



Shared Prosperity Dignified Life



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Economic and Social Commission for Western Asia (ESCWA)**Report****Online Training Webinar on “Addressing the Water-Energy-Food (WEF) Nexus in the Context of Climate Change and Sustainable Development”***VOL. III: The Water-Energy-Food Nexus Approach for Rural Development**The Role of Small-Scale Renewable Energy Technologies and Gender Empowerment***22 October 2020****Summary**

The European Union and the Gulf Cooperation Council (EU-GCC) and the Environmental Center for Arab Towns (ECAT), in association with the UN Economic and Social Commission for Western Asia (ESCWA), the Middle Eastern Desalination Research Center (MEDRC), the Swedish International Development Cooperation Agency (Sida), and the Embassy of the Kingdom of the Netherlands in the UAE organized an online training webinar on 22 October 2020 titled “Addressing the Water-Energy-Food (WEF) Nexus in the Context of Climate Change and Sustainable Development” on “Vol. III: The Role of Small-Scale Renewable Energy Technologies and Gender Empowerment”. The webinar covered the development of rural communities by introducing small-scale renewable energy technologies and assessing their sustainability for income-generating nexus-based activities.

The webinar enabled the participants representing various institutions to engage in constructive discussions focused on the development of rural environments through small-scale renewable energy technologies. This enabled the participants to reflect on the significance of capacity building and awareness raising channels as well as gain a better understanding on the economic, social and environmental benefits of small-scale renewable energy technologies for rural development.

The webinar concluded with a series of recommendations that address the challenges faced in the nexus approach towards the SDG targets, climate change mitigation and Water-Energy-Food Nexus framework. Some key recommendations all speakers touched upon included post-pilot sustainability of renewable energy (RE) technology-based projects, improving the packaging and marketing of rural produced products, using RE to improve water access and energy costs, and on-site training sessions for women in RE and energy efficiency concepts.

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I. Introduction

1. The European Union and the Gulf Cooperation Council (EU-GCC) and the Environmental Center for Arab Towns (ECAT), in association with the UN Economic and Social Commission for Western Asia (ESCWA), the Middle Eastern Desalination Research Center (MEDRC), the Swedish International Development Cooperation Agency (Sida), and the Embassy of the Kingdom of the Netherlands in the UAE organized an online training webinar on 22 October 2020 titled “Addressing the Water-Energy-Food (WEF) Nexus in the Context of Climate Change and Sustainable Development” on “Vol. III: The Water-Energy-Food Nexus Approach for Rural Development: The Role of Small-Scale Renewable Energy Technologies and Gender Empowerment ”.
2. The main objective of the webinar was to shed light on the development of rural communities by introducing small-scale renewable energy technologies and assessing their sustainability for income-generating nexus-based activities.
3. The webinar was attended by a variety of participants representing various local key partner organizations, government and financial institutions and relevant governmental regional organizations, national experts, representatives from private sector, NGOs, academia and local communities.
4. The webinar was divided into two session. Session I discussed the role of small-scale renewable energy technologies and applications to support rural development, and session II presented field projects and gender empowerment through a nexus approach.

II. RECOMMENDATIONS

5. The workshop concluded with the following recommendations:
 - a) Enhance the role of women in the local community by integrating them into community-based organizations and cooperatives.
 - b) Organize and promote the participation in capacity building and training workshops focused on enhancing the local knowledge and skills to improve income-generating activities and the awareness towards renewable energy and energy efficiency.
 - c) Promote the use of renewable energy technologies to reduce energy costs, improve the competitiveness of agricultural products, and improve access to water.
 - d) Rehabilitate water pumping systems, install photovoltaic energy and water irrigation systems, and implement modern irrigation networks.
 - e) Improve the obstacles standing in the way of rural women employment and entrepreneurship consisting of legal, cultural, and financial barriers.
 - f) Develop fit-for-purpose policies to be in place to support rural development and create awareness campaigns and the sharing of experiences and opportunities at local, regional and intra-regional levels.

III. MAIN TOPICS OF DISCUSSIONS

6. Presentations and discussions are summarized in the following sections which are organized according to the substantive sessions of the webinar.

A. SESSION I

7. The session opened with a presentation covering the REGEND project’s aims and objectives, the main challenges faced in rural community development, and the strategies and solutions used to overcome them. The main benefits of RE technologies’ implementation in rural contexts were highlighted to be technical maturity, increased economic productivity and growth, climate change mitigation and pollution reduction, and significant improvement in health, education entrepreneurship and gender empowerment.
8. REGEND’s small-scale RE technologies were assessed through four aspects: technical sustainability (usability, compliance, fit-for-purpose), economics (capital and operating expenditure, life cycle,

benchmarking, economies of scale), environment (Water-Energy-Food (WEF) nexus, benefits to environment, adverse effects), and social impacts (local resourcing, politics, culture, individual and community health).

9. An important topic also discussed was the rapid potential for development and growth in rural communities and in the WEF sectors which requires the availability of natural resources, the interest in productive activities, an active population, especially women in the labour force, strong local governance, and the willingness and commitment of the community and authorities to learn and grow.

10. The participants concluded that, despite the challenges presented, RE has great potential within rural areas throughout the Arab region offering an affordable and more sustainable alternative energy source. Rural communities can benefit from increased access to water, food and energy as well as economic development catered towards gender empowerment and a better livelihood. To achieve such aims, fit-for-purpose policies should be in place to help development, awareness campaigns should be organized and the sharing of experiences and opportunities at local, regional and intra-regional levels should be practiced.

B. SESSION II

11. A presentation on REGEND's field projects was then delivered. The target countries in the Arab regions, Jordan, Tunisia and Lebanon, were all presented and tackled through the WEF Nexus approach. The aims, objectives, challenges and recommended solutions were also highlighted.

12. The presentation on Tunisia introduced Chorbane, a rural community in Tunisia, that holds a 78% rurality rate, 20% unemployment rate and a Rural Development Index (RDI) of 178 (3rd class). The environmental and socio-economic risks faced there vary from droughts due to climate change impacting agriculture to the decrease in skilled labours due to emigration. The analysis of this community discussed the opportunity for organic agriculture and the facilitation of a new regulatory framework for decentralization through the REGEND project. The WEF nexus capacity-building programme being implemented there was also highlighted to be key in building the knowledge and skills of the rural populations.

13. The following presentation discussed the potential of promoting integrated agricultural and food production by reducing production costs and increasing the competitive ability for women in local markets in Jordan. It was also emphasized that successful development for local communities can only be reached in accordance with the national strategy of that country which should account for rural areas' particularities and challenges. The integration of the WEF nexus concept into productive farms, capacity building, and sustainable women empowerment was also highlighted. Important actions were recommended to achieve each objective and on-site training sessions and educational programs were deemed critical for the sustainability of rural ecosystems.

14. The final presentation discussed the REGEND project in Lebanon. The 12% rural population rate and 50% of territory susceptible to desertification made it a promising candidate for such a project. The main challenges faced were the legal, cultural and financial barriers to rural women employment and entrepreneurship as well as the rural areas' lack of updated data, complicated electrical systems, poor market understanding, and lack of marketing and advertising skills. The two solar photovoltaic systems to be implemented in the rural areas, coupled with capacity building, will reduce energy costs, build skills, and increase productivity thereby improving food production and safety and increasing sales and profits.

C. CLOSING SESSION

15. The webinar sessions were closed by the moderator, Mr. Jauad El Kharraz, Head of Research at Middle East Desalination Research Centre (MEDRC). The closing statement emphasized the fruitful discussions during the webinar and the intention to continue coordinating and collaborating with the represented stakeholders.

IV. ORGANIZATION OF WORK

A. DATE AND VENUE

16. The webinar was organized online on 22 October 2020.

B. OPENING

17. The webinar was formally opened by Ms. Radia Sedaoui, Chief of the Energy Section at the United Nations Economic and Social Commission for Western Asia (ESCWA).

C. PARTICIPANTS

18. The webinar was attended by a wide variety of participants representing various local key partner organizations, government and financial institutions and relevant governmental regional organizations, national experts, representatives from private sector, NGOs, academia and local communities.

D. AGENDA

19. Presentations and discussions were made over two sessions. The agenda of the webinar is summarized below:

- a) Session I
- b) Session II

ANNEX I: AGENDA

Introductory session

Welcome remarks

Ms. Radia Sedaoui, *Chief of the Energy Section at UN ESCWA, Lebanon*

Keynote speakers:

- **Ms. Roula Majdalani**, *Lead Cluster at Climate Change and Natural Resource Sustainability, ESCWA*
- **Ms. Katrin Aidnell**, *Regional Programme Manager environment, climate change, water, renewable energy and food security, Embassy of Sweden*
- **Dr. Mustapha Taoumi**, *Clean Energy Key Expert, EU GCC Clean Energy Technology Network*

Session I: The role of small-scale RE technologies and applications to support rural development

Moderator: Ms. Radia Sedaoui, *Chief of the Energy Section at UN ESCWA, Lebanon*

Keynote Speakers:

- **Dr. Syham Bentouