



# Issues Note

## Session 6.2

### Greening energy and ensuring a just transition for men and women

#### 2020 Global Forum on Environment

#### MAINSTREAMING GENDER AND EMPOWERING WOMEN FOR ENVIRONMENTAL SUSTAINABILITY

Paris, 5-6 March





## Issues Note

### MAINSTREAMING GENDER AND EMPOWERING WOMEN FOR ENVIRONMENTAL SUSTAINABILITY

## Session 6.2. Ensuring a green energy just transition for men and women

*The transition towards a low-carbon economy will depend on a more efficient energy production and use as well as on greening energy infrastructure. Moving away from carbon-intensive industries is expected to create changes in employment in various sectors. Just transition should, therefore, include a gender perspective, to guarantee equal opportunities for both men and women in the workforce. Women's empowerment and leadership in the energy sector may play a catalytic role in promoting clean energy<sup>1</sup> and more efficient energy use, as well as in helping to tackle energy poverty. More women in corporate leadership and management positions could allow for a more effective integration of environmental and gender goals and more sustainable, trust-worthy and inclusive corporate decisions.*

### Energy poverty

Energy poverty is a worldwide phenomenon. Even though its definition varies depending on context, location and population affected, it is an issue visible both in the Global North and in the Global South. For the most advanced economies, energy poverty constitutes mostly an issue of energy affordability rather than one of access. For the least advanced ones, it is firstly an issue of availability, access and reliability before even considering affordability and sustainability. In both cases, however, energy poverty has a strong gender dimension.

Energy poverty is an issue for OECD countries. In the US, it is estimated that around 30% of households live in energy poverty (USEA, 2019). In the EU, in 2012, more than 54 million people, almost 11% of the EU's population, had difficulties warming up their homes and paying in time their utilities bills. Women, especially single mothers and elderly single women, were the most affected because of their lower income, physiological characteristics and behavioural patterns (Clancy et al. 2017).

In developing countries, lack of access to energy is a major dampener on girls' and women's well-being and economic opportunities. Due to their household roles, they are usually most affected by lack of energy access. Women and girls in rural areas spend large part of their day collecting fuelwood, which translates not only into perpetuating their situation of poverty and inequality (Dutta et al. 2017), but also into lost opportunities for education and remunerated labour (OECD, 2018). Based on Lewis' model analysis, household electrification improves school attendance for girls, and in the long-run women's employment opportunities (Lewis, 2013). In rural areas in Brazil, increased access to electricity ameliorated employment opportunities both for men and women. However, women benefited the most as, by using electric appliances, they freed up time from household chores. Girls under 18-years of age are 59% more likely to complete primary education when they have access to electricity in comparison to when they do not (O'Dell et al., 2014).

Women and children are also the main casualties from in-door pollution generated by traditional cooking stoves that are widely used in the Global South. More than a quarter of the world population rely on traditional use of biomass for cooking and heating, while they have limited access to clean and efficient energy for lighting (United

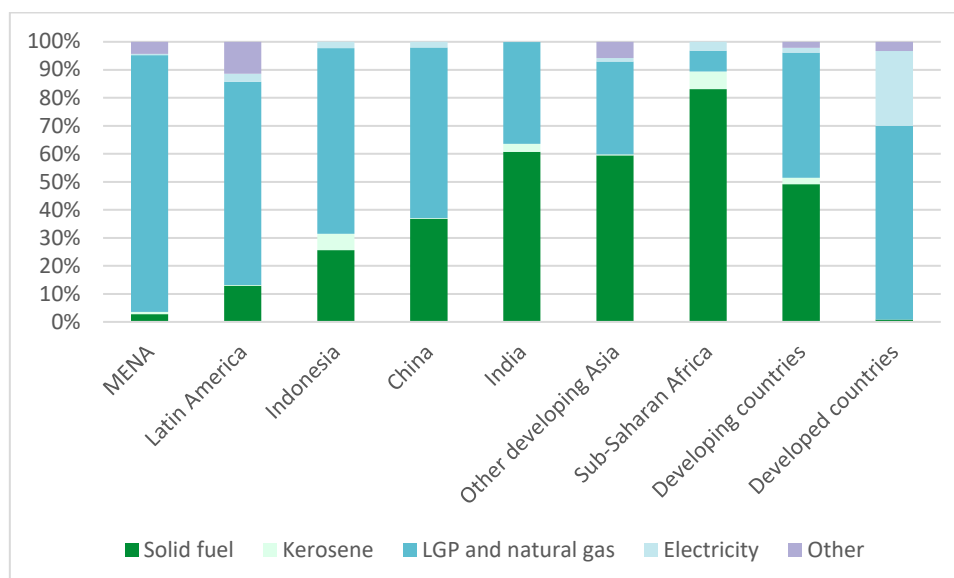
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<sup>1</sup> Definitions on what could be categorised as clean energy vary. In this Issues Note, we focus mainly on renewable energy.

Nations, 2016). The negative effects of the use of biomass have been widely reported on both human health, and agriculture and ecosystems (Venkataraman, 2010).

More sustainable energy sources that guarantee fuel efficiency, reduce pollution, health risks and climate impacts are being widely developed. Thirty-two countries have included a cook stove initiative in their Nationally Determined Contributions (NDCs), as well as various other initiatives to promote the use of renewable energy in specific sectors (Climate and Clean Air Coalition, 2016). However, efforts need to be multiplied, especially in Sub-Saharan Africa, where more than 80% of the population still relies on solid cooking fuels.

**Figure 1. Share of population relying on different cooking fuels, 2015**



Source: (IEA, 2015) All Rights Reserved.

## Greening energy

Achieving universal energy access by 2030 via renewables can deliver triple wins: economic (via investment and employment in the renewables), social (including women's empowerment and improved health impacts) and environmental (lower emissions and pollution). At the same time, greening energy infrastructure is a *sine qua non* requirement to tackle the climate crisis and reduce pollution. Many countries are taking measures transitioning away from fossil fuel use. In 2017, 13.5% of the total primary energy supply came from renewable energy sources. Currently, about 71.5% of the global renewable energy is supplied by non-OECD countries. Yet, much of the renewable energy in developing countries is not clean. Solid biofuels and charcoal cover almost 61% of the global renewables supply, and no major fluctuation has been measured since 1990 (IEA, 2019b).

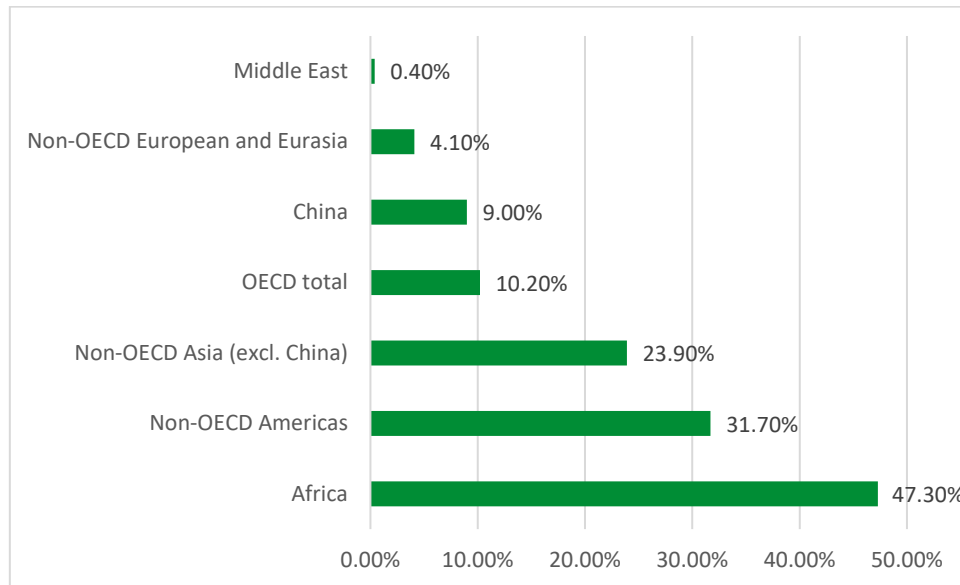
Countries need to take advantage of a unique opportunity to leapfrog brown technologies altogether, developing low-cost, renewable energy facilities based on solar and wind. Advancing women's participation in the renewable energy sector is an opportunity for women to move away from energy poverty, by contributing actively in the energy value chain.



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Figure 2. 2017 shares of renewables of regional total primary energy supply



Source: IEA (2019a)

The possibility for small-scale, renewable energy generation makes the industry more accessible to women. As off-grid energy solutions are becoming more popular, women have an opportunity to become more active not only as energy-users but also as energy-entrepreneurs. Women-led community-based co-operatives have provided women with access to the energy value chain. For instance, Windfang E.G. was the first only-women community-based co-operative established in Germany in 1991. Even though it commenced as a small initiative of women committed to support the energy transition through wind energy, it currently owns 11 wind turbines and 3 solar panels, supplying more than 3,000 households with renewable energy. In Germany's case, legislative provisions support co-operatives' participation in auctions for on-shore wind and solar PVs, by setting lower bonds for small developers (Botta, 2019a).

Women in developing countries are also engaging in the retail market of more efficient renewable energy solutions (IUCN, 2019). Such co-operatives, could provide an opportunity for women to engage in all value chain roles, not only in the "last mile", but also in production. Further analysis on gender-responsive policies and measures supporting women's co-operatives could provide policy-makers with the necessary tools to actively enhance women's economic empowerment through sustainable solutions.

To support emerging economies in creating an enabling environment for finance and investment in renewable energy and energy efficiency the OECD has recently launched a Clean Energy Finance and Investment Mobilisation (CEFIM) programme, funded by the Danish government (OECD, 2019e). An important question asked in the CEFIM programme is whether clean energy finance and investment policies promote gender diversity and women's empowerment. Female entrepreneurs are often disadvantaged in debt finance, generally disposing of fewer assets to act as loan guarantees. To support a just transition and encourage innovative business models for clean energy, it is important to ensure that both men and women have access to finance and are considered in public engagement programmes.

The same considerations also apply for the financing provisions of multilateral development banks, where the allocation of funds to climate change mitigation, adaptation and resilience should have a gender component, encompassing labour, social, and industry and economic changes in the existing production systems (WEDO, 2016).

## A just transition for women and men

Women are in general better represented in the renewable energy sector than in the traditional energy sector. A global survey conducted in 2018 by the International Renewable Energy Agency (IRENA) shows that women account for 32% of the workforce in the renewable energy sector, compared to 22% in the oil and gas industry sector, indicating that they may have a higher interest in environmental sustainability fields (IRENA, 2019). However, the study shows that women occupy almost half of the administrative positions in the renewables sector and 35% of the non- Science, Technology, Engineering, Mathematics (STEM) technical roles, but only 28% of the STEM-related roles.<sup>2</sup> This is linked to perceptions of gender roles – common also in other sectors - that hamper women’s participation in STEM and R&D related fields, exclusion and harassment by male colleagues, and obstacles in reaching decision-making positions, due to lack of supportive measures to address such gender-based barriers.<sup>3</sup>

The International Energy Agency (IEA) is supporting the Clean Energy Education and Empowerment (C3E) initiative, launched by the Clean Energy Ministerial in 2010. C3E focuses on enabling greater gender diversity in the clean energy professions. It brings together experts in public administration, industry and research organisations, which work together to identify best practices and share data, experiences and career development programmes. The Equal by 30 Campaign is operated under the C3E initiative, and its signatories (9 countries and more than 80 energy companies) have committed to equal pay, equal leadership and equal opportunities by 2030. Based on their analysis, on average 23% of total employees in 135 energy companies are female (C3E, 2019).

Also, moving away from carbon-intensive industries and transitioning to a low-carbon economy, is expected to create changes in employment in different sectors, even if projections show that, at the aggregate level, employment should remain at the same levels (Botta, 2019b). Chateau et al. (2018) have examined the effects of transitioning to a low-carbon economy to the labour markets. Independently of the different scenarios analysed, disruption is expected in energy-intensive industries, but also, potentially, in construction or business services. The most affected seem to be the low-skilled workers (Chateau et al, 2018).

Furthermore, Botta’s (2019a) analysis on low-carbon transition shows a possible shift of workers from fossil-fuel intensive industries to low-carbon ones. International Labour Organisation (ILO) calculations project an 11-15% decrease of “brown” industries workforce. Botta (2019a) further argues that the transition has differential effects based on a company’s location, and on the workforce’s gender and age. In the case of the UK coal-mining sector, the transition affected primarily the male workers in the sector, 90% of which were displaced. Evidence shows, however, that female workers in manufacturing were crowded-out, as men engaged in activities previously occupied by them (Aragón et al. 2018).

Just transition should, therefore, include a gender perspective, to guarantee equal opportunities for both men and women in the workforce. More research in coal regions, where structural changes are now being planned, would help identify the trends and the needs for more inclusive and sustainable job creation. This could expand beyond skills development and training, to financing and investment priorities. Finally, considering women’s already higher engagement in the renewables sector, but low participation in STEM-related roles, new skills

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<sup>2</sup> A more recent IRENA report on women’s engagement in the wind energy sector reaches equivalent results, showing also women less engaged in the sector in Africa (9%) and Asia-Pacific (15%) in comparison to Latin America and the Caribbean (19%), and Europe and North America (26%). IRENA (2020), *Wind Energy: A Gender Perspective*. IRENA, Abu Dhabi.

<sup>3</sup> In the IRENA 2019 survey, these measures include mainstreaming gender through audits and awareness raising in the private sector; setting supportive networks, mentorships and awards; providing better access to education and vocational training by adapting curricula; introducing gender quota and targets; breaking gender barriers by adapting workplace policies and regulations; and, ensuring better work-life balance.



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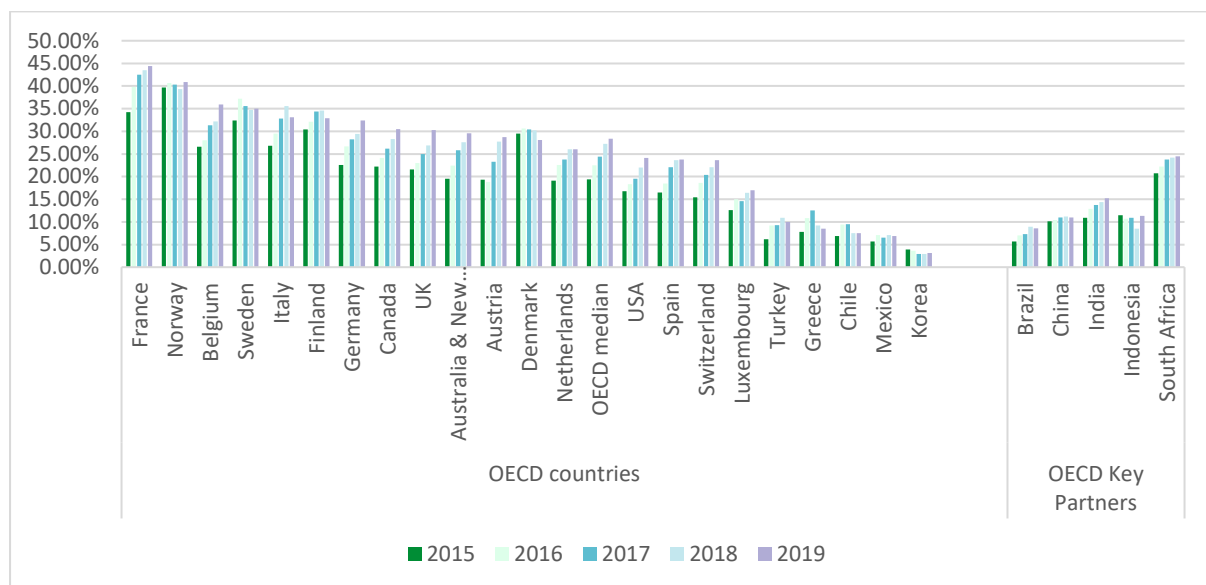
development should consider how to build upon existing good trends and empower women to strengthen their presence in areas that were traditionally male dominated.

#### Women in energy leadership

As recent studies show, promoting gender balance in corporate boards and in senior management positions not only supports good corporate governance, but also helps business to grow and to perform better as well as to improve its environmental outcomes. Specifically, companies with at least one female director generated on average 3.5% higher returns on equity than those with no female directors.<sup>4</sup> In addition, companies where more than 20% of senior managers were female performed better by 3.6% when compared to companies with less than 15% female managers (Credit Suisse, 2019). Increasing women's participation in high management positions showcases better performance results even from women's participation in boards (supervisory roles) (Credit Suisse, 2019).

Gender diversity can also improve a company's reputation and employee retention. Setting as a strategic aim to improve the company's position through gender equality, sends a positive message internally, to workforce, and externally to investors and consumers (Kamalnath, 2015). It also provides legitimacy and trustworthiness for stakeholders (Perrault, 2015), as women are positively correlated with ethical and social compliance (Isidro & Sobral, 2015).

**Figure 3. Percentage of female board members**



Source: Credit Suisse data 2019, analysed by OECD

Gender balance also helps minimise governance-related controversies. Women's increased participation in boards offers a shift in governance styles, enhancing more the collective, collaborative decision-making usually

<sup>4</sup> Credit Suisse Gender 3000 (CSG 3000) data covers about 30,000 senior managers from more than 3,000 of the largest global companies. Companies are based in more than 50 countries and cover Telecoms, Finance, Consumer staples, Utilities, Industrials, IT, Energy and Materials. ['The Credit Suisse Gender 3000: Women in Senior Management'](#), Credit Suisse, 2017.



required from boards of directors (Kamalnath, 2015). A research conducted identified that of the 2,400 companies monitored between 2012 and 2015; those with at least 3 female board members experienced 24% less governance-related controversies than average.<sup>5</sup> Yet, women's participation in boards remains below 30% in OECD countries (median) (Figure 3).

Achieving greater gender diversity on companies' boards and senior management positions could bring about an acceleration towards the green transition, as it would allow for a more effective integration of environmental and gender goals. Analysis shows that decision-makers are highly influenced not only by their education and background, but also by their experiences and social considerations. In fact, increasing the number of board members with experience in environmental sustainability, will increase the probability that related issues will be introduced in the agenda (Walls et al, 2013). A study by Hossain et al (2017) reveals that the higher the number of female directors in a company's board, the more carbon-related information will be disclosed. By examining the relationship between gender diversity in boards and the Carbon Disclosure Project (CDP)<sup>6</sup> index in 33 countries, Hossain et al show that there is a positive correlation between how companies score in the CDP index and their board size, asset size, energy consumption and Tobin's Q ratio<sup>7</sup> market value (Hossain et al, 2017).

Ben-Amar et al (2017) reach similar conclusions, suggesting that gender diversity promotes the adoption of sustainability initiatives, as well as improving the effectiveness of stakeholder management. To achieve such gender diversity, at least two female directors need to be accounted for (Ben-Amar et al., 2017).

Firms with three or more female members in their board of directors show more environmental corporate social responsibility in issues such as pollution prevention, emissions reduction, use of recycled materials in production, use of clean energy, committing to energy efficiency measures, and environment-related reporting, as women are overall more attentive towards environment-related issues (Post et al., 2011). In Norway and France where female participation in companies' board of directors exceeds 40%, it is reported that women have repeatedly brought a more cautious and less controversial approach in decision-making, including in environment-related issues (Dhir, 2015).

Family-owned companies with female executives are incorporating environmental and sustainability targets into the company's operations and business strategy. The percentage is just over 60% when women hold less than 50% of executive positions and almost 70% when they hold more than 50% of executive positions (Credit Suisse, 2019).

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<sup>5</sup> Women on Boards: Global Trends in Gender Diversity on Corporate Boards' MSCI, November 2015. MSCI ESG Research identified and assessed the severity of governance controversy cases implicating the 2,400+ companies in the MSCI ACWI coverage universe between 2012 and 2015. For this analysis, they focused on the 3,224 governance-related controversy cases dated between 2012 and 2015 across MSCI ACWI companies.

<sup>6</sup> The [Carbon Disclosure Project](#) is a non-governmental environmental organisation that has created and developed a global disclosure system, for investors, companies, cities, states and regions to engage on environmental issues. Through an Index developed, it scores volunteering companies and cities, based on the level of environmental transparency and action taken on climate change, water security and forest preservation. More than 8,400 companies and 900 cities and regions disclosed information through CDP in 2019.

