GFSE Newsletter

Dear Friends of GFSE,

We are pleased to send you our autumn edition of the GFSE newsletter, containing updates on activities of the Global Forum on Sustainable Energy, important events and news from other stakeholders working towards a sustainable energy future for all.

Enjoy reading!
The Global Forum on Sustainable Energy

IEA Report: Solar PV Global Supply Chains

Global PV manufacturing capacity has increasingly shifted from Europe, Japan, and the United States to China over the past decade. China has invested over $50 billion in new PV supply capacity - ten times more that Europe. Today, China's share of solar module components represents over 80% with an increasing tendency. Chinese industrial policies focuses on solar PV as a strategic sector and a significant export for China.

This trend has caused reduction in cost of solar PV and fostered continuous innovation on the global scale, which has positive impact on clean energy transition. At the same time, uneven geographic concentration in global supply chains brings also potential challenges (and risks for the EU). It has also led to supply-demand imbalances in the PV supply chain and represents a significant vulnerability.

Solar PV manufacturing is electricity-intensive and currently mostly based on fossil fuels. Today, coal produces over 60% of the electricity used for global solar PV manufacturing, what is significantly more than its share in global power production (36%). The primary reason for the fossil intensive manufacturing of PV is that the production is mainly concentrated in China.

Despite improvements in the efficient use of materials, the PV industry's demand for critical minerals will increase remarkably. IEA estimates that demand for silver for PV manufacturing, for example, will increase to 30% of total global silver production in 2030 - up from about 10% in 2020. This rapid growth, combined with long lead times for mining projects, raises the risk of a supply-demand imbalance, which can lead to cost increases and supply shortages. China plays a dominant role in securing access to critical minerals. Recycling of solar PV panels can enhance security of supply in the long term and also provide social, environmental and economic benefits. (could meet over 20% of the solar PV industry’s demand for aluminium, copper, glass, silicon and almost 70% for silver between 2040 and 2050).

The cost of PV production in China is 10% lower than in India, 20% lower than in the United States, and 35% lower than in Europe. Thus, the cost competitiveness of existing PV manufacturing is one of the biggest challenges for supply chain diversification.

Diversification can diminish/minimize supply chain vulnerabilities and provide economic and environmental opportunities. Governments should pay attention to ensuring PV supply security as an integral part of a clean energy transition.

The IEA proposes five key policy measures to ensure solar PV security of supply:

- Diversify manufacturing and raw material supplies
- De-risk investment – finance and tax policies
- Environmental and social sustainability - clear and transparent standards, social inclusion
- Foster innovation and research
- Develop and strengthen recycling capabilities

More information can be found here:

Solar PV supply chains

GFSE online event Young Women and Green Skills

On Tuesday, 20.09. 2022, a virtual GFSE event "Young Women and Green Skills" took place.
The event was introduced by GFSE President and former Ambassador MMag. Dr. Irene Giner-Reichl. She sketched a first picture and the contents of the event and emphasized that increasing the involvement of young women in the clean energy sector is very important to advance the energy transition quickly. Women are still highly underrepresented in the energy sector.

In the first presentation, Ms Raphaela Reinfeld-Spadt, Head of Research and Innovation at Energie Burgenland, took us on a journey through the challenges of a regional energy service provider in a rural area in search of suitable and well-qualified women in the green energy segment.

Ms Katharina Pröstler, Gender and Energy Expert at the United Nations and Industrial Development Organization (UNIDO) presented UNIDO's vision. Gender mainstreaming, gender markers and gender guidelines should be integrated into the project cycle as standard. Women should serve as mentors to women. All studies so far have shown that gender equality leads to higher and faster economic growth.

The joy and passion for geothermal energy and the wonderful working environment for women were exuded in our third presentation by DI Dr Edith Haslinger. A senior scientist from the Austrian Institute of Technology. In her presentation, she highlighted the many advantages of geothermal energy and praised the interdisciplinary field of work.

Ms DI Beate Zöchmeister took us on a journey to different jobs where women work at Web Windenergie AG. In her presentation, she referred to jobs that are not always the focus when talking about green jobs. She also emphasized the important role of communication

skills and social competences of women. From this point of view, it is possible to attract women from different educational backgrounds to green jobs in the energy sector.

The GFSE would like to sincerely thank the speakers for their time and support in making this event a reality. We hope to be able to offer more such events for you in the future and hope that you will join us again in the future.

More information as well as the recording can be found here:

GFSE online Event Women and green skills

Policy Brief: Women and Green Skills in the Renewable Energy Sector

In the renewable energy sector still remains a significant gender gap in access and consumption, as well as in the workforce. Women are underrepresented in the energy sector compared to the global labour force (48%). The numbers are slightly higher in the renewable industry (32%) compared to the conventional energy sector (28%). Most women work in office-related corporate functions such as human resources, finance, and customer service. The numbers in higher positions that could influence decision-making remain especially low. Also, the number of women in technical careers is still very low.

Nonetheless, women are underrepresented in the workforce, but they are often most dependent on reliable energy sources in their daily work. Cooking in the home can account for 60-80% of black carbon emissions because fuel is often used for cooking. In addition, women are exposed to extreme temperatures and air pollution. Sustainable modern energy infrastructures and technologies usually reach women last, while they are most dependent on them. Women are generally more affected by energy poverty than men - up to 70% of the people living in poverty are women.

In order to enhance the gender equality, women have to reach higher positions to be involved in the decision-making process to prepare the way for those entering the field. The reduction of gender stereotypes and the division into “male” and “female” jobs is also essential. Regarding to this issue is crucial, that girls and women have access to education, training grants and mentoring opportunities.

The GFSE policy Brief can be found here:

Policy Brief Women and Green Skills in the Renewable Energy Sector

Decentralised solar electricity for agri-food value chains in the Jindu Kush Himalaya region

The International Renewable Energy Agency (IRENA) in cooperation with the International Center for Integrated Mountain Development (ICIMOD) and SELCO Foundation have published a report about findings and recommendations on the use of decentralised solar photovoltaic (PV) solutions for selected food value chains in the Hindu Kush Himalaya (HKH) region.The Hindukush Himalayan region relies mostly on agriculture and farming to provide food security and livelihoods. Agriculture sector in mountain environments faces challenges of climate change, limited accessibility as well as insufficient access to markets, a high degree of fragility, lack of production and post-harvest technologies.

The present study was carried out to assess the viability of solar PV solutions to meet energy needs in four selected food value chains of economic importance of the HKH region – buckwheat, yak milk, potato and other vegetables.

Recommendations:

- *Increasing the capacity and skills of local communities* - skills training and certification, trained persons at the local level to ensure proper operations, troubleshooting and repairs.
- *Enhance the commercial viability of local food products* - government and public sector support in the form of concessional loans, tax credits and subsidies to encourage private sector investment, reduction of sales and duties on purchase of equipment and machinery etc.
- *Build awareness and inform local communities about policies and programmes* – it´s necessary to make isolated communities aware of available tools and opportunities for PVs deployment.
- *Promote solar PV solutions to support climate resilience and adaptation*

Innovations need to be tailored to rural areas and decentralized with the focus not only on technology but also on sustainable and appropriate ownership models, financing and supply chain models. Financing has been a barrier to scaling and for self-sustainable and long-term investment.

Clean and affordable decentralised renewable energy can reinforce the resilience of local population by improving the agricultural productivity and income generation as well as the adaptation to the growing impacts of climate change. This could bring substantive socio-economic growth to the region. It will also help to reduce the dependence of mountain areas in the HKH region on external food supplies.

Decentralized solar-powered solutions and energy-efficient machinery have the potential to transform food value chains. However, this transformation must take place while preserving the socio-cultural patterns of the region and ensuring green and sustainable development in line with local needs.

Source:

The report can be downloaded here

UN-ENERGY PLAN OF ACTION

UN-Energy aims to achieve a double goal: to eliminate energy poverty and to address climate change through renewable and sustainable energy for all - this represents the SDG7.

UN-Energy is the United Nations mechanism for interagency collaboration on energy. Its purpose is to promote coherence among the UN system's multidisciplinary actions to meet SDG 7, thereby enabling achievement of the 2030 Agenda for Sustainable Development and the Paris Agreement on Climate Change, and to promote coordination and collaboration within the United Nations on policy development and implementation, as well as knowledge sharing. UN-Energy brings together 30 of the world's leading organizations in the field of energy and sustainable development. UN-Energy organizations currently work with over 190 countries worldwide. They provide a variety of services and programs at the global, regional and national levels.The 2021 High-Level Energy Dialogue emphasized the urgency of accelerating the energy transition.

The High-Level Energy Dialogue under the auspices of the UN General Assembly, attended by world leaders on September 24, 2021 brought as its outcome a global roadmap for accelerated SDG-7. This roadmap provides a guide for cross-sector collective action on energy to achieve scaled and broad impact. It includes five key areas: Decreasing the energy access gap; rapidly transitioning to decarbonized energy systems; mobilizing funding; leaving no one behind; and utilizing innovation, technology and data. The roadmap announces 2025 and 2030 as milestones.

Source:

UN-Energy Plan of Action

We hope you enjoyed reading our news updates and look forward to staying in touch with you within the GFSE community. We highly welcome reactions and suggestions!
If you do not wish to receive the GFSE newsletter anymore, please send an email to gfse@energyagency.at

The Global Forum on Sustainable Energy is a neutral multi-stakeholder platform facilitating international dialogue on energy for sustainable development by considering the special interests and challenges of developing countries. GFSE aims to establish a sustainable world energy system from a social, economic, and environmental perspective.

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