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## **Gendering Just Energy Transition**

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# Gendering Just Energy Transition

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## **Introduction: Gendering Energy Transition**

Energy is a value chain with the extraction of commodities such as fossil fuels at one end and electricity use at the other. Energy systems along this chain are gendered because women and men are involved in the extraction process, in value addition through processing, and as end users, but the roles women and men play in society, communities, and households, and the tasks they carry out in this chain vary greatly, depending on their economic class, social status, race, ethnicity, rural/urban location, age and abilities. Any change or shift in a component of this chain impacts women and men differently because of these different roles; the unequal levels of access to resources such as education, training, jobs, and credit; and the disparate ownership levels of productive assets such as land and technology.

We are experiencing a fundamental shift in global energy systems, moving towards fossil-fuel free, decarbonized future is the hallmark of this transition (Johnson and Boyland, 2020). Energy transition starts at the extractive end of the energy chain, and coal—which has so far ruled the generation of electricity globally—can be expected to experience the greatest impact. As both climate and non-climate policy factors driven largely by market forces, coal sector transitions are already occurring, and the closure of coal-fired power stations is evidence of this shift (Sartor, 2018).

The question that arises within this broad picture is: How do we ensure that women are not impacted negatively, and are not left behind while economies shift away from coal and toward decarbonization? Any economic shock or structural change has significant and often prolonged socioeconomic impacts on affected workers and communities. Both historical and emerging studies of the distributional impacts of coal sector decline reveal that these socioeconomic impacts are gendered and that intersectional factors such as race, ethnicity, class, caste, ability, and age have significant bearing on how these impacts are experienced. Men and women in the Global South are further disadvantaged by higher levels of poverty and marginalization, and less social welfare support (Aung and Strambo, 2020).

This note explores the gendered implications of energy transition with a focus on the impending closure of major coal mines in coal-producing Global South countries. Collating evidence of gendered impacts, it analyses basic questions of justice—‘Who benefits? Who loses?’—as the energy landscape changes. It proposes an intersectional approach to understand the gendered impacts, and proposes intersectionality-informed pathways to reduce these impacts in locations and contexts where the coal sector is experiencing—or might experience—transition. Based on

the concepts of Just Transition that allows us to think through redistributive justice as regional economies shift away from fossil fuel extraction, it further shows why gender considerations are important, and how gender can be mainstreamed in strategies adopted for transitioning the coal sector.

For clarification this note understands that women are not a homogenous and singular group, but have very different identities and life situations depending on their economic class, social status, ethnicity and race, age, and abilities, among other forms of social difference. Recent feminist theories argue that neither sex nor gender is binary, and that individuals do not always identify with the gender assigned to them (Lansky, 2000). The notion of 'women' is something of an empirical category, and intersectionality is deployed as an analytical tool to theorize about inequalities and disadvantages amongst women based on social structures and systematic processes (Hunting and Hankivsky, 2020). The category of 'women' remains valid in the context of the sexual division of labour and embedded gendered hierarchies of power that confer on some groups more status, privileges, and freedom (Cornwall, 2000; Hesse-Biber, 2012).

For the purposes of this note, Davis's (2008: 68) broad definition of intersectionality as 'the interaction between gender, race, and other categories of difference in individual lives, social practices, institutional arrangements, and cultural ideologies and the outcomes of these interactions in terms of power' is appropriate. Hankivsky (2014 et al: 4) notes that intersectional approaches are oriented towards 'transformation, building coalitions among different groups, and working towards social justice' so that one can expand the scope and analytical lens to help achieve the goal of transforming gender relations. Finally, intersectional approaches embed the dynamics of power that are negotiated between women and men within households and communities, and address inequity, which is a key goal of intersectional approaches to policy and gender research.

