incorporating a gender-inclusive perspective in a coal transition scenario and offers a guidance framework for stakeholders to expedite a more equitable and sustainable transition.

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Acronyms

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BII	British International Investment
BRSR	Business Responsibility and Sustainability Reporting
COP	Conference of Parties
CSR	Corporate Social Responsibility
EP	Equator Principles
ESG	Environment, Social and Governance
E&S	Environmental and Social
EMDE	Emerging Markets and Developing Economies
FGD	Focus Group Discussion
FIs	Financial Institutions
GDP	Global Domestic Product
GFANZ	Global Financial Alliance for Net Zero
GRTF	Gender Responsive Transition Framework
IEA	International Energy Agency
IFC	International Finance Corporation
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
JETP	Just Energy Transition Partnership
MDB	Multilateral Development Banks
MSME	Micro, Small and Medium Enterprises
NZ50	Net Zero 2050
NSDC	National Skills Development Corporation
OECD	Organisation for Economic Co-operation and Development
KPI	Key Performance Indicator
SDGs	Sustainable Development Goals
SLB	Sustainability Linked Bond
SLL	Sustainability Linked Loan
SLI	Sustainability Linked Instrument
SME	Small and Medium Enterprise
TCFD	Taskforce on Climate-related Financial Disclosures

1 | INTRODUCTION

CLIMATE CHANGE AND GLOBAL DEVELOPMENTS

The rising global temperatures by 1.1°C above pre-industrial levels has resulted in increased frequency and intensity of weather events such as floods, droughts, rising sea levels and melting glaciers. These natural disasters have threatened human lives and livelihoods that eventually stifle economic growth and development. The world is still grappling with the challenges of post COVID recovery and the Ukrainian war effects on growth prospects, food and fuel prices and social impacts. Climate change will have a multiplier effect, exacerbating these crises. The 2022 Sustainable Development Goals (SDG) Report estimates that about 3.6 billion human lives are highly vulnerable to the impacts of climate change, with drought alone putting 700 million humans at risk of displacement by 2030. Medium-to-large scale natural disasters are expected to increase by 40% from 2015 to 2030 (UN DESA, 2022). The ubiquity and increased incidence of climate impacts on businesses, societies and economies has therefore underlined net-zero emissions as an unequivocal solution. This necessitates a conscious prioritisation of "green" choices over "brown" to bring about system-wide changes.

3.6 billion lives are vulnerable to climate change impacts due to a 40% increase in natural disasters by 2030. Net-zero emissions are considered as an undeniable solution

According to the Net Zero Tracker, over 110 countries have committed to net zero in line with the Paris Agreement. However, policies and laws to tackle climate change are still work-in-progress. UK, France, Sweden, Denmark, New Zealand are some of the countries that have legally binding net-zero agreements while Canada, Spain, EU member states are working on legislations (Net0, 2022). Achieving net zero requires a paradigm shift in how economic growth is perceived today and a major overhaul of economic sectors, especially coal. Developed countries who have been the highest emitters historically are required to drastically reduce emissions and transition away from coal. Emerging economies are also being urged to follow suit. Since three-fourths of the world's coal power is based out of emerging and developing economies, coal plant closures will have severe economic and social implications in these economies, both in terms of risks and opportunities (Accenture, 2022). As the energy transition to renewable sources gains momentum, phasing out of coal plants would be inevitable.

JUST TRANSITION AND GENDER

Building societies and economies that are greener, resilient, and climate-neutral is already one of the topmost priorities of all nations globally. However, it is recognized that low-carbon transitions need to be 'just.' According to International Labour Organization (ILO), "Just Transition means greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind. (ILO, 2023)" In other words, climate action, policies and finance need to also consider socio-economic dimensions and impacts while addressing environmental challenges. ILO's guidelines for just transition emphasizes that environmental policies and programs should acknowledge the significant gender aspect of various environmental challenges and opportunities. To achieve fair outcomes, it is essential to incorporate gender-specific aspects in relevant climate action and policies. ILO emphasis that social inclusivity and financial inclusivity of vulnerable sections such as women through affordable access to environmentally sustainable solutions and finance are important for an effective just transition. It recommends that social and government stakeholders should create awareness and understanding among women about green job opportunities. Guidance on re-skilling/ upskilling opportunities, equitable training services suitable for women needs to embed into transition plans for it to be just. (ILO, 2015).

OBJECTIVE, SCOPE, AND METHODOLOGY OF THE REPORT

Coal-phase outs and exponential rise in renewable energy will pose significant transition risks in the industry. Closure of coal fired power plants and coal mines due to policy changes, and technologies and shifts in market preferences will potentially disrupt livelihoods. Although the coal sector is male-dominated, women form a significant part of the indirect labour force and supply chains and are often unaccounted and under-represented. Statistics show that the transition will have inevitable impacts on women at an individual, household, and community level. These include income loss, loss of social identity, energy poverty, domestic conflicts, and myopic transition policies due to lack of women's engagement.

Policies, institutional capacities and financial systems need to significantly ramp up to support low-carbon transition

Further, the energy needs of emerging markets are on a rapid growth phase with increased industrialization, urbanization, rising consumer demand and rapid integration into global trade. Data from World Economics maintains that 50% of global GDP is represented by 24 emerging markets and 66% of global GDP growth over the last decade (2011 to 2022) was contributed by these countries. (World Economics, 2022). It is therefore important for emerging economies to pursue their growth targets with adequate policies and interventions to support redirection of finance for a low-carbon transition.

This report aims to propose a framework for policy stakeholders and Financial Institutions (FIs) to engender policies and strategies towards achieving a just transition in coal. Solutions that can accelerate gender-just performance are also examined under cross-cutting themes of community-level interventions and the use of alternative finance mechanisms and transition finance instruments. The integrated 'Gender Responsive Transition Finance Framework' makes recommendations under the themes of policies and regulations, financial policy interventions, alternative finance, and community-level interventions. The secondary research findings have been substantiated by primary research, in the form of a Focus Group Discussion (FGD) which brought out first-hand inputs from practitioners on the role of women in transition action in emerging markets, gender-just policy interventions which can help in mainstreaming gender dimensions, financing models which can include such aspects and the challenges, risks and opportunities in adopting a gender lens while financing energy transition. Finally, the report also includes comments and insights from Expert Reviewers, thereby strengthening the findings.

2 | TRANSITION IN THE COAL INDUSTRY

CLIMATE FOOTPRINT OF THE COAL INDUSTRY

Coal is one of the critical sectors for transition and is responsible for over 0.3^0C of the 1^0C rise in temperature (ClientEarth, 2022). The dirtiest fossil fuel of all, coal combustion represents 40% of the world's energy-related CO2 emissions (Jakob, et al., 2020). In addition, recurring scientific evidence from the Intergovernmental Panel on Climate Change (IPCC) is a clear indication of an urgent need for coal phase-out. Further, the International Energy Agency (IEA) states that for the world to reach net zero by 2050, all countries need to join hands to phase-out coal by 2040 (2030 milestone for advanced economies) and increase the chances to keep global warming within the 1.5^0C scenario (IEA, 2021). Towards this objective, the 26th Conference of the Parties (COP26) could be seen as one of the turning points for the coal industry as more than 40 countries pledged to phase down coal (BBC, 2021). The achievement of such an ambitious goal would certainly require stricter policies and a rapid transition away from coal at the earliest.

COAL INDUSTRY IN EMERGING MARKETS

Emerging markets and developing economies continue to rely heavily on coal for their development. For example, coal combustion is suspected to account for over a third of the electricity produced and is the largest source of carbon emissions (IEA, 2022). Emerging markets consume 76.8% of global coal consumption, with close to 73% used in power generation (Christian Bogmans, 2020). The dependence on coal is also evidenced by the rebound it witnessed following the post-pandemic recovery, nullifying the drop in CO2 emissions observed during lockdowns (Rack, 2021). This indicates the deep entrenchment and dependence of coal across other industry sectors in the global economy. Emerging markets and developing economies currently have 1,500 GW of coal in global installed capacities, contributing to one-third of global CO_2 emissions (Stark & Miguel, 2022). An additional 500 GW is envisaged to be commissioned over the next decade in these markets. Given the average life span of coal power plants of over 50 years, this would only mean that coal plants will continue to exist in the 2070s, thereby making NZ50 challenging (Stark & Miguel, 2022). Since the peaking of coal production in 2013, economies are accelerating climate action to reduce consumption of coal-dependent energy, rapidly cutting down coal-based power consumption and transitioning to greener sources of power.

Emerging markets consume about 77% of global coal, primarily for power generation. They are critical for a global net-zero transition

Emerging economies, especially Asia shall be pressurized to expedite coal phase-outs resulting in energy transition policies and transition risk to the coal industry, thereby affecting coal-reliant workforce and communities (Lahiri-Dutt, 2022). Further, while direct employment in the coal industry accounts for only 4.7 million jobs globally, indirect job markets created by coal-powered industries across the demographic variable, especially gender are significant. In the absence of a well thought out coal transition strategy, there would be serious economic repercussions (Bulmer, Pela, Eberhard-Ruiz, & Montoya, 2021).

The socio-cultural and economic impacts of displacement are harsher on women. Mine closures do not see a shift of women labourers back to agriculture

Source: DownToEarth

WOMEN IN THE COAL INDUSTRY

Female representation within the coal industry is up to 17% of the global mining workforce (McKinsey&Company, 2021). However, the actual number of women in the coal industry is not known, mainly because most women are employed as unpaid casual labourers to help in various mining activities. In some geographies, women also resort to informal engagement in the coal industry to supplement family income but remain dispossessed, and unrecognised for their efforts (Nayak, 2020). This type of social exclusion and exploitative culture is most prevalent in the underserved areas and among tribal communities that reside close to mining sites, further marginalising women of such communities (Athar, 2012). Studies emphasise a lack of organisational structure for women which effectively translates into less representation at union levels and little economic benefits in case of job losses (UN ECE, 2022). Primary respondents confirmed that women employees are under-reported in the industry as they are off the records.

A qualitative study undertaken by The World Bank and ILO maintains that women are often employed in supply chains/ other sectors that are reliant on coal sector revenues. They are therefore significantly impacted by coal mine closures even if they are not directly employed in the coal sector. The study also corroborates that several forms of violence against women – domestic, sexual harassment, alcohol-fuelled violence, forced prostitution – increased during coal mine closures. Women experienced heightened levels of mental stress and anxiety due to increased household burden and the necessity to find alternative sources of income to support families. Over 220,000 direct and indirect jobs were lost in Polish Silesia, Europe's largest coal-mining region, due to closure of two-thirds of coal mines (Jarzabek, 2022). A surge in men's alcoholism, substance abuse and violence against women were noted during these large-scale layoffs and loss of livelihoods (World Bank, 2021).

Gender-Segregated Impacts of Coal Mining Displacement on Women in Eastern Jharkhand, India: Findings and Implications

A 2006 study based in the mining areas of Eastern Jharkhand in India, brings out the gender-segregated impacts of displacement, in an attempt to refine policies and redefine development (Ahmad & Lahiri-Dut, 2006):

- Impacts of displacement due to expansion of coal mining projects were far worse on women than on men
- Besides disruption of livelihoods, the socio-cultural consequences were far more traumatic on women given their unequal status in indigenous communities with no legal rights to property ownerships
- Domestic violence and abusive behaviour of husbands, loss of support systems, and lack of conflict resolutions further aggravated the suffering of women.
- The study suggests the need for a "**gender-sensitive model of development**" to uplift women and redefine development in the low-carbon economy

Another research by the World Bank Group on the impact of booming large-scale mining in Africa on local labour and women confirms that new mines open new jobs for women. As a result, women shift from low-paying agricultural jobs to better paying jobs in the manufacturing and services sector. However, mine closures do not see a symmetrical shifting back of women labourers into agriculture. For example, the structural shifts caused by boom-bust cycles in the African mining industry had permanent effects on women employment rates (Kotsadam & Tolonen, 2015). Thus, a coal transition affects both genders very differently, leaving women in a more disadvantaged position. As confirmed by experts, these issues require ecosystem changes and a long-term view to deliver a gender-just transition.

Increased violence against women - domestic, sexual, economic, alcohol-fuelled violence

Increased household burden, mental stress and anxiety to find alternative sources of income to support household

Lack of adequate social and legal rights and support systems for conflict resolutions, deprivation of access to resources, compensation benefits

Figure 1 Coal mine closures and its socio-economic impacts on women

Overall, as seen in Figure 1, coal mine closures have a significant impact on women. There is a need for pre-emptive action to design interventions targeted to support coal-dependent women communities, who would be subject to more complex challenges in the inevitable scenario of a net-zero transition.

TRANSITION RISKS FACED BY THE COAL INDUSTRY AND JUST TRANSITION

While the climate realities of today clearly demand urgent action, it is equally important to carefully consider all dimensions including social and human when designing climate action initiatives. Transition risks, defined as "the risks related to the process of adjustment towards a low-carbon economy," include changes in government policies, technological upgradations, shifting market preferences and consumer demand (Bank For International Settlements (BIS), 2021). These risks manifest in a variety of ways, presenting long-drawn challenges at social, cultural levels, economic and employment levels (World Bank, 2021). Transition risks are also felt more acutely by women, who are economically unempowered or with less access to resources, exacerbating the current status of inequality (Celine Guicarch, 2021). For example, the socio-economic impacts of climate change are more acutely felt by women who face high health risks and gender-based violence (CarbonBrief, 2020); (Srivastava, 2022).

Transition risks in coal industry arise from climate pledges and shifts in government policies, technology and market preference for renewable energy

In the context of the coal industry, communities that depend on it, are most vulnerable to transition risks, especially those in local economies that are less diverse in terms of industry sectors. Apart from this, large-scale displacement, and unemployment as a result of mine closures and net-zero transition also have a more detrimental impact on the physical and mental well-being of women employed in the coal industry, especially as gender aspects remain disregarded in interventions that mitigate the effects of such mine closures and resultant displacements (Ahmad & Lahiri-Dut, 2006). This is when women are, as it is, socio-economically disadvantaged and have a lower status in mining towns due to certain norms that legitimise gender discrimination (Sharma, 2012).

Furthermore, coal phase-outs also manifest as increased burden for women in terms of household work and finding an alternative livelihood (Walk, et al., 2021). Skewed power relations and social constructs have consistently made women more vulnerable to adversities in the face of change, adding on to the different dimensions of gender inequality. For example, there is ample evidence to support the fact that globally, women have endured most of the climate crisis and continue to do so (Singhal, 2022). Similarly, in the context of a coal phase-out, economic restructuring to make way for cleaner energy sources is bound to be more challenging for women than men for several reasons – such as pay inequalities, lack of women-safe work environments, cultural backgrounds, and lack of affordable mobility (Karthik, 2022). This is especially as coal phase out discourses have unequivocally focused on male workers, with female participation garnering no attention (Walk, Paula; Isabell Braunger, 2022). This aligns with primary research findings, which highlighted that lack of financial literacy and inclusion, barriers to education and disempowered social status further exacerbate these inequities.

Women have also been inadequately advantaged in terms of economic opportunities and access to finance – both key to empowerment, equality, and sustainable development. For example, economic opportunities remain heavily skewed towards men, with less than half of all women participating in the labour force, compared to over 70% of men (ILO, 2022).

As a result, it is not surprising that all over the world, men tend to earn more than women (Ortiz-Ospina & Roser, 2018). Firstly, social, and financial measures in the form of compensation do little to mitigate the negative economic impacts on female workers. For instance, a 2003 study across three countries in Eastern Europe reveals that while unemployment issues persisted even after five years of mine closures, it was more difficult for older women (more than 35 years of age) to find alternative employment opportunities than their male counterparts (Haney & Shkaratan, 2003). Secondly, differential access to resources and facilities, such as health care and other social services along with inequality in wages, compounds the challenges for women. Gender asymmetry across several parameters can increase due to decarbonisation-led large-scale socio-technical transition. This predicament further slows the transition to clean energy sources, presenting a double-bind situation which necessitates gender integration in net-zero strategies, to truly transform economies sustainably.

Ambitious long term Just Energy Transition Partnerships (JETPs) by emerging economies such as South Africa at COP26 and Indonesia in November 2022 at G20 and Vietnam seek to catalyse finance for accelerating coal transition in a manner that recognizes the criticality of keeping social and human capital at the centre of such transition policies and decision-making process. JETPs are funding structures to facilitate multilateral funding and private investment for just energy transition in emerging economies including creation of green jobs, resilient and sustainable economics. JETP is co-led by the partner countries of The International Partners Group which is comprised of France, Germany, the UK (chair), the US and the EU.

Examples of just transition

- South Africa developed an evidence-based just transition framework (President Climate Commission Towards A Just Transition, 2022) invloving an in-depth multi-stakeholder consultations for policy interventions and governance mechanisms
- The Indian state of Jharkhand has setup a state-level just transition task force to spearhead the net-zero transition efforts in the state. Through a consultative process to assess the impacts of coal phaseouts on communities and workforce, the taskforce will chalk out a roadmap for just transition and shall focus on 6 key themes such as energy transition, coal transition, livelihood transition sustainable mobility and capacity development (Deogharia, 2022)

Emerging markets can contextualize based on human dimensions and gender-specific vulnerability parameters relevant to their socio-economic profile

Policy interventions and regulations for the phasing out of coal such as limiting new coal plants and phasing out existing coal mines carry stranded asset risks that could disrupt financial stability. A well thought out plan implemented with supportive policies for a just transition is therefore undeniable. A just transition seeks to distribute the benefits of a green economy transition widely and equitably, while ensuring adequate protection to the economically vulnerable sections, whether they are countries, regions, industries, communities, workers, or consumers. (EBRD, 2022). Recognising the intersection between gender and climate in policies, system-level changes and deployment of financial resources is therefore a crucial step to making the transition orderly, just, and equitable.

COAL TRANSITION AND VALUE CHAIN IMPACTS

De-commissioning of coal plants and withdrawal of coal for electricity generation will have socio-economic impacts, thus, risking the livelihoods of many involved across coal value chains (Bhattacharjya, et al., 2021). The sector creates spillover effects on other sectors in the coal value chain – e.g., coal transportation, businesses providing goods and services to coal mines (upstream) or downstream industrial uses generating "complementary" jobs across the value chain. Local retail industry develops around coal mines to meet the local consumer demand by mine-dependent workforce and their families generating indirect jobs – referred to as coal activity "induced" indirect jobs (Bulmer, Pela, Eberhard-Ruiz, & Montoya, 2021). Coal transition therefore disrupts local economies and impacts household incomes significantly because of direct labour displacement, not only within the coal industry, but also has indirect impacts across its value chain (Bulmer, Pela, Eberhard-Ruiz, & Montoya, 2021).

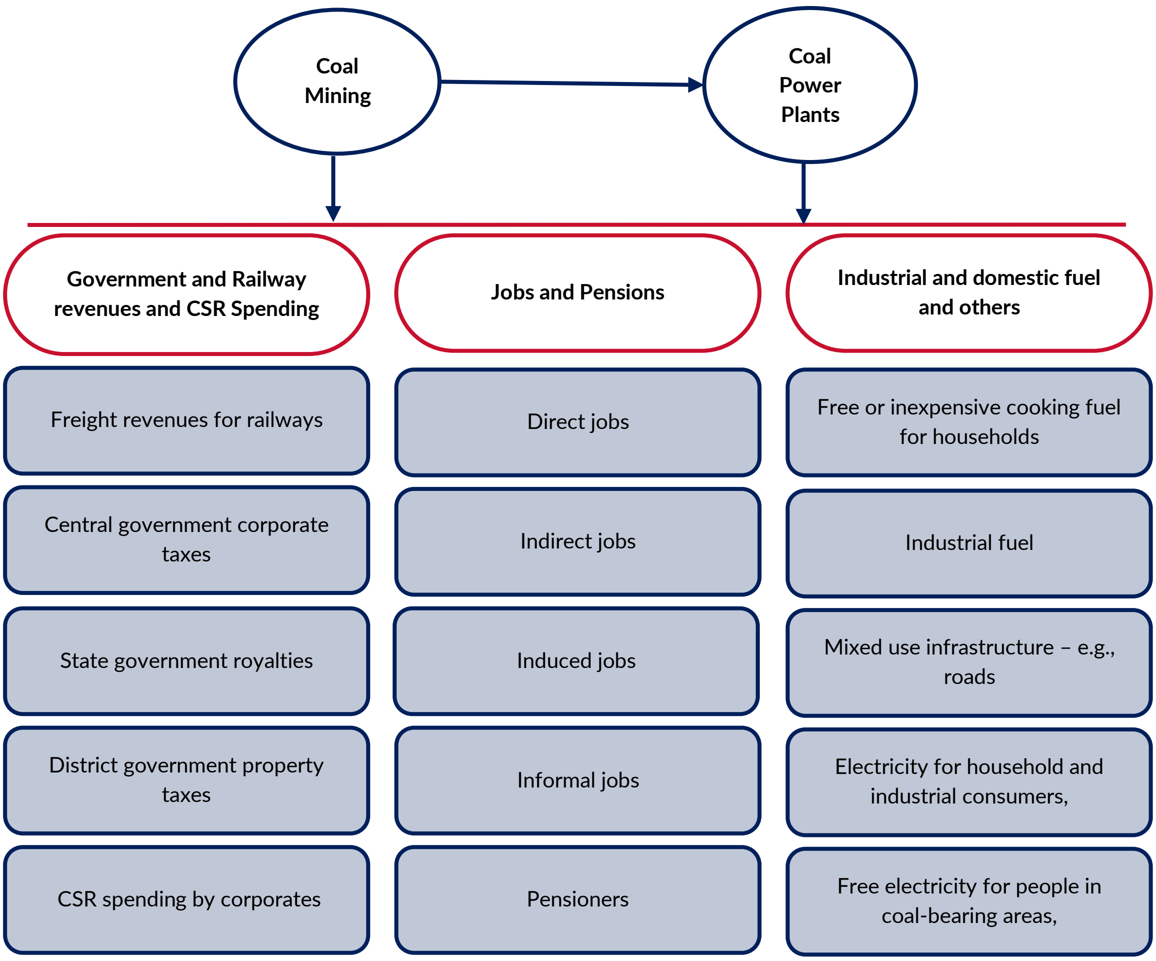

Figure 2 Socio-economic contributions of coal mining and coal power plants
Source: PhD Research Thesis: Fossil Fuel Phase Outs To Meet Global Climate Targets: Investigating The Spatial And Temporal Dimensions Of Just Transitions, Sandeep Pai University of British Columbia, 2021

A research study at the University of British Columbia on India's coal sector is an example that highlights the complexity of layers of socio-economic dimensions involved across the coal value chain and its spillover effects. The study highlighted that about 40% of Indian districts are linked to the coal sector in terms of direct and indirect jobs and revenues. As shown in Figure 2 above, coal sector is an important source of revenue for governments and railways. CSR spending by coal plants also generates jobs in the mining communities (Aggarwal, 2021).

As the adverse effects of coal plant shutdowns are more severe for women including those employed across the value chain, gender-specific vulnerability to decarbonisation is a critical issue that needs integrated and organised solutions, which can be deployed at the crucial intersection between gender and coal transition. Further it is important to create jobs in locally viable sectors including in the non-renewable sectors to enable job transitions.

Source: CarbonCopy

3 | ROLE OF TRANSITION FINANCE IN COAL INDUSTRY

IMPORTANCE OF TRANSITION FINANCE IN EMERGING MARKETS

Amid the evolving challenges of coal transition as discussed above, establishing a system of financing models, mechanisms and structures have become critically important. The shifting business models and the adoption of low-carbon, green technologies need strong financial support to address emerging priorities. According to Organisation for Economic Co-operation and Development (OECD), "transition is the journey towards the 2030 Agenda and the achievement of sustainable development, and transition finance is the financing of that journey." (OECD, 2019). Transition finance focuses on financing the transition from high-carbon to low-carbon industries. Transition finance is closest to the "low-carbon" as seen in Figure 3 below; as suggested by Climate Bonds Initiative, "transition" label can be applicable to activities or entities that are making a significant contribution to reducing emissions by half before 2030 and achieving net-zero emissions by 2050 but will not have a long-term role to play (CBI, 2021).

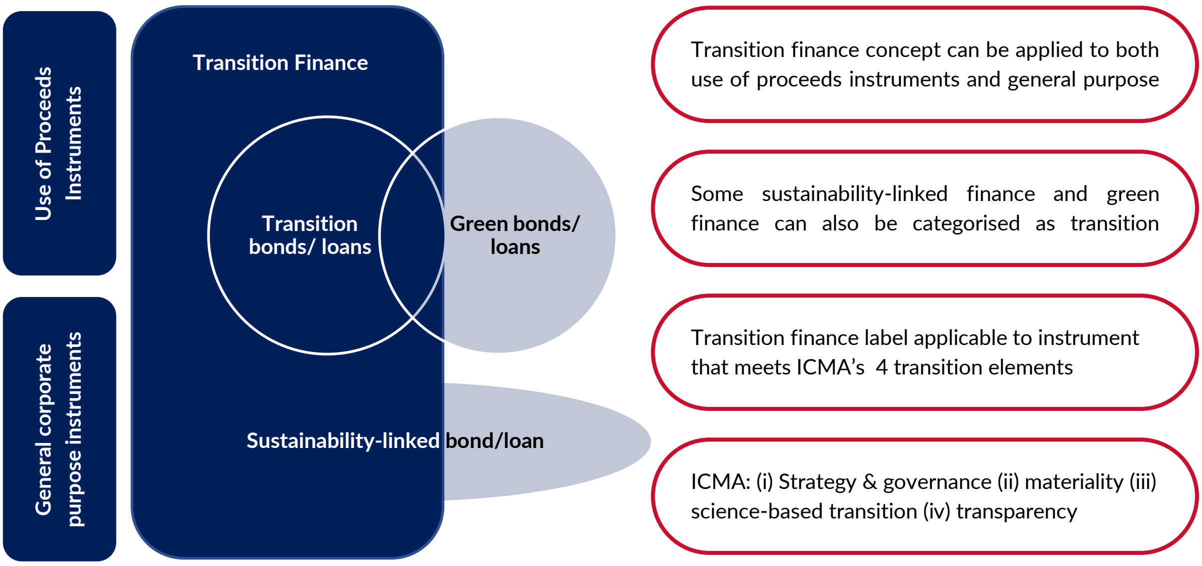

Figure 3 Concept of transition finance
Source: Ministry of Economy, Trade and Industry, Japan

Broadly defined as financial resources leveraged to support emission reductions in carbon-intensive companies, transition finance is key to circumventing major financial and economic challenges and gaps in a low-emission pathway (OECD, 2019). The space has gained significant traction over the past few years, with the size of the market closing at US $12.5 billion in 2022 vs $9.6 billion in 2022. According to Climate Bonds Initiative Global State of the Market 2022, the transition bond segment grew by 5% while the number of issuers grew by over 2.7x times and the average ticket sizes were smaller. These were primarily driven by the stronger policy environment in Japan and China. Stock exchanges like London Stock Exchange and Johannesburg Stock Exchange have established dedicated segments for transition bonds facilitating access to capital for transition to hard-to-abate sectors (LSE, 2023) (JSE, 2023).