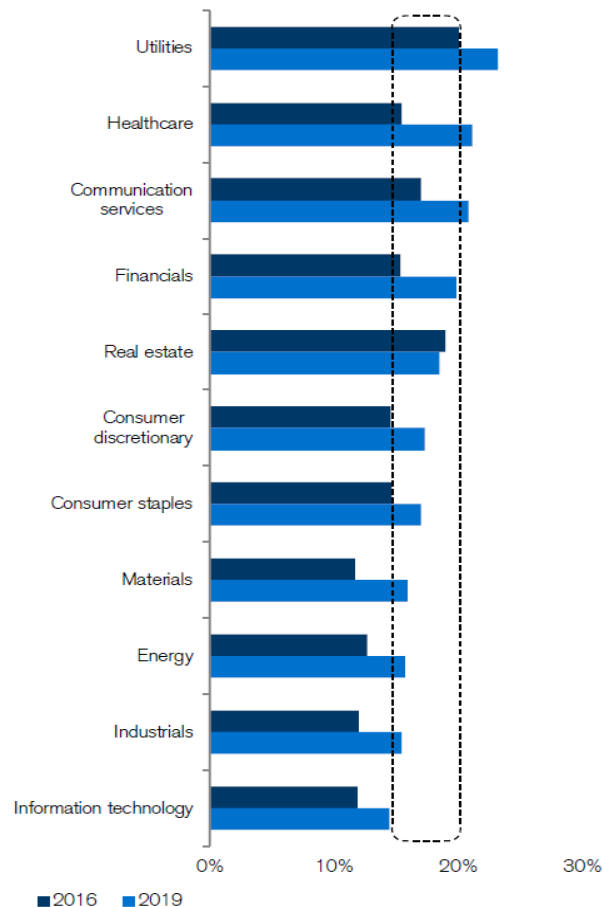
<sup>7</sup> Tobin's Q ratio equals the market value of a company divided by the company's assets replacement cost. A ration higher than 1 would imply overvaluation of the company's stock.



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Figure 4. Women in management by sector



Source: Credit Suisse, 2019

When viewing women's participation in high management positions by sector, energy companies have low female representation. Based on 2019 data by Credit Suisse, only about 2% of companies in the energy sector have a female Chief Executive Officer (CEO) and just over 9% have a female Chief Financial Officer (CFO) (Credit Suisse, 2019). In a 2010 survey for Germany, Spain and Sweden, 64% of energy companies (electricity, gas, steam and hot water supply) had no women in their senior management or board of directors; while the percentage of women's participation was only 2%, 8% and 18% in Germany, Spain and Sweden respectively (Carlsson-Kanyama et al., 2010). Recent Equal by 30 data show that on average 18% of management positions are held by women within 68 companies examined in 2018 (C3E, 2019). The Equal by 30 member countries are introducing mentorship programmes, where female senior managers support newcomers in the Clean Energy sector to help them advance in their career.

Broader than action in the renewable energy sector, the [G20/OECD Principles on Corporate Governance](#), endorsed by G20 leaders in 2015, propose the introduction of targets to further enhance the increasing gender diversity on boards and senior management, and many OECD countries have already introduced relevant provisions (OECD, 2019b). The EU has also introduced new guidelines for disclosure of information on women representation in senior management and boards of directors. The level of engagement in the implementation of the TCFD Recommendation and gender targets vary between companies, but they are becoming increasingly common practice (Jurdant & Sebti, 2018). Considering the interlinkages between gender diversity and climate-related disclosure of information, it would be appropriate to consider an integrated gender-responsive policy



framework that could support the private sector transition to lower-carbon economy practices. More research on environment-related sectors, and female participation in the workforce and senior management positions, as well as how this links to the companies' transition to lower-carbon solutions would assist policy-makers in better defining future possible initiatives and measures in integrating gender in environmental policies.

### Questions for consideration

- Do clean energy finance and investment policies promote gender diversity? If not, what should be done to change this? If yes, please share best practices.
- How much evidence is there on energy poverty among women, especially from vulnerable layers (single mothers, etc)? What is being done about it?
- What examples are there of successful initiatives promoting women entrepreneurship and co-operative production in environment-related sectors, such as the renewable energy sector?
- How to guarantee that a just transition will be just for all, considering the primary and secondary effects in the labour force?
- How can women's interest in STEM, technical education and training be increased in order to facilitate access to green jobs?



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