### **Gender Mainstreaming in Just Energy Transition**

Gendered approaches to the analyses of energy systems are not new; development agencies have long argued for and aided efforts to enhance access for women to improved energy sources (Osunmuyiwa and Ahlborg, 2019; Pueyo and Maestre, 2019). There have been significant shifts in the literature on gender and energy over the last few decades. The Women in Development (WID) approach with its singular focus on treating women as a homogenous group and portraying them as 'the missing link' in development has given way to the Gender and Development (GAD) approach in which women and men are seen as part of a web of social relations considering the realities of lived experience (Standal et al., 2018: 8). Another shift is in recognizing women's agency; previously, women were simultaneously seen as victims of energy poverty and presented as the answer to development challenges, but Elmhirst and Resurrección (2012) and Resurrección (2017) critique this casting of women as *passé*, and argue for women to be seen as household energy managers who could effectively increase awareness of and deliver energy products and services.

Debates on justice in energy transitions, however, are relatively new. What we know today as the Just Transition movement has evolved over several decades and is composed of a wide range of interests and stakeholders who are all concerned with addressing the human or social aspects and costs of fossil fuel extraction, processing, and energy transition. As the process of transition

accelerates, concerns about the rights of fossil fuel workers and mining communities that might be left behind have grown (UNRISD, 2018). The 2015 Paris Agreement reference on Just Transition, ‘Taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs per nationally defined development priorities’ (UNFCCC, 2015), has further legitimized Just Transition and its importance in achieving a low carbon economy. However, the focus of energy transition towards a low carbon economy has so far been mostly confined to technical, economic, and political spheres (Bridge et al., 2013; Aung and Boyland, 2020), raising the need to mainstream gender in all aspects of Just Transition.

The growing body of research on the gender differentiated impacts of energy transition presents robust quantitative and qualitative evidence, and argues that impacts of the energy transition are indeed gendered (Feenstra and Özerol, 2021; Clancy et al 2019; Sovacool 2016). However, while the gendered effects of the energy transition have been deeply studied in the academic literature, gendered analysis of energy transition has been focused in a few sectors only (Johnson and Boyland, 2020; Johnson et al., 2020). Thus, mainstreaming efforts would need to be based on three pillars: participation of both women and men in all processes; consideration of intersectionality to avoid treating all women as having the same interests and priorities; and adoption of the feminist principle of transparency.

### **Why Gender in Energy Transition?**

Economic inequality is widening in many countries and gender inequality remains stubbornly high. Despite decades of gender mainstreaming in policy and practice, some women continue to experience sustained structural and cultural barriers to economic and political participation. Moreover, evidence points to the fact that some of these structural barriers are worsening, with more women (and men) being forced into less secure and risky forms of work with shrinking social welfare support. In coal-fired energy sector, the erasure of unionised workforces and consolidation within the mining industry has resulted in the transfer of wealth and power from workers to shareholders (Wiseman et al., 2017).

Consequently, feminist scholars have begun to reconceptualise gender mainstreaming as a long-term strategy aimed at bridging gender awareness and daily routines and are urging policies and research to shift the focus on the gendered aspects of everyday energy use practices (Musango et al., 2020). Feminist tools such as gender audits, gender impact assessment, and gender analysis continue to be powerful and indispensable for mainstreaming gender in policies and programs (Fraune, 2018). However, as Clancy and Mohlakoana (2020) note, their transformative potential cannot be realised without political and financial commitment to achieving gender equality. As a result, gender has so far received little attention in discussions of justice in energy transition.

The need to mainstream gender in energy transition is also embedded in the rapid growth of technology in the coal sector and in the energy systems that are replacing coal. Generating clean energy such as geothermal energy from coal mines has been suggested as one technological innovation, but it is unclear how far such developments will succeed in places without a natural advantage. Dutch philosopher Brey (2019) considers that new technologies of a socially disruptive nature will change things such as the meaning of ‘informed consent’ as ubiquitous and data-intensive applications interfere with what has so far been seen as a human right.

## **Coal Extraction in the Energy Chain**

The part of the energy chain that is least considered through a gender lens is coal extraction. Most countries in the Global North have been reducing their consumption and production of coal in the move towards greener energy systems (IRENA, 2019; ILO, 2018). However, it is expected that countries in the Global South, especially in Asia, that have increased their production and consumption of coal and coal-based electricity, will encounter global pressure to adopt alternative energy policies. Evidence suggests that while all workers and coal-reliant communities will suffer, women and men will not experience these changes in the same way.

Gendered vulnerabilities resulting from climate change have also been brought to the fore. Changes or shocks tend to aggravate pre-existing socioeconomic vulnerabilities and risks, and are more intensely experienced by the poor in the Global South (Rao et al., 2019). Increasingly, social scientists are finding evidence linking climate change and energy insecurity with a range of social and cultural factors. For example, abolishing modern slavery potentially may be one of the quickest and cost-effective ways to fight climate change (Bales and Sovacool, 2021). Barca (2015) underlines the dire consequences of climate change on the global labour force, and Barrett et al. (2002) draw attention to the effects on jobs as the world moves towards cleaner energy systems. Hans et al. (2021) argue that social and economic pressures, including women's increased work burden both in productive and reproductive labour due to climate change, affect gender relations. In this context, it is important to move beyond counting heads to unpacking relations of power, inclusion, and exclusion in decision-making, and challenging cultural beliefs that have denied equal opportunities and rights to differently positioned people, especially those at the bottom of economic and social hierarchies.

In considering coal sector transitions as a response to climate change, we therefore need to consider whether relevant policies and practices respond to the gender-differentiated needs of women and men in coal-affected communities. The aim is to understand coping mechanisms such as male outmigration and the formation of women's collectives to create space for agency and change, and to develop an analytical framework that can dig deeper into rigid social relations to ensure women's wellbeing in the new low-carbon economy.

### **(Why) Are Women More Impacted in Mine Closure?**

Unplanned mine closure leads to shock, grief, loss of trust, and a sense of helplessness for workers and communities, and women are particularly marginalised and disempowered by the process. The distributional impacts of mine closure, particularly those on employment, livelihoods, and wellbeing, are felt differently by women and men, challenging and changing gender roles, relations, and identities. However, mine closure impacts for women have remained broadly the same across time. This is largely due to the obstruction to women's participation in mining employment, continued neglect and marginalization of social and gender impacts of mining by industry and government, and structural barriers to their participation in negotiations with mining companies and other community forums to advocate for their needs and interests.

Women in the Global South are distinctly disadvantaged because of a range of intersectional, institutional, structural, and cultural factors, which exacerbate the impacts of mine closure. Here mining frequently takes place amidst uneven economic development: communities may rely on subsistence agriculture pre and post mining; government structures, services, and infrastructure

are weak; and gender relations are characterized by inequality. The emerging evidence confirms that the negative impacts of mine closure in this region may therefore be more severe and protracted and further increase economic and gender inequality. Since women own fewer resources in mining communities, they bear the negative burden of distributional impacts of mine closure.

### **Key Gendered Impacts of Coal Mine Closure**

*Employment and livelihoods*, including financial stress and insecurity, increased mental health problems, and substance abuse amongst former mine workers lead to increased rates of domestic violence, sexual assault, and abuse (of women and children). Evidence also points to an increase in marriage breakdowns; women becoming breadwinners, albeit in insecure, low paid, or exploitative work; an increase in women's 'triple burden' of paid and unpaid domestic and caring work; and loss of identity, stigma, and social isolation for men. An intersectional approach reveals that these impacts are not uniformly experienced by all women or all men.

*Changes in land use, lack of land ownership, and involuntary resettlement* exacerbate poverty, access to land and water, food insecurity, and loss of livelihood. For indigenous women in particular, these changes permanently alter deeply held connections to place and cultural identity—including customary gender roles—and significantly increase underlying structural disadvantage and vulnerability. In some cultures, women and men may have different obligations, responsibilities, and rights in terms of land ownership, use, and access. Where land is customarily owned by women, post-closure land distribution or withholding of customary land by the state can snatch these rights from women, thereby further diminishing their economic, social, and cultural status.

*Cessation of infrastructural and social services* affect women's mobility and wellbeing. The ownership, ongoing delivery, and maintenance of infrastructure and services that have been developed and funded either directly by mining companies or via tax transfers to local governments is a key area of impact for women and men in mining communities following closure. Loss of access to health, education, and child-care services disproportionately impacts women and may have potential long-term intergenerational socioeconomic impacts.

*Water*—its quality and security—has significant impacts on health and livelihood. Despite attempts at mitigation, mining activities may permanently alter or contaminate water resources, leading to potential long-term liabilities for communities and governments; the health impacts of using polluted water are greater on women.

*Outmigration* is closely tied to employment and livelihoods. Mining companies and governments may build social assets such as housing during a mine's project cycle, but the choice to leave a home and a community is a difficult one, particularly for poor and less mobile women and men.

*Loss of identity, declining social capital, erosion of community cohesion, and loss of connections* occur as a result of alienation, grief, and the loss of pride, lack of purpose, social disruption, and isolation. Mine closure leads to unemployment, economic decline, and uncertain futures, which often leads to acute poverty and food insecurity in a highly gendered manner, resulting in mental health disorders, substance abuse, domestic violence and abuse, and marital breakdown.

The invisibility of gender in coal mine closure means that many mitigation and transition programs have been either poorly designed or implemented or have failed to include women and men from impacted communities as active participants in the planning process. At a minimum, effective mine closure should involve: clear, regular, and up-to-date communication and dialogue with impacted workers and communities regarding closure timelines prior to project commencement and throughout the project life cycle; active participation of diverse local women and men in closure planning; preparing workers and communities for life after closure by embedding closure considerations in gender-sensitive economic diversification programs, education, sustainable livelihoods, and transferable skills training throughout the project life cycle; and environmental management and rehabilitation of mine sites to minimize impacts on surrounding and host communities.

### **Embedding Intersectional Principles in Gendering Just Energy Transition**

Following Hankivsky (2012, 2014), Colfer et al. (2018), and GADN (2017), the following principles are identified:

- *Reflexivity*: Researchers and policymakers must consider their own social positions, identities, and relationships, and how these might shape our perspectives and the outcome of our analyses.
- *Diverse knowledge*: It is important to value and recognise diverse forms of knowledge as well as how power influences which forms of knowledge are considered legitimate.
- *Multilevel analysis*: Understanding the effects between and across various levels in society, including macro (global and national-level institutions and policies), meso or intermediate (provincial and regional-level institutions and policies), and micro levels (community and household) is crucial.
- *Resistance and resilience*: These can disrupt power and oppression, and collective action can destabilize dominant ideologies.

The key questions in bringing an intersectional lens to policy-making and research on gendered Just Transition would then be:

- What forms of identity are critical organising principles for this community/region (gender, race, ethnicity, religion, citizenship, sexual orientation, and gender identity, age, caste, ability)?
- Which women, girls, men, and boys are most at risk of marginalisation and why?
- What social and economic programs are available to different groups in the community, and do they promote or advance a transformative agenda for women's rights?
- Who does and does not have access or control over productive resources and why?
- Who has the lowest and highest levels of public representation and why?
- What laws, policies, and organisations limit the opportunities of different groups?
- What opportunities facilitate the advancement of different groups?
- What initiatives would address the needs of marginalised or discriminated groups in society?

- What are the expressed needs and priorities of these marginalised groups?

### **Conclusion: Operationalizing Intersectional Approaches to Gender Mainstreaming in Just Transition**

The invisibility of gender consideration indicates a continued inability to understand and mitigate the complex gendered impacts of coal mine closure during energy transition. Evidence suggests that the impacts of energy transition are uneven, between women and men, and among women. Therefore, gender mainstreaming is urgently needed to ensure that Just Transition is truly fair to everyone in extractive communities, and that new energy systems do not exclude women. An intersectional approach would incorporate *four* interrelated domains of gender power relations: distribution of labour and roles; access to assets and resources; norms and values; and institutions, rules, and decision-making power. Finally, it would focus on gendered power dynamics as the overarching dimension and embed them in all these domains to reinforce and influence each other through a range of practices, institutions, and discourses.

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