According to an estimate by UNFCCC at COP27, an annual investment of $ 8 to 10 trillion is needed globally until 2030 including in renewable energy, technology and infrastructure for low-carbon transitioning of economies and achieving net-zero emissions by 2050. It is recognized that the transition financing gap is huge for emerging markets. For example, for transitioning into clean energy systems, the IEA estimated that $1 trillion was required annually till 2030 by emerging and developing markets (EMDE), excluding China to meet 2050 net zero targets. However, their current spend is only 15% of the requirement. Further demand for sustainable opportunities is rising. Global ESG assets under management was at $46 trillion in 2021 and is expected to double by 2024. Greater allocation of these assets to transitioning emerging markets can happen if the policy makers create market systems for capturing the interest of the global investors (Jain G. , 2022).

Transition finance is relevant for companies that have a significant carbon footprint and need to adapt to new environmental regulation, consumer and investor sentiments

The setback suffered due to the pandemic has further intensified the need for transition finance, more so in emerging markets. Cumulatively, $94.8 trillion worth of additional investments is needed in emerging markets to reach a net-zero economy by 2060 (Standard Chartered Bank, 2022). This is when the financial sector is struggling to even define transition finance uniformly (Caldecott, 2020). There is also no common consensus on the range of financial instruments needed to scale this financing approach (Michaelsen & Mylläri, 2021). As a result, the issuance of transition instruments remains uncommon with the quantum of issuance showing a marginal difference over the years as evidenced in the issuances data earlier. This stems from multiple inadequacies as highlighted in Figure 4 below, among others.

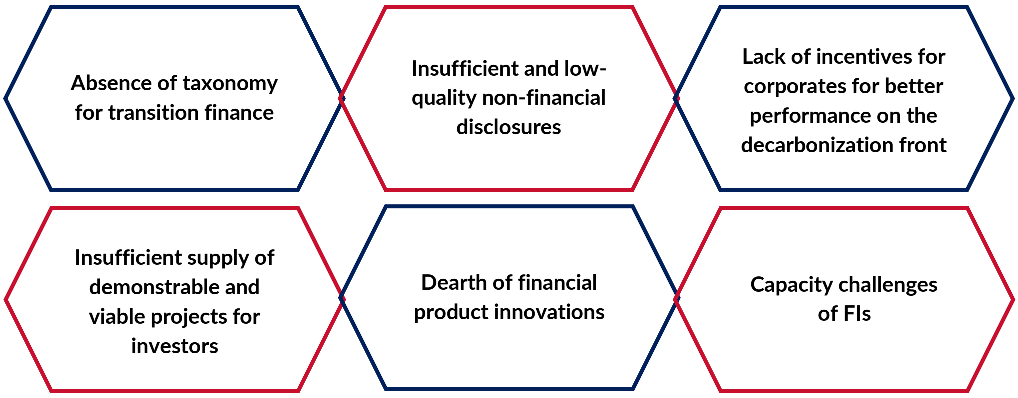

Figure 4 Limitations to transition finance

Navigating the complexities of this space often dissuades private investors. Additionally, in most climate ambitions and action plans, there are typically no viable transition pathways described. In the absence of global standards and principles and clear definitions of what is a transition financing activity, it further fails to legitimise investments in transition assets, projects, and activities, impeding tracking of transition finance flows and raising concerns for “transition-washing” (Oxford Business Group, 2021).

Even with all the headwinds facing the mainstreaming and scaling of transition finance, demand for financing to pivot to greener business models and solutions is likely to mount. To achieve the soaring net-zero commitments over the world, a significant amount of finance will be required. Thus, there is tremendous potential for transition-focused finance including green bonds and debt issuances to meet the financing requirements over the next several years (Whieldon & Laidlaw, 2021). This certainly suggests enormous potential, which needs to be augmented and improved through policy considerations and funds' redirection. While policies and the financial systems rethink and re-orient towards transition finance, it is pertinent to bring in a gender lens early on for a gender-just transition.

NEED FOR GENDER-RESPONSIVE TRANSITION FRAMEWORK

For net-zero transition and a low-carbon economy to be truly effective and uniform in delivering an effective just transition, it is essential that gender-specific consequences are considered. Such considerations in the context of coal mine closures have been disregarded in policies and practices. Experts iterate that women have not been actively involved in policy and fiscal planning and development, or at best, have remained an afterthought (Joshi, 2021).

Safety nets have traditionally been extended to men as they dominate the workforce in coal, or extractive sectors, in general. This leaves out women, who are employed in the lowest form in such sectors, vulnerable to economic shocks likely to accompany a poorly planned net-zero transition. The near-immediate drop in women's employment across sectors, along with a rise in violence against women during the pandemic is a testament to this claim, of how adversities/changes are more acute for women (Barua, 2022). Primary research findings suggest that while innovative financing mechanisms have emerged, they fall short of fully integrating a gender lens within their scope.

Lack of gender considerations in sustainable finance

- Gender-inclusive financial products account for only 0.03% of the $40 trillion sustainable finance market (Uzsoki & Rahim, 2021)
- Sustainability-linked loans and bonds (SLLs and SLBs) commonly measure climate-related KPIs such as carbon emissions, renewable energy, and sustainable sourcing.
- In practice, gender-related KPIs in sustainability-linked instruments is significanty less frequent despite its flexibility (Environmental Finance Data, 2022)

Including gender considerations/ KPIs into sustainable finance structures irrespective of their thematic/ programmatic focus is critical to reap the societal and financial benefits of a meaningful just transition policy with maximum impact. In this regard, a Gender-Responsive Transition Finance (GRTF) framework would enable linking gender-just principles with climate action and outcomes. The steady buildout of transition finance presents a clear opportunity to guide, deploy and implement this effectively, to make the transition inclusive and fair for all.

4 | THE GENDER RESPONSIVE TRANSITION FINANCE FRAMEWORK

A low-carbon economy presents tremendous opportunities, one of them being the achievement of gender equality, inclusivity, and justice - which is central to realising SDG targets and the Paris Agreement (Dhir, 2017). This is because women play a leading role as environmental, social, and economic actors in greening the economy.

Given the near-superficial consideration of gender-based factors while planning a low-carbon development, it is important to develop a transition finance framework that integrates gender-related objectives. A Gender Responsive Transition Finance framework seeks to integrate gender concerns in transition finance and investments made for decarbonisation. Such a framework would also help enhance financial flows by identifying areas of gender-related impacts and leverage points in addition to a generic just transition.

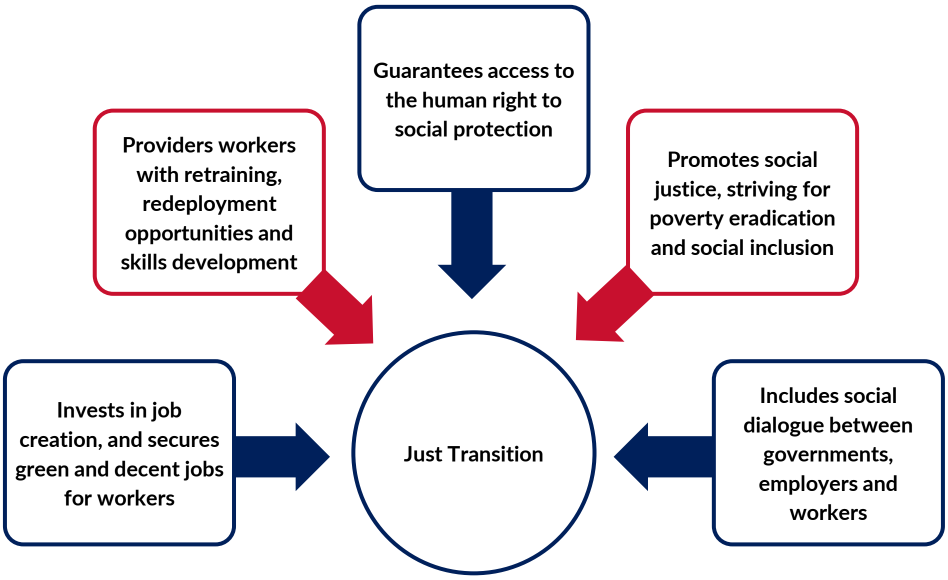

Figure 5 Just Transition
Source: ILO Report: Social Protection for a Just Transition

Drawing from and building on the ILO's Paper on Social Protection for a Just Transition (2019), a GRTF framework seeks to consistently mainstream gender-just related objectives in formulating plans, policies, and principles. The framework shall enable and catalyze investments towards building sustainable and greener economies for thriving and resilient local communities with gender-adequate social protection (ILO, 2019). By integrating ILO's Just Transition framework of Figure 5 with Transition finance principles (ICMA, 2020) and TCFD's disclosure recommendations on governance, strategy, risk management, metrics, and targets, (TCFD, 2017) along with gender-related goals, a holistic foundation for gender-responsive transition finance can be established.

It is suggested that the GRTF framework be guided by the following principles.

- *Effective governance:* Alignment of resources, accountability and transparency in the implementation and monitoring of progress is the foundation of an effective governance and oversight mechanism for achieving the objectives of a gender-just transition.
- *Long term vision with short-term goals:* Gender-just transition requires a long-term view around economic and socio-cultural impacts on gender dimensions in the decision-making process. From a strategy perspective, gender issues and impacts need to be woven into long-term vision and planning by policy makers, corporates, and transition financiers. Short- and medium-term goals, operations and gender-related metrics can then align with the impact expectations and objectives of the coal transition
- *Gender-just transition management and process:* Baseline assessments of material economic and socio-cultural impacts on vulnerable sections with a focus on women should guide risk management practices and forward-looking targets. Definition of relevant metrics and targets to assess and report on risks, opportunities and impacts and monitoring of progress from a gender perspective should be a part of transition management process

As is seen, impact and performance metrics and targets often are embedded into governance mechanisms, risk management and reporting structures. Therefore, for the purposes of this proposed GRTF, instead of carving out separate section on metrics and targets, gender related measurable KPIs can be woven into the overarching pillars of governance, long term strategy and gender-just risk management process. Since transition is a complex and dynamic process, it needs to flexible and revised/ updated through an inclusive process to make it relevant to the changing local/ global contexts and times. Policy choices and the allocation of financial resources will influence the extent and nature of employment and socio-economic impacts.

Therefore, it is crucially important to involve those who will be impacted – workers, employers, communities – in the decisions to be made (ILO, 2022).

Determining focus areas and consolidating them into a framework would provide greater transparency, clarity and credibility that would help boost investor confidence, enhancing the quality and quantity of financial flows. Taking this into consideration, this paper identifies four key focus areas for a GRTF framework:

- policy and regulations,
- financial institutions,
- alternative finance, and
- communities

Policy and regulations	○ Coherence and governance structures ○ Collaborative long-term vision setting and communication ○ Evidence-based policy design ○ Impact management and transparency ○ Gender-just transition pathways and resourcing including reskilling and livelihood support ○ Incentivization to Financial Institutions ○ Use of public finance as a source of scaling up gender-based finance
Financial Institutions	○ Build sensitization towards gender issues ○ Accountability and transparency ○ Gender considerations in strategy and decision making ○ Creation of women-centric transition/green products ○ Engagement with portfolio companies ○ Place-based solutions
Alternative Finance	○ Blended finance structures ○ Labelled Bonds ○ Sustainability linked instruments ○ Financial inclusion products focused on gender - just transition ○ Other innovative approaches
Communities	○ Involvement of critical stakeholders in transition dialogues ○ Designing localized community-based interventions ○ Social protection schemes for women ○ Education and capacity building for women

Figure 6 Four pillars of the proposed GRTF Framework

The following section 5 elaborates on the four focus areas as shown in Figure 6 above.

5 | FOCUS AREAS OF THE FRAMEWORK

POLICY AND REGULATIONS

Energy and coal transition and policies often intertwine as traditional energy sector continues to be coal dependent. The International Union for Conservation of Nature (IUCN) analysed 192 national frameworks including policies, plans and strategies developed by 137 countries globally. It was found that a vast majority of national energy sector policies are gender neutral and only 1% of such national frameworks recognized women as change agents (Prebble & Rojas, 2017). An independent Switzerland-based research organization that promotes responsible extractive industry practices, Responsible Mining Foundation, substantiated the disadvantaged position of women in the mining sector and confirmed that women-related challenges are often ignored by mining companies and regulators alike. The research results corroborated that gender considerations are rarely a part of strategies or decisions and are not included in legal or ESG standards (UNECE, 2022).

Policy interventions and regulations have significant influence on socio-economic impacts, employment generation and finance allocation

Addressing gender gaps and equity is key to driving an equitable transition and achieving larger SDG goals. Be it making the workforce more gender-neutral or changing social paradigms related to women, policy and regulations have a vital role in enabling such alterations. Globally, the awareness and action on the climate front are escalating as a result of regulatory action. A similar case for action can be created for gender-just transition, wherein policymakers adopt a gender lens to accommodate women's transition to a low-carbon economy.

Integrating gender considerations would require a collective understanding of just transition itself in which certain similar procedures and processes can form a fundamental idea (Conway, 2022). For instance, mapping regions and communities would help assess the scale of action and financing required. In addition to this, policymaking through a participatory diagnosis, or similar method would help align climate and public policy efforts with gender-just transition, potentially eliminating the need for new arrangements (HelenRossa, S.Adhurib, Yansyah, Anna, & Pheland, 2019).

Primary research respondents confirm the need for participation and 'localized' solutions. For example, East India has majority of the coal mines, while West India has more renewable energy opportunity. Shutting down coal plants in East India would displace livelihoods to a sizeable percentage of the population. However, migrating such workforce to West India is not a feasible solution, thereby necessitating policies which can encourage local solutions to accommodate such livelihood options.

Highly localized solutions in creation of long term alternative livelihoods options for women is fundamental for a gender-just coal transition

Planning social protection schemes in a holistic manner is also necessary to address the barriers faced by women in accessing such initiatives. These barriers may be in the form of the digital divide, mobility issues, social norms, or little to no employment benefits post-training (Nikore, 2021). In other words, supporting women through the transition process while enabling them to sustain themselves needs to be built into policies to actualise a just transition. At the same time, embedding gender-transformative approaches into climate policies and tools is also essential to harness women power in leading the transition away from coal (Jarzabek, 2022).

Spain's Gender-Inclusive Transition Strategy for Green Job Creation

- In 2020, Spain adopted a gender-inclusive national transition strategy in which green job creation policies were required to mainstream gender considerations, reduce gender inequalities and provide opportunities to women in transition
- Provisions for measuring and monitoring progress through collection of gender disaggregated data were also included
- A joint protocol signed by the Women's Institute of Spain's Ministry of Equality and the Institute for Just Transition in 2021 emphasized on improving women employability and working conditions in transition-affected areas and increased visibility of women as change agents and entrepreneurs (ILO, 2021)

While the outcomes and impacts are yet to be seen, it only reinforces the necessity for a gender-responsive climate action plan

Primary research highlights the necessity of developing alternative livelihoods for displaced workers, considering local socio-cultural and family dynamics. Respondents observed that projects tend to have short-term vision and are abandoned after the pilot phase. Thus, financing for community livelihood projects should have a long-term perspective, supported by ongoing implementation structures to ensure scalability and sustainable outcomes.

Ensuring increased participation and access for women in traditionally male-dominated sectors, creating pathways for new job creation and social protection of women in general across sectors is a part of a just transition. From a practical response perspective, a good example is that of North America's Building Trades Union, which advocates programs for training and upskilling of women. European trade unions are also seeking to enhance focus on improved job creation and quality for female workforce as part of just transition process (Smith, 2021).

Stakeholder engagement and collective ownership process in planning and implementing policies for large scale coal mine closures enables better transition adjustment

Key takeaways for policy and regulations

i. Coherence and governance structures: Just Transition policies need to be coherent across sectors and levels of government – national and sub-national - with specific roles, responsibilities, and accountability for a just transition that includes impacts on gender-specific parameters. Relevant committees/bodies may be constituted with responsibilities for oversight that includes specific gender justice objectives. For instance, South Africa's Presidential Climate Commission's working paper (Trade & Industrial Policy Strategies, 2021) suggests that often it is essential to analyse the existing functions and structures of the national, provincial, and municipal governments, that are challenged by lack of well-defined authority and responsibilities and do not include specific mandates with measurable targets. When defining policies, the paper urges governments to create functions and structures using theory of change model that distinguishes policy aims (long term impacts) from intermediate objectives (outcomes) and specific government action (output). The structure can capitalize on the local knowledge and networks of local bodies (municipal, provincial) while leveraging the resources of apex/national level authorities.

Mine closure experiences

- **South Africa mine closures:** Non-consultation with workers prior to close of 5 non-viable coal plants by Eskom in 2017 led to strikes and protests by The National Union of Metalworkers of South Africa . In 2018, the Union intercepted the Ministry of Energy from entering into private contracts for expanding renewable energy in South Africa through a court order
- **Netherlands and Poland:** In contrast, Netherlands and Poland engaged deeply with stakeholders prior to large scale closures of mines. Responsibility and governance structures were integrated in implementing the programs resulting in better management of coal transition challenges (World Bank, 2021)

ii. Collaborative long-term vision setting and communication: A coherent long-term vision and commitment to just transition goals that include gender-specific expected outcomes can help in streamlining policies. Linking gender goals to larger SDGs and making it a part of public financial management can help mainstream gender considerations. Clarity in vision in terms of articulate targets and metrics, as well as establishing efficient communication channels across governing and implementing public authorities is important. Long term transition strategies should be formulated by engaging with stakeholders and including an additional gender lens. Inclusive and collaborative process of stakeholder engagement helps better identify the needs / challenges of the communities affected by transitioning away from coal. It also enables consensus-building on the way forward. Further, engaging stakeholders in the process and throughout the planning and implementation stages process facilitates better management of coal transition challenges. (Connolly, 2022).

iii. Evidence-based policy design: For policy to produce the desired effects, it is critical to implement interventions that are developed based on evidence of impacts. Collection of evidence involves baseline vulnerability and impact assessments of livelihoods and other socio-cultural aspects on indigenous communities including on a disaggregated gender basis. Policies can be implemented based on gaps and opportunities identified to amplify impacts. Regulatory enforcement and implementation of plans are then oriented toward expected social and women-centric parameters. Impact indicators for performance measurement and mechanisms to achieve results can then be culled out for effective gender-sensitive transition.

iv. Impact management and transparency: Measurement and monitoring of social and gender impacts periodically and adjusting just transition plans and actions to meet the gender just transition goals is important for achieving results. Strengthening of practices and processes for data collection and reporting systems to assess policy impacts is a critical element of risk management systems. For example, the mandatory BRSR reporting in India mandates the top 1,000 listed companies to collect data on women workforce at various levels – junior, middle, and executive - and on wage (dis) parity. This data can feed back into gender-responsive human resource policies with respect to hiring, training, retention, and promotion. Primary research findings confirm that mandating enhanced reporting at coal plants and compulsory gender audits will force companies to re-think gender impacts.

Reporting is an easy, yet critical tool for result-oriented implementation of policies. Data yields valuable insights and intelligence for decision-making

v. Gender-just transition pathways and resourcing: Development of just transition pathways and priorities that identify potential impacts and over short-, medium- and long-term time horizons is important to measure and report on progress and take responsive actions through feedback mechanisms. Local and sub-national governments whose economies and local livelihoods are coal-dependent should be sufficiently resourced to generate gender impacts in a coal transition scenario. Reskilling and livelihood support should be factored into transition policies and pathways.

vi. Incentivization to Financial Institutions: Catalytic policies, guidance frameworks and incentivization of the financing community to redirect capital flows towards a just transition would further accelerate the gender-just transition process. For example, ADB's Gender Toolkit provides guidance to promote gender mainstreaming in public policy and projects focused on the micro, small and medium-sized enterprises (MSME). The Toolkit identifies a list of potential gender issues and how these can be addressed through enabling policy features and indicative KPIs in gender action plans. Key gender analysis questions have also been included in the toolkit. A potential barrier for women to access loans is their inability to offer collateral due to lack of property ownership. Policies that remove gender-unequal provisions on property ownership, refining banking laws to relax collateral requirements or encourage earmarking of MSME loans to women borrowers could be some of the possible measures (Asian Development Bank, 2014).

FINANCIAL INSTITUTIONS

Banks and financial institutions are gradually beginning to reorient their financial resources and business models towards a low-carbon development, which was upheld by developments at COP26. The formation of the Glasgow Financial Alliance for Net Zero (GFANZ) was a significant step to bringing banks together under one roof to accelerate the transition to a net-zero global economy. Supported by over 450 banks, the GFANZ promises to advance lending toward decarbonisation and report on the progress made (GFANZ, 2021). Besides this, landmark agreements reached at the global climate conference is also believed to set the tone for bank financing in the future (Thomson Reuters, 2021).

Women's association, or rather, dissociation with the banking sector can be seen at various levels. Firstly, from the perspective of financial inclusion, women are still falling behind men, who have 9% more chances of having a bank account (Hess, Klapper, & Beegle, 2021). The efforts of banks in enhancing financial literacy, access to digital banking services and formal assistance in setting up a livelihood have improved over the years, but barriers for women still exist in several geographies. This hampers the efficiency and effectiveness of direct benefit transfer schemes, challenging the social security of women (Kumar, 2022). Contextualising a transition away from the coal industry and providing a mandatory reference framework and compliances impels necessary action from public trust institutions, such as banks.

Financial literacy and access to banking services continue to pose significant challenges to women and livelihoods

Source: World Bank

With just transition becoming the focus of all transition discussions across businesses and governments, financial institutions will also need to overhaul their business strategies and practices given their key role in enabling climate transition. For example, ILO has developed a Just Transition Finance Tool to guide FIs to integrate just transition considerations in their financing activities as depicted in Figure 7 below.

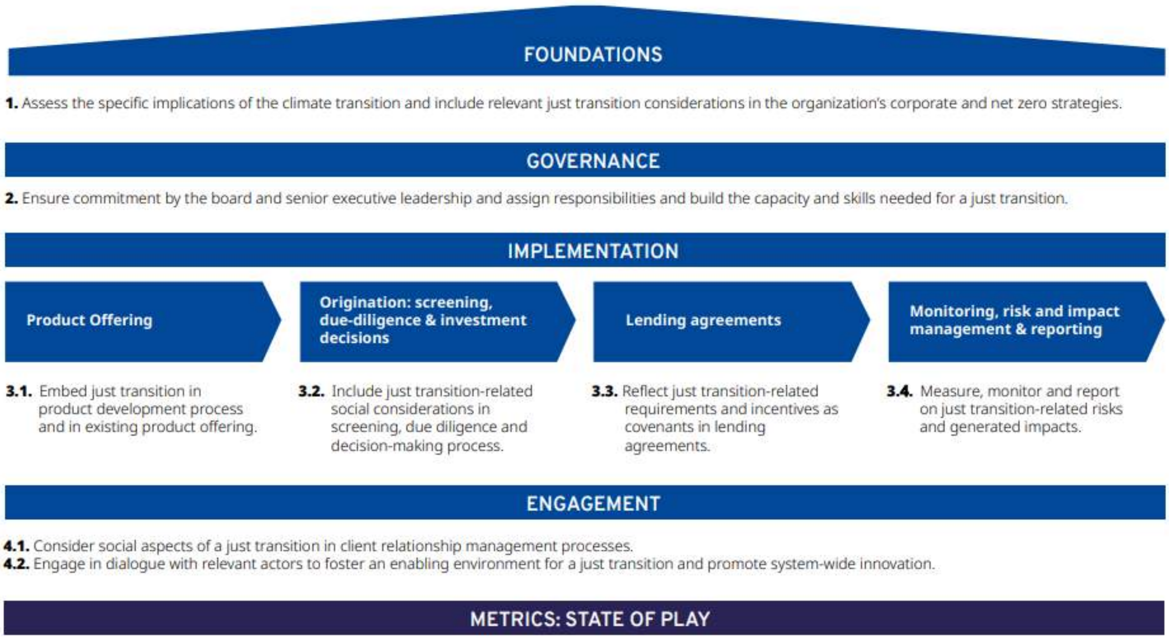

Figure 7 Four steps for embedding just transition in banking activities
Source: ILO, Just Transition Finance Tool for banking and investing activities

The tool suggests engaging with clients to ensure 'just' objectives and targets, including gendered ones wherever material and relevant as part of their transition plans (ILO, 2022). With FIs being urged to integrate social considerations into their lending policies, this can be a good opportunity to emphasize on gender considerations.

More importantly, banks still are one of the biggest coal supporters. Research shows commercial banks worldwide are responsible for over $1.5 trillion worth of investments that have flowed into the coal industry (Urgewald, 2022). The gender-just approach, which is subsumed in a just transition, continues to remain out of focus. This is due to a lack of direction from regulators on the role of banks in initiating conversations around just transition (Clifford Chance LLP, 2021). Without any dedicated just transition frameworks or guidelines mandated by banking regulators, social considerations in general and gender considerations in particular, remain at the periphery, at best.

Banks can play a critical and catalytic role in accelerating gender equity by committing to prioritising gender-relevant parameters in financing projects

Globally, banks are witnessing green shoots in terms of climate and ESG financing and investment products. Integrating a gender-responsive approach in such forms of financing is known to have a positive effect in the form of higher rates of return on sustainable transactions. Further, in all ESG/sustainable finance investments, gender is the unstated common denominator as the benefits accrued from these forms of finances trickle down to create favourable economic outcomes eventually and are intricately linked.

Given this context, there is a need for banks and financial institutions to change their approach. Environmental and Social (E&S) risk for financial institutions are inherent in the borrower's nature of operations and need to be managed to avoid "reputational image, costly litigation, or loss of revenue" (Asian Development Bank, 2017). While what material social risks (or opportunities) are relevant depends on the nature of the client's business, some common social aspects include human and labour rights, job losses, diversity, and inclusivity. FIs should therefore articulate a proper transition plan that embeds justice for women and local communities - this strategy should be business-wide and include certain basic tenets. For example, a renewable power project, promoting gender equity in job creation and skills development is desirable. (ILO, 2022).

Energy2Equal: Promoting Gender Equity in Renewable Energy Sector in Sub-Saharan Africa

- In 2019, IFC launched a 5-year initiative, Energy2Equal to promote gender equity among the workforce in the Renewable Energy Sector in Sub-Saharan Africa
- The initiative provides recommendation to corporates to close gender gaps by addressing challenges in recruitment, training, retention of women workforce etc
- For example, Schneider Electric with energy projects in the region has committed to a 50/40/30 gender diversity KPIs in its sustainability strategy. This denotes Schneider Electric's targets of having women workforce to be - 50% of all new hires, 40% of frontline managers and 30% of senior leadership roles by 2025. It also aimed to remove occupational segregation and encourage more women participation in sales force (Energy2Equal Africa, 2022)

FIs can adapt some of these aspects while engaging with its clients at pre- financing stages or driving impacts post financing

Amendments to the EPs include commitments to human rights, climate change, indigenous peoples, and biodiversity – all pertinent for risk management and risk mitigation for a gender-just transition. For example, while assessing a project, the documentation should cover gender and gender disproportionate impacts and that could provide a basis for prioritising relevant gender metrics (Equator Prinicples, 2020). Another way of addressing E&S risks emerges from adherence to global standards and principles. For example, the Equator Principles (EPs) have altered the way projects are funded globally. In a risk management framework, the EPs provide the basic criteria for due diligence and monitoring to make responsible decisions across five financial products - project finance advisory services, project finance, project-related corporate finance, bridge loans and project-related acquisition and refinance (Equator Principles, 2022).

Gender Lens Investing is becoming a notable strategy in the investment industry. Research by Wharton Social Impact Initiative shows that the number of gender lens funds that invest in private equity, venture capital, and private debt, increased by approximately 50% between July 2020 to June 2021 (Biegel, Brown, & Hunt., 2022). Moreover, funds considering women's issues in their investment process now contain $49 billion in assets, increasing more than twice in just two years (Giles, 2022)

In the energy space, British International Investment (BII), UK's Development Finance Institution's investment in an Indian green infrastructure company is a good example of its just transition initiatives. BII invested $230 million equity in the company that included capital allocation for training and skill development of women in renewable power plants and other local green energy jobs (Clifford Chance LLP, 2021). Similarly, relevant gender parameters may be considered by banks when financing coal transition and green energy projects.

Source: World Bank

Amundi Asset Manger's product that focuses on investments with just transition for climate is also a good example of how FIs are participating in just transition goals. Amundi invests in companies that has better transition parameters with 50% weightage to workforce protection in industries that are restructuring (UNPRI, 2021) . Comparable products with enhanced gender-specific parameters if created in emerging markets may help further solutions.

Key takeaways for FIs

i. Build sensitization towards gender issues: While FIs increasingly are recognizing the need to consider economic impacts of environmental factors in a financing decision, gender issues are rarely a part of their agenda. There is a need to create enhanced awareness and build capabilities across the organization to gender-related socio-economic impacts. For example, banks/ investors can engage with a potential borrower/ investee company on gender aspects while conducting due diligence and risk and impact

Sensitizing male-dominated executive-level management to gender issues is key, as they are crucial decision makers and partners in advancing gender solutions

assessments. FIs can also co-develop gender action plans (CDC Investment Works, 2022) along with clients for achieving gender targets. Private equity investors play an active role in business strategy development consultations and can use it as a platform to address gender related issues and measures.

ii. Accountability and transparency: Management level responsibilities for gender-related impact performance of financing decisions need to be strengthened. Periodic review and measurement of gender-centric performance indicators throughout the financing and project cycles increases accountability, outcomes, and impacts. Identifying potential gender issues and formulating measures to address the issues with quantifiable targets provides direction and helps to re-align processes and practices to achieve the outcomes. Incentives linked to performance on gender strengthens management accountability.

iii. Gender considerations in strategy and decision making: Gender-just considerations need to be incorporated in screening and diligence process of potential financing activities and processes such as selection criteria, including metrics and gender-sensitive credit lines/ investments. Development of sector-specific gender guides could be a useful tool to redirect capital into gender-just transition initiatives. Institutional capacities to collect and analyse sex-disaggregated data need to be built into the financing process.

iv. Creation of women-centric transition/green products: Gender-just coal transition opens multiple opportunities to create innovative financial products that have gender-linked metrics. For example, bank loans designed specifically for rehabilitation of women facing job displacement, can help in banks actively getting involved with companies owning coal plants which need to plan a transition. In collaboration with several partners, India's National Skill Development Corporation (NSDC) raised over $14 million in Skill India Impact Bond. The funds shall be utilized for youth skilling programs with 60% beneficiaries being women (Strategic Investment Research Unit (SIRU), 2021)

v. Engagement with portfolio companies: FIs can leverage the power of capital and stewardship capabilities to demand performance on gender-related metrics and tie it into their financing covenants. FIs therefore play a catalytic role in increased uptake of gender issues at corporate level including their strategies, planning, processes, products, risk management and gender-related disclosures. Investor coalitions aimed to drive climate performance are fast becoming popular - e.g., Climate Action 100+. Similar stewardship initiatives by investors are upcoming to drive gender equity.

Stewardship - FIs can leverage the power of capital to influence portfolio companies

- 30% Club France Investor Group coalition launched by Axa Investment Managers targets at least 30% female representation on the management teams by 2025 of SBF 120 stocks index through stewardship (Axa Investment Managers, 2021)
- BNP Paribas Asset Management influences its investee companies on gender equity and environmental considerations (BNP Paribas Asset Management, 2022)

vi. Place-based solutions: The socio-economic concerns of different localities/ places/ communities are unique with different priorities and must be addressed. Multilateral Development Banks (MDBs), investors and commercial banks can collaborate with key stakeholders and anchor a gender-just transition in locations/ communities that are suffering from potential closure of coal mines. For example, local branches of large banks can design financial products with KPIs that support alternative employment opportunities for displaced women, upskilling or reskilling of women workers in areas where they service.

ALTERNATIVE FINANCE

Instruments, products, and structures emerging outside of traditional financial systems have worked well to scale sustainable finance. The democratisation of alternative sources of finance has resulted in cumulative green debt issuances since 2006 crossing $2 trillion as of September 30, 2022. Green debt issuances contributed 57% of the cumulative issuances of all sustainable bond labels such as green, transition, social and sustainability which touched $3.5 trillion as of September 30, 2022. (Climate Bonds Initiative, 2022). Despite its growth, green finance is not sufficient for achieving net-zero targets. Transition finance to carbon-intensive and coal-dependent sectors, along with appropriate sources and scale, is also essential.

Financial innovation is key to raising capital to cater to the changing needs of companies that have been motivated by climate change. Although not on a large scale, green financial instruments have witnessed a significant rise in performance, resulting in their buildout across the globe. Therefore, alternative financial instruments developed on the back of innovation have the potential to accelerate financing. Innovative structures like blended finance provides de-risking mechanisms to leverage scalable risk capital. Outcome based sustainability-linked instruments incentivize performance and address green-washing concerns of investors (Gardes-Landolfini, et al., 2022). In addition to the indispensable need to redirect financial flows, encouraging finance and innovation for gender inclusivity in coal transition is also needed to address social objectives alongside the low-carbon transition.

Decommissioning coal plants in Asia – ADB financing partnership scheme

i. ADB long with other FIs have proposed an innovative public-private partnership scheme to speed up the decommissioning of coal plants in Asia.
ii. The scheme blends a mix of equity, debt and concessional finance to buy out and operate the coal plants at a lower cost of capital providing for better returns that can be used to repay debtors and investors
iii. It expects to close the coal plants within 15 years, well ahead of its usual life while providing breathing space for workers to find new jobs and economies to move to greener energy (Clifford Chance LLP, 2021)

Such models and alternative sources of finance can be utilized to create desired social impacts and gender-specific outcomes

Alternative financing mechanisms and creation of innovative products that are linked to predetermined performance targets on gender parameters can create positive impacts in a coal transition. However, so far, gender equity and equality has evolved largely independent of transition finance or has seen narrow interlinkages to such a label of finance. For example, the financing plan proposed by a South African electric utility with heavy coal reliance, is a "pay-for-performance" model wherein the loan is paid out as decarbonization projects progress. This multi-tranche, multi-year, concessional facility, that has garnered interest from the US, UK, and the EU (Eskom, 2021) can potentially be enhanced for gender-linked performance indicators and can be contextualized by other geographies for gender-linked transition finance.

Such linking of KPIs related to gender responsiveness with transition finance instruments would be helpful. Such a product structure would facilitate the shift away from carbon intensiveness while creating provisions for those affected and rendered vulnerable due to such transformations. Reconciling gender equity and equality is one of the ways to create avenues that would cater for the complexities associated with the coal phase-out. In this way, innovation can be a recourse for transition finance instruments, however, their emergence is much slower than their sustainability counterparts.

Source: IFC

Key takeaways for alternative finance

i. Blended finance structures: Blended finance is a transaction structuring approach that facilitates the pooling of capital from a diverse set of financiers with different investment objectives. Catalytic public finance, say from philanthropy and DFIs is used as a guarantee to draw in private capital, by reducing the riskiness of the project. Blended finance structures are increasingly being used in developing and emerging markets to create scalable impact (Convergence, 2022).

ii. Labelled Bonds: Labelled bonds such as gender bonds, transition bonds, social bonds can be used for achieving desired gender impacts in a transition scenario. For example, a $200 million issuance of Krungsri Women SME Bond by the Bank of Ayudhya in 2019 focused on providing loans to women-led SMEs in Thailand. Another example is the Women's Livelihood Bond Series (WLB Series) - an innovative financial instrument floated by the Impact Investment Exchange (IIX) to mobilize $150 million of private capital for the purpose of creating sustainable livelihoods. Over 2 million women in South and Southeast Asia affected by climate change received access to affordable credit, micro savings, insurance, affordable and clean energy through the bonds. WLB was also the world's first women-focused instrument generating social and financial returns for investors and is also listed on social and traditional stock exchanges (UNFCC, 2023). Similar funding mechanisms can be explored to focus on place-based/ project-based gender parameters for transition related impacts. Also, transition bonds may include specific gender related KPIs.

Financial literacy, inclusivity and access to skilling and micro-entrepreneurial opportunities are important for women empowerment

For example, the FCDO-funded ASEAN Low Carbon Energy Programme (LCEP) is a GBP 15 million fund that aims to enable low carbon energy initiatives in the ASEAN region. LCEP complies with the UK's International Development (Gender Equality) Act and mainstreams gender parameters across all its interventions in its low carbon transition. With the support of LCEP, Thailand's Securities and Exchange Commission developed a guide for sustainable bond issuance guide that specifically advocates for and demonstrates the integration of gender equality into all types of sustainable bonds, irrespective of their thematic focus (UK Government, 2022).

iii. Sustainability-linked instruments: An 'outcome/performance-based' instrument sets a sustainability performance target and identifies measurable KPIs to assess impact performance. Examples of these include a sustainability linked bond or a sustainability linked loan. The issuer shall benefit from the structural characteristics of security only if it achieves its targets and non-performance may have a negative impact. Private issuers of sustainability linked instruments can commit to gender related KPIs pertaining to increasing women workforce participation, gender equity at management levels, supply chain strategies covering women-owned businesses, products/ services, community-level engagements, etc (IFC, 2021). Outcome-based funding and SLLs that track gender-related performance metrics for coal transition projects create incentives to perform. For example, relevant gender transition KPIs can be in the form of tracking the number of women displaced or the number of women securing alternative livelihoods.

- Creating new products or modifying existing product portfolio that eliminate barriers faced by women – e.g., minimum criteria related to age, work experience, credit collateral, credit scores – can help build resilience in communities impacted by coal transition
- Simplified process and novel delivery and distribution models - digital, mobile - can accelerate the process of achieving financial inclusion. Financial institutions can explore leveraging existing outlets in underserved communities, such as retail stores, grocery stores, pharmacies, or postal services locations, to expand distribution opportunities for financial products

iv. Financial inclusion products focused on gender-just transition: Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit, and insurance – delivered in a responsible and sustainable way (World Bank, 2022). Besides access to basic financial services, financial inclusion schemes and products seek to provide skill development and livelihood opportunities, financial literacy, and grievance redressal mechanisms to the socially marginalized sections of the society, especially women (PRS India, 2020). For example, the launch of Indian Post Payments Bank, a division of India Post in September 2018 and granting of differentiated banking licence such as small finance banks and payments banks by RBI in India helped address the problem of last mile connectivity (PRS India, 2020). Primary research findings strongly support the need to empower women facing displacement by providing access to finance, skilling and micro-entrepreneurial opportunities.

v. Other innovative approaches: Integrated financial products providing a one-stop solution for all financial needs - deposits, credits, remittances, micro-insurance – can be explored to make long term sustainable impacts. Bundling of financial solutions addresses the major challenge of lack of financial access and independence faced by women.

Innovative Financial Products

- Vietnamese retail bank LienVietPostBank launched the ViViet platform that targeted 500,000 female users. It offered low-cost deposits, overdraft facilities and micro-loans to women entrepreneurs and women-run businesses on mobile devices. (Salman & Nowacka, 2020)
- Similar offerings can be tailor-made to meet the unique needs and preferences of women in a coal transition scenario

Source: bankingfinance.in

COMMUNITIES

Current interventions aimed for the development of communities affected by displacement are, for the most part, ineffective. This is inevitable, given the incognisance around rampant gender inequities and inequalities at policy level as discussed earlier. Policy stakeholders and FIs should adopt a bottom-up approach by involving the women in the communities vulnerable to a coal transition to develop policy interventions and financing solutions.

Solar Sister Initiative: Empowering Women and Eradicating Energy Poverty

- The Ibagwa example demonstrates that equipping women with the basic skills that enable them to communicate their problems needs to be at the centre of community-level interventions
- By providing market-based, women-centered opportunities and bringing off-grid solar and clean cooking technologies to underserved communities across Sub-Saharan Africa, the Solar Sister initiative is eradicating energy poverty (Gray, Boyle, & Yu, 2017)
- The goal of Solar Sister is to create a women-led, last-mile distribution network that can provide energy access to areas with lack of access to grid power, low-income or seasonal economies or isolated geographies. In this way, it provides viable economic opportunities to women, by recruiting, training, and mentoring them to build sustainable businesses
- The initiative's mentorship and training programs also convey knowledge and skills in financial management and technical product areas. Through this initiative, women are better equipped to support their families financially and become financially independent through their entrepreneurship

Source: Solar Sister

Often, women have been recognised as change agents and environmental stewards, mostly in the context of nature-based interventions aimed at biodiversity conservation, water management, climate change and suchlike. One of the many pieces of evidence that supports this is the case of Ibagwa community women in Nigeria, coming together to actively voice against coal activities and environmental degradation in the area (Premium Times, 2022). Supported and trained for advocacy, synergised for positive action, and pushed for their rights (i.e., alternative opportunities), these women were able to raise the issue to the concerned officials through organised efforts.

In the case of coal transition, there is a need to focus more closely on the gender-based disparities that arise even if the transition is just and orderly, as workforce displacement and job losses are an immediate outcome of mine closures. However, building institutional capacities at community levels, creating alternative sources of employment, and building sustainable social assets could take several years and involves a range of actors and multiple stakeholders, requiring collaborative efforts (World Bank, 2021).

Source: team4tech

Key takeaways for communities

i. Education and capacity building for women: Women's education in male-dominated fields, upskilling in innovative technologies and green jobs, and promoting entrepreneurship and self-employment at the community level are essential for an inclusive and equitable transition towards recognizing women as agents of change. For instance, globally, solar photovoltaic industry is leading the renewable energy sector, in terms of jobs. It employs over 33% of all renewable energy jobs, i.e., 4.3 million people. Women constitute 40% of all solar industry workforce, which is twice the women in the oil and gas sector. This suggests that developing women's technical and engineering skills in smart energy solutions (e.g., rooftop solar installations, technology-based applications) and removing social barriers can create alternative employment options (IRENA, 2022). The inputs from primary respondents confirmed that social, cultural, and educational barriers that constrain women from enrolling into Science, Technology, Engineering, and Mathematics (STEM) programmes should be addressed effectively for creating a technically skilled women workforce.

ii. Engaging with local women as agents of change: Communities and social groups are built around economic activities driven by existence of coal mines. It is therefore important to educate and create awareness about the impacts of mine closures and how communities in general and women in particular can prepare to adapt to the transition. Primary respondents highlighted that the challenges faced by women are vastly different across regions and communities. Job losses and labour displacement due to coal mine closures is exacerbated for women, where the local culture is adverse to women empowerment. In such a case, it is important to consult stakeholders in the community and design interventions which promote local livelihood opportunities – for example, a local art or culture-based options. Primary research supported creating nature funds and supporting nature-based solutions that leverage the natural and cultural assets of the local ecosystem. Social protection schemes such as social assistance and social insurance should focus on women workers specifically in the coal value chain. Such schemes should design and implemented in consultation with local women for increased awareness and better utilization of the schemes.

Source: United Nations

6 | CONCLUSION

Urged by climate science and net-zero targets, decarbonization pathways and coal phase-outs are on the agenda of policy makers, corporates, and capital providers. There is a sharp rise in net-zero commitments globally and a just transition, if planned and implemented well, can embed larger SDG goals of social equity and inclusivity. While just transition was touched upon in the Paris Agreement, it has gained critical significance since COP26. Over 190 states agreed to The Glasgow Climate Pact at COP26 which emphasized on making just transition central to net zero plans (Robbins & Muller, 2021). Marrying policy incentives with increased financial literacy and inclusivity among women could remove social barriers and empower women as change agents in a just transition policy. Recreation of ecosystems such as land reclamation, coal gasification, nature-based solutions can focus on including gender angles.

However, there is a strong need to adopt a tailored approach that addresses the most vulnerable sections of the society such as women in a coal transition scenario. There is evidence that women play a significant role as environmental, social, and economic actors in greening the economy and their contribution cannot be ignored. Reorienting policies and finance to mainstream gender considerations and integrating women-centric impact parameters and metrics in policy formulation, financing decisions and environmental governance mechanisms is therefore essential.

The proposed GRTF framework discussed in this paper outlines how stakeholders can collaborate to leverage the window of opportunity to achieve gender equality in line with the SDGs and the Paris Agreement. The recommendations under the four key levers of the proposed framework – policy and regulations, FIs, alternative finance and communities– is therefore intended to accelerate the process of financing an orderly and gender-just coal transition. Driving a gender-focused just transition which uses a top-down approach with policies and regulations, and a bottoms-up approach considering community-level interventions - interspersed with interventions from the financing community, including using innovative financing mechanisms, can help in achieving a truly just transition in emerging economies.

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