

E-PAPER

Working Paper

# Framing the Gender and Just Transition Discourse in India

Perspectives of Women from the  
Informal Economy Across India

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# Abstract

Just transition is an emerging concept in India, and the understanding of how gender intersects with it is evolving. Our study aims to bridge this gap in the discourse on gender-just transition by listening to the perspectives of women in the informal economy through a theme-based listening tool. Globally, it is recognised that the transition to a green economy will have disproportionate adverse impacts on women across the value chain - owing to their higher dependence on carbon-reliant economies for livelihoods and energy consumption, lesser resources to adapt, disruption of livelihoods and forced displacement, and increased burden of caregiving. Our findings reveal that women's participation in the energy transition is equally critical as they are an integral part of the workforce and as caregivers are primary consumers of energy at the household level. But their participation is limited by access to green skills, impact on health due to lack of timely and affordable care and social safety nets given the informal nature of their work. The gender just transition discourse and policies in India will have to recognise the societal gender norms that limit women's participation and decision making in the energy transition and a whole systems approach is suggested as a way forward for framing and guiding policy on gender-just transition in India.

# 1. Introduction

The accelerating impacts of climate change call for an urgent transition away from carbon intensive coal and other fossil fuel based economies. This is considered important to mitigate the worst impacts of the climate crisis. However, the energy transition process globally has failed to adequately account for its social justice dimensions, and its impact on lives and well-being of communities who will be worst hit by this transition (Johnson et al., 2020; Miller, 2013).

Just transition means «promoting environmentally sustainable economies in a way that is inclusive, by creating decent work opportunities, reducing inequality and by leaving no one behind» (ILO, 2023). Just transition has increasingly become a focus to ensure that the energy transition process does not perpetuate existing inequities or create disproportionate unintended ill-effects, and that benefits of the transition are maximised for everyone. It focuses on all aspects of the well-being of the most vulnerable workers, their families, communities dependent on the entire value chain, including the households where a significant proportion of the unpaid work is carried out (Brückner and Sardadvar, 2023).

The discourse on just transition in India is recent and gained momentum after the country's commitment to net zero emissions by 2070 at COP26 in Glasgow, 2021 (Singh and Victor, 2023). There is a recognition in the policy discourse on the need to ensure that the process of energy transition is just, inclusive and leaves no one behind, but is largely focused on the coal mining sector. The Report of the Inter-Ministerial Committee on Just Transition from Coal by NITI Aayog (2022) identifies the five key areas which need attention in planning for just transition, post closure of coal mines, which include: (i) livelihoods (both formal and informal) linked to coal value chain, (ii) community health, (iii) infrastructure (which were set up and provided by coal mining companies such as schools, hospitals and roads and used by the local community<sup>1</sup>), (iv) repurposing of resources and, (v) public finance (to compensate for loss of revenue from coal). The Just Transition Research Center (JTRC, 2022) highlights that «the government needs to look at just transition from a human security point of view, securing the jobs and livelihoods of fossil-fuel-dependent people instead of equating it to renewable energy».

India is majorly dependent on coal for meeting its energy needs due to which the focus of energy transition has remained primarily on coal-based power and coal mining, where major shifts are expected. This is in line with the global trends where most countries have focused primarily on coal-based power and coal mining (Bhushan and Banerjee, 2023). In its Economic Survey 2023-24, the Government of India notes that to achieve the net-

**1** Public sector coal mining enterprises (such as Coal India Ltd.) are known to set up basic infrastructure in mining regions where they operate for use by the communities. These may include hospitals, schools, roads, water supply, among other amenities. The Task Force notes that these need to be sustained post-closure of any mines in these areas.

zero emission target, focus will be on investing in renewable energy sources, exploring green hydrogen and improving Liquefied Petroleum Gas (LPG) uptake; moving towards clean coal initiatives and strengthening energy efficiency measures (Government of India, 2024), the focus being largely on technical aspects of the transition. Another focus has been on ensuring electric mobility, especially in public transport and incentivising private consumers to move to electric vehicles.

The discussion on gender and just transition is fairly limited in government policies and plans. Even the report of the Inter-Ministerial Committee on Just Transition from Coal does not discuss the concerns of the women working in the coal sector informally, even though they form a significant proportion of the informal coal mining labour force (Banerjee, 2022; Majumdar and Saini, 2024). Some of the policies which remain the backbone of the government's efforts towards energy transition such as the green hydrogen mission, clean coal initiatives, push for electric vehicles, lack a focus on women in these sectors and remain overly technical in their approach., only oriented towards achievement of green pathways. Renewable energy (RE) is one sector where women find mention for their potential livelihoods and importance of RE in women's household work.

Given that just transition is an emerging concept in India and the understanding on how gender intersects with this concept is evolving, our study aimed to bridge this gap in the discourse on gender just transition by listening to the perspectives of women in the informal economy using a feminist political economy framework to understand:

- **What are some of the key concerns and intersectional gendered vulnerabilities that should be recognised by the energy transition discourse?**
- **What could be some of the critical areas to focus on from a gender and just transition perspective?**
- **How can this exercise add to the evolving discourse on gender and just transition in India?**

## 2. Methodology

As a first step an extensive review of the existing literature on gender and just transition globally and in India, was carried out to understand the present discourse. Key words which guided the review included just transition, women, gender, livelihoods, climate change, energy transition, framework, vulnerability, renewable energy, decentralised energy, women's work and labour, informality, health, mobility, energy poverty. Research papers, institutional study reports, media articles, proceedings of different convenings on just transition, blogs were analysed to understand the key themes discussed in gender and just transition discourse. In addition, government documents on just transition, including Press Information Bureau releases by the government, reports of government committees, guidelines of different programmes, were studied to understand the policy space and discourse on this issue.

The secondary analysis was combined with insights from primary research to understand how the issue impacts women's lives and well-being. Primary research was carried out using qualitative research methods - listening exercises with women and organisations engaged in the space of energy transition, coal mining sector and informal livelihoods. The listening exercises were carried out with women and organisations from different regions of India working across different sectors such as domestic workers, agriculture and allied sectors, decentralised solar, app-based gig workers, waste pickers. The main objective of these exercises was to understand the knowledge and experiences of diverse groups of women on energy transition.

A total of 38 stakeholders were identified for the listening exercises, which included a mix of individual women and organisations related to the informal fossil fuel energy economy and renewable energy sector. Of these 38, it was possible to conduct listening exercises with 16 stakeholders. Of these 16, 3 were focused group discussions, each with a group of women, capturing insights from around 30 women living in the coal-mining regions of India. Apart from these, 13 individual listening exercises were conducted by the team. The list of stakeholders for the listening exercises is given in the annexures.

These Listening exercises were conducted using a pre-designed, theme-based listening tool, which comprised a mix of close-ended and open-ended questions. The transcripts from the listening exercises were prepared and entered in excel. These transcripts were then analysed to understand women's insights and experiences with respect to energy transition and its implications on their lives, with focus on different themes listed above. These insights from across the different listening exercises were then combined and analysed to draw the inferences presented in the next section.

The insights from the listening exercise were presented at a two day consultation organised in Delhi which saw the participation of diverse stakeholders from academia, civil society, media, government and women leaders focused on work around just transition. The convening supported in consolidating the findings from the listening exercises and

provided recommendations for building discourse and action on gender and just transition in India.



National Consultation on Gender and Just Transition, New Delhi

Photo: ASAR



National Consultation on Gender and Just Transition, New Delhi

Photo: ASAR

# 3. Review of state of knowledge on gender and just transition

## 3.1 Potential framing of gender just transition from a global perspective

Globally it is recognised that the transition to a green economy will have disproportionate adverse impacts on women across the value chain - owing to their higher dependence on carbon-reliant economies for livelihoods and energy consumption, lesser resources to adapt, disruption of livelihoods and forced displacement, and increased burden of caregiving (Elasha, 2009). To address this, the discourse on gender-just transition has gained momentum and calls for a systemic approach to transform women's lives, minimise the climate induced hardships, transition-induced challenges, and ensure that benefits lead to gender-equitable outcomes.

Gender just transition should be based on principles of shifting power, redistributive justice, ensuring dignified jobs and freedom from gender-biased limitations to work, and valued and paid care work (WEDO, 2023). The process of gender-just transition should adopt an intersectional approach, rooted in care and social protection, to be equitable, inclusive and fair (UN Women, 2023). As Johnson et al. (2020) observe, if existing power asymmetries related to access and resource distribution are not addressed early on, the same structural inequalities will simply be replicated, transferred and worsened in new energy regimes.

The whole systems approach is seen as the way forward for achieving gender-just transition as the process of energy transition is complex, dynamic, where different elements of the system are interconnected and interact with each other, because of which a shift in one part of the system needs to be seen in the larger context of how it will affect the elements across the system (Abram et. al., 2022). For women, climate change exacerbates challenges in all spheres of well-being, for example, worsening of health, loss of livelihoods and increased economic insecurity, increased burden of caregiving and domestic chores, unmet energy needs perpetuating energy poverty.

## 3.2 State of knowledge in the Indian context

In India, several organisations have highlighted the need for a framework for achieving just transition and discuss how gender needs to be an important part of pathways for achieving just transition in India. Focus of these is largely on the coal mining sector and how the closure of coal mines and move away from coal-based power will impact economies and communities, as it will lead to fundamental changes in gender roles and relations as women and men lose their direct and indirect livelihoods from coal mines.



Majumdar and Saini (2024) highlight that 60% of the labour mining force comprises informal workers, who are predominantly women engaged in unofficial activities and note that an often ignored aspect of this transition is the differential impact on men and women of the transition since women bear double burden of household care, along with informal livelihoods. Loss of these livelihoods will increase the intra-household conflicts, domestic violence, out-migration, which will impact men and women differently. This needs to be factored in, in policies on just transition.

Singh and Victor (2023) suggest that to make the process of transition away from coal, gender-sensitive, one needs to focus on addressing women's energy poverty, financing women-centric initiatives, strengthening health interventions informed by detailed Social Impact Assessment study in the regions, introducing measures for addressing social issues like mental health, alcoholism and substance abuse, leveraging government system for women's rights (like Forest Rights Act, 2006), and imparting agency through women Self Help Groups (SHGs).

TERI (2023) discusses that India's just transition should focus on both structural transformation of the coal sector, considering both institutional (structural changes in governance institutions for just energy transition) and functional (redress key areas of concern in mining regions through consensus building, socio-economic transformation and green development) aspects of the transition. They highlight the need to «incorporate gender-disaggregated interventions and programs, such as skilling and reskilling, livelihood promotion, and compensation measures tailored to the specific needs of women in coal mining-affected communities», and investing in social infrastructure (such as education, health).

Bhushan and Banerjee (2023) highlight the need for formulation of a national just-transition framework and note that such a framework needs to have some areas of focus at national level and some at the sub-national level, and include all fossil fuels. They identify gender responsive development as a key policy area of focus for just transition and discuss that it should focus on targeted support for women's education, livelihoods, and better income opportunities, financial inclusion, among others. They also highlight the need for different ministries to undertake gender-sensitive budgeting and ensure adequate resources to improve access and opportunities for women. National policy could also focus on areas like gradual transition of coal mines, investments in green energy, labour and social support for formal and informal workers in the mining sector, and structural support to impacted regions.

Bhattacharjee (2024) observes that to ensure gender-just transition for women engaged in coal sector, the policymakers should ensure formulation of a comprehensive national action strategy that encompasses the advancement of extractive industries, women's empowerment, and gender equality; devising legal frameworks to address obstacles and discrimination experienced by women in mines; forming a monitoring team comprised of female members from the local community to ensure that government initiatives are carried out effectively; increasing community involvement while mining projects

are implemented and developed; certification of the diverse abilities that women in communities have inherited over the generations; and ensure women's representation in decision-making processes.

In order to move beyond desktop research and highlight the discourse and understanding on just transition in India from a bottom-up perspective, Asar Social Impact Advisors organised a series of multi-stakeholder regional convenings on just transition in India over the last few months. These convenings were organised in Maharashtra, Odisha, Jharkhand and West Bengal and each convening saw participation of 25-30 organisations, a mix of community, civil society, academics, think tanks and independent experts. These convenings highlighted that the general awareness and understanding, as well as the participation of the grassroots organisations and communities on just transition and its policies is low. While there are discussions around the need to make the process of just transition inclusive, focus on gendered dimensions of this transition remains limited.

For example, the Odisha convening touched upon several important themes like coastal resilience, agriculture, commons, and forest-based livelihoods which hold significant importance for women's lives, livelihoods and well-being in context of climate change and energy transition, but focus on gender in these discussions was missing. Moreover, even when there is recognition for the need to factor-in gendered dimensions, understanding of these issues remains low. The Maharashtra convening highlighted that the gender concerns in the process of energy transition need to be mapped, documented and popularised for improved understanding. The convening in West Bengal did focus on certain gender issues including the issue of clean cooking and indoor air pollution, domestic violence, issues of unorganised women workers in Micro, Small and Medium Enterprises (MSMEs), need for access to safe and cleaner public transport for women daily workers and domestic helps to ensure livelihoods, issues of sexual and reproductive health and rights, and mental health due to climate change and energy transition, which is important for broadening the focus of discourse on gender and just transition.

Discussions around just transition in India are still in their early stages, and discourse on gender in this transition is still largely absent. The need to build a deeper understanding on gender concerns and issues is highlighted, with the need to focus on holistic well-being and development of and for women, especially the most marginalised. These convenings, indicative of the broad discussions on just transition in India, highlighted the need to build and strengthen the discourse on gender and just transition in India, factoring in state and regional diversities, and broadening the scope of the discussions to include all aspects of women's well-being.

## 4. Results

In this section we present the findings that emerged from the listening exercises organised into several themes. These themes help us understand the focus areas for the energy transition from the perspective of the women in the informal economy to make the process just and inclusive.

The women who participated in the listening exercise, work across a diversity of sectors which are dependent on energy and will be impacted by the climate crisis and process of energy transition, including sectors like agriculture, fisheries, tailoring, domestic work, app based gig workers, waste pickers, entrepreneurs in areas of renewable energy (RE) and electric vehicles (EV). The women worked and belonged to different States like Kerala, Karnataka, Delhi, Jharkhand, Maharashtra, West Bengal, Odisha and Rajasthan. They live in different social economic strata of society including urban poor, urban elite, rural and coal mining regions.

### 4.1. Women's participation in the renewable energy sector

Renewable energy, especially decentralised energy, has been critical in improving access to energy, reducing time poverty and drudgery, especially in off-grid, remote areas. For example in Nichalagarh, Sirohi District of Rajasthan, access to decentralised solar energy solutions has reduced women's drudgery, given them autonomy and control over energy, reducing their energy poverty. Women in Nichalagarh, Rajasthan shared that,

*«Women do have more time at their hands now, women are more social now since they can talk with neighbours even after 6 pm.»*

Before decentralised solar, women had to be indoors by 6 PM and finish housework by 7 PM because it was dark. Women can now spend more time during the day for livelihood activities (agriculture and livestock), and they can do household work during late evenings and nights. Solar engineers in Sirohi district of Rajasthan shared that «it is important for every household to get electricity, it is a basic right and every last household in this village should get electricity and decentralised solar is the best option for the area looking at the geography.»

Women also feel a sense of authority, control and pride since the electricity they use is produced by themselves. In Kerala, in addition to reduced drudgery, decentralised solar power is a source of additional income where households earn by supplying surplus energy to Kerala State Electricity Board (KSEB), across the state.

In places like Sunderbans, West Bengal, we found that solar power had been installed long ago, for all community services like street lights, cyclone shelters, household lighting

etc. However, with the recent access of coal fired thermal power plants (CFTPP), all of those previously installed solar lights are now defunct. Individual households are using solar lights only when there is a power cut and grid power from CFTPP is not there. The people never wanted to spend money on repairing solar energy installed at their premises.

*Though local NGOs suggested that «women can be capacitated to engage in such kind of technology repairing works, which will also give them scope for earning. At the same time, it will help with planning for installations and operations of renewable energy.»*

A key finding is that there is a huge gap in making renewables accessible to all and women's participation in the sector. In Kerala for example, while decentralised solar energy has made significant headway, women's participation is still lacking in the solar workforce with Agency for New and Renewable Energy Research and Technology (ANERT) officials noting that «*something seems to be holding women back*». Women shared that there is no additional skilling programme for women entrepreneurs in the field of renewable energy and no government assistance is provided to set up enterprises by the women. In Kerala «*despite having a solar energy policy within the state (since 2013), there are no active efforts from the government to take this ahead or to support women entrepreneurs and while there are more than 800 solar enterprises and there may be only below 10 which are run by women*» shared members of a solar enterprise in Kerala.

## **4.2 Carework should be a component of the energy transition**

Most women across sectors rely on biomass chulhas for cooking, exposing them to severe pollution, and men are reluctant to invest in women's health and comfort. Most of these women do not have any childcare facilities and depend on elderly family members where possible. They are responsible for collecting water, cooking, caring for family members, looking after animals, and carrying out own-farm activities.

*«Clean cooking option is not available, as male members in the family do not want to spend money on anything which can be done free of cost by the women in that household»*

Domestic workers work in affluent homes but come back to the drudgery of their own households. Women's work within their own homes is unpaid and unrecognised, forcing these women to bear the double burden of care. In several cases, elder daughters are forced to drop out of school to look after younger siblings, resulting in intergenerational care burden and deprivation of a better future.

The process of energy transition has not reduced women's drudgery and caregiving burden which is a barrier in them fully participating in the workforce. Women working in in-

formal sectors shared that caregiving and fulfilling household needs remains the primary responsibility of women, even in contexts where women are educated and working.

Women interviewed in Nichalagarh, Sirohi District, Rajasthan walk 1-2 km every day to fetch water for household needs. Domestic workers shared that in certain households where they go to work, employers buy new appliances that are less labour consuming and that makes the work easier, for example washing machines, dishwashers etc. But this does not improve the life of domestic workers or make it easier. Since there is more free time, they are asked to do the jobs that are not part of their work and they don't get paid for that.

In coal mining areas, women's formal workforce participation is very limited and they are mostly engaged in household chores, and informal work around the mines, including coal gathering and scavenging of coal from abandoned mines. The girl child is often asked to stop going to school and get married.

*«I take care of children and cook food in Anganwadi and for this I work for 4-5 hours there, grow vegetables at home and take care of my own children. How am I going to have any time to learn new skills for new work?»* shared a woman from Dhanbad district in Jharkhand.

Care work includes diverse responsibilities for women, within the families and outside of its purview. It involves taking care of their family members and their needs, taking care of their own economy and livelihood. And most women working in the informal sector and doing care work, live in energy poverty and consume less energy than they need, to improve their lives.

### **4.3 Whole systems approach to the energy transition by focusing on skills, mobility, health and social protection**

The access to safe and affordable mobility is a key issue identified by women working across sectors, for them to reach places of work or even access new skills to upgrade their jobs. Reaching the place of work on time often proves challenging for these women since they depend on public transportation, which can be irregular or late. In Rajasthan, for example, it was shared that women have to walk 5-6 kms to reach a village for basic amenities including shops and they can't walk alone as it is not safe, restricting their mobility and increasing their drudgery in absence of public transportation. In places like Sundarbans, where climate change has disastrous effects and women's livelihood are impacted, there is an issue of safe mobility in accessing schools, study centres, which needs to be seen in connection with skilling.

*«Since the houses are on the hills, women need to walk around 5-6 kms daily to reach the small township within the village where the ration shop, post office, GP (gram panchayat) office etc is situated. Women never walk alone through this road since it is a forest route*

*and also there are alcoholic men on the road.»* shared a woman from Nichalagarh, Sirohi District in Rajasthan.

While there is a lot of conversation around electric vehicles, the transition process remains unclear, especially on how existing vehicles can be replaced by the drivers. While women have seen these on the roads of big cities like Bangalore and acknowledge it could potentially support in meeting their mobility needs, there are concerns around the costs and charging EVs. Women, who we spoke with in rural areas, had not even heard about EVs.

The absence of skilling programmes for women, which are tailored to their needs, irrespective of educational attainments, is another deterrent. Women solar engineers in Rajasthan shared that they face several barriers in accessing skilling programmes; *«The major barrier for skilling among women is their caregiving responsibilities at home, men letting them go for training, women's engagement in agriculture labour and other informal work.»* Waste pickers also shared that they are interested in getting skilled for green jobs, but no such skilling opportunities are available to them.

In certain cases, lack of skilling for the maintenance of renewable energy infrastructure at the community level remains a major gap. For example, in West Bengal, despite installation of solar lights long ago, they remain defunct now due to lack of maintenance; community women shared that *«lack of skilling is a major reason for solar lights to become defunct and in fact skilling could have enabled a source of earning for communities»*. Similarly in Odisha it was shared that the Odisha government has launched the Pink auto scheme for safe travel of women, but has not focused on skilling or training women as drivers for this, which could have been a source of livelihood for them. There is also a gap between the skills for which training is given and the kind of jobs available; for example in West Bengal youth were trained on decentralised solar but did not get an opportunity to put that training into practice.

For many women who are illiterate or have low levels of educational attainment, several skills and training remain inaccessible. For example, a woman in Dhanbad, Jharkhand shared how despite being able to take out time from her other responsibilities, she could not get training as she was illiterate. Gender bias against women also restricts women's involvement in high end jobs in renewables; in Kerala it was shared that *«there is a mindset that women are not good at certain types of jobs.»*

In West Bengal it was shared that *«the youth will be in need of a job when actual transition from coal to RE takes place. Providing a complete orientation for this generation would be a valuable investment in human resource development, preparing them for new job opportunities.»*

Women working across sectors shared that the lack of access to affordable healthcare impacted their productivity at work given the informal nature of their work and also resulted in high out-of-pocket expenditure. Most women articulated the need for access to

healthcare as a critical part of the energy transition as it will support them in doing their jobs better inside and outside their homes.

*«There is no point in talking about healthcare in our settlement. We are poor people, and there is no hospital in our ward. We have to go to the city for government hospitals. The company's hospital is not for us.»* shared an ill woman living next to a coal mine in Chandrapur.

Moreover, there is no health or life insurance for them, to provide them with any safety net. App-based workers shared that they don't go to doctors, and mostly get over-the-counter medicines. They don't have any health insurance or health coverage from the aggregators. Similar concerns were shared by waste pickers who shared that *«in this profession, the government should take care of our health because we work throughout the day to make the city and the houses clean»*.

The high level of informality in women's work can deter them from participating in the energy transition and result in loss of opportunities and incomes. Women working across sectors recognised their dependence on social safety nets, be it insurance or access to government welfare schemes like Public Distribution System (PDS), MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Scheme), among others. The women expressed that social security benefits like health insurance are not available to the women engaged in informal livelihoods, forcing them to spend a significant amount of their earnings on healthcare. Women shared that they rely largely on government social security schemes like MGNREGA, pensions, PDS but get no benefits from employers and for most workers there are no special schemes available, for example, there are no schemes for waste pickers or domestic workers. Women are forced to work in poor conditions without any regulations or laws setting minimum standards for working conditions.

It was observed that the more vulnerable the women, based on intersectionality, service providers were less likely to be responsive to those communities thereby restricting their access to social protection, based on their needs. It was suggested during the listening exercises that these women were most likely to be further marginalised by the energy transition in absence of social safety nets, be it waste workers, domestic workers, indigenous women, women living around coal mines and needed social protection schemes based on their context.

## **4.4 Strengthen women's decision-making in the energy sector**

The push for energy transition is top-down due to which ground level awareness on green energy, required skilling, market linkages, uptake and maintenance is low. Many of these women play an important role in the process of combating climate change and in energy transition, such as waste pickers and are aware of their roles, but do not receive any support from the state. Waste pickers, for example, contribute significantly in reducing

waste from reaching landfills, recycling waste and promoting circular economies thereby reducing carbon emissions (Gawade, 2025; Sinha and Pegu, 2024).

*«In the energy sector masculinity is the unquestioned norm, embedded within institutions that allocate and distribute resources, creating a form of path dependency wherein the energy transition policies can also reproduce existing gender order unquestioningly» Prof Manjula Bharathy, TISS.*

It was also felt that there are limited opportunities for women to learn or understand about the green energy sector, and hardly any efforts are made to inform the communities. In West Bengal it was shared that the *«push for energy transition is missing, so there is no awareness of this even at LSG (local self government) level. Moreover no efforts have been made to implement DRE (decentralised renewable energy). One also needs to focus on mental transition, for this process to be successful.»*

*«It is essential for women from our community to have a role in the energy sector and government energy policies. In areas where mines and other energy companies are granted approval, the problems faced by women increase significantly. As a result, their opinions are often overlooked. When drafting policies related to land and resources, we hope that issues concerning women will be considered and women will be given priority,»* expressed a women's group in Chandrapur, Maharashtra.

In the transport sector, it was shared that in transitioning to EVs, concerns or needs of the drivers are not considered. There is little support to enable them to shift to EV and there is no decentralisation when it comes to taking decisions and making policies, making the situation difficult for workers already struggling with getting basic amenities and rights. There is no policy or statement that mentions drivers during transition to EV. If the drivers already own a car, there is no subsidy/ support / long term loans from the government for supporting them to transition to EVs.

Women have restricted agency and decision-making power within households, at community and panchayat levels. At household level they lack the agency to make decisions with regard to their body autonomy, including family planning, but are allowed to make small decisions on day to day things and it was shared that they lose agency to even choose what to cook if they lose their jobs. There is absence of institutional spaces to let women voice their concerns or asks, especially with respect to livelihoods, transport, health, energy access, and men are considered main decision-makers.

*«We should have the rights over our surroundings and environment, but we don't. It's essential that we have representation at home, in society, in the company, and the council. Only then can we raise our issues and challenges. The government and the company are responsible for providing us with quality education, healthcare, transport, and other basic amenities. We need leadership that will question these issues»* said Padma Kamathwar, Chandrapur, Maharashtra.



Oppressive gender norms and inequality which is even worse for women working in the informal economy, is a challenge that the energy transition will need to recognise and address in order to increase women's participation and decision making in this process.

## 5. Conclusion

Women will bear the disproportionate burden of the process of the energy transition to a green economy due to their higher dependence on the fossil fuel driven economies, lesser resources to adapt and increased burden of care giving and oppressive gender social norms. A majority of women in India are part of the informal sector and they face extreme vulnerabilities and risk due to the nature of their work and lack of social safety nets.

The discussions around just transition in India are at early stages and within these discussions the discourse on gender is largely absent. The discussion on gender and just transition is fairly limited in government policies and plans. Even the report of the Inter-Ministerial Committee on Just Transition from Coal does not discuss the concerns of the women working in the coal sector informally. While several organisations working in this area have highlighted the need for a gender pathway in India's just transition, this is largely focused on the coal mining sector and how the move away from coal-based power will impact the related economies and communities, including women.

The bottom up dialogues on just transition including women on the frontline of climate change and energy transition process indicate that any framework, policies and programmes on gender and just transition in India needs to look beyond coal. The discourse needs to take into account state-level and regional diversities to broaden the scope to include women across carbon reliant economies and consider all aspects of women's well being. This is in line with the international feminist discourse on gender just transition that should be based on principles of shifting power, redistributive justice, ensuring dignified jobs and freedom from gender-bias limitations to work, and valued and paid care work.

The preliminary understanding from listening to a diversity of stakeholders suggests that while the process of energy transition will impact women in a diversity of sectors from agriculture, waste management, gig work, renewable energy and care work to name a few. It can also support and enable women's work and reduce drudgery by improving mobility, access to decentralised renewable energy and clean cooking. But this can only happen when women's concerns and voices are part of the consultations and decisions on the process of energy transition at local, sub-national and national levels. Women's participation in the energy transition is equally critical as they are an integral part of the workforce and as caregivers are primary consumers of energy at the household level. But their participation is limited by access to green skills, impact on health due to lack of timely and affordable care and social safety nets given the informal nature of their work and to prepare for the uncertainty of the transition. The gender just transition discourse and policies in India will have to recognise the societal gender norms that limit women's participation and decision making in the energy transition. The whole systems approach is suggested as a way forward for framing and guiding policy on gender-just transition in India. This acknowledges that the energy transition is a complex and dynamic process where women's labour and participation in the energy transition is interconnected with their wellbeing, gender norms and the burden of care work.

## 6. Recommendations

The results of the study were discussed over a two day multi-stakeholder consultation in Delhi in November 2024 and the recommendations that are based on those deliberations contribute to further building a framework and discourse on gender and just transition in India.

- **Ensure that the process of energy transition towards clean energy is inclusive, and does not push the cost of transition on those most impacted and at risk due to intersectional vulnerabilities.**
- **Define gender just transition as per our own context, vulnerabilities and realities, adopting a feminist epistemological lens.**
- **Use gender just transition approach while planning climate mitigation actions for each country and society, by focusing on lived experiences of women and making their narrative the data, to change the epistemology.**
- **Expand the scope of gender just transition discourse beyond coal and allied sectors, and focus on women engaged in all informal livelihoods, which depend directly or indirectly on the process of energy production, consumption and energy value chains, and will be impacted by any proposed energy transitions.**
- **Invest in women's overall well-being, including health, skilling, education, social protection, among others to enable them to participate in the labour force and contribute to the process of energy transition.**
- **Invest in strengthening care infrastructure and ensure its accessibility to all women, to reduce their care burden and promote their livelihoods, address energy poverty and improve their well-being.**
- **Map out women's existing livelihoods and occupational roles to inform discourse on gender-just transition. Make skilling programmes contextual, as per women's needs and in accordance with available jobs.**
- **Make the process of defining, planning and engaging for gender-just transition bottom-up and inclusive, and specific to spatial and socio-economic-cultural contexts, such that those who are most impacted have the space and voice to participate.**
- **Explore the role of political leaders, especially elected women representatives, to advance localised demands and narratives, led by women. The Panchayati Raj**

**Institutions (PRIs) and urban planning bodies can be leveraged to create microlevel plans shaped by voices of women.**

- **Make conscious efforts to address the injustices and inequalities prevalent in the current fossil fuel energy system within the framing of gender-just transition to prevent perpetuating the existing normative and cultural barriers faced by women.**
- **Strengthen and leverage workers unions to ensure that energy transition does not leave behind the workers and overlook their rights. Strengthen women's and girls collectives, self-help groups, cooperatives to give women the platform, power and voice to demand their rights in the process.**
- **Explore models of co-creation with the communities of women, contextualizing renewable energy solutions to community needs. Explore benefit-sharing models for decentralised renewable energy with the communities.**
- **Take steps to ensure that vulnerabilities and occupational safety hazards associated with the coal sector are not replicated in the renewable energy sector.**
- **Develop a research agenda to explore gender dynamics in energy transitions by examining the interplay of individual, institutional, and societal factors.**

# Annexure

## List of women / organisations who participated in the listening exercise

Informal Women workers and stakeholders working on issues of informal women workers

Category	Name of the Organisation / Individual	Location
<b>Informal women workers/ networks</b>	Shehri Mahila Kamar Union (Domestic workers union)	Delhi
<b>Informal women workers in the coal economy</b>	Baimanus (FGDs with around 10 women living around coal mines in Chandrapur)	Chandrapur, Maharashtra
	Deshaj Abhikram (2 FGDs with around 20 women living around coal mines in Dhanbad)	Dhanbad and Bokaro, Jharkhand
<b>Think tanks/ academics/ women rights groups working on livelihoods, labour participation etc.</b>	Prof Bijoya Roy	Academician (Health Provisioning to women & Health financing) at Centre for Women's Development Studies
<b>Government/ Elected Reps</b>	Agency for New and Renewable Energy Research and Technology (ANERT)	Govt. of Kerala, Trivandrum

Women in Renewable Energy Sectors or working on Energy Transition

Category	Name of the Organisation / Individual	Location
<b>Women Entrepreneurs/ formal workers in the renewable energy sector</b>	Hasirudala	Karnataka
	IFAT - Indian Federation of app based transport workers	
	Ceiba Green Solutions	Odisha
	Swara Smart Power	Trivandrum, Kerala
<b>Civil Society organisations directly/ indirectly working on energy transition/ just transition</b>	IPAS Development Foundation	South 24 Parganas & part of Hooghly (WB)
	Rupantaran Foundation	South 24 Parganas & part of Kolkata
	Praajak Development Society	Districts of WB
	Gram Vikas (Solar Micro-Grid Renewal for Rural Lives & Livelihoods project)	Odisha
	Bindi International	Rajasthan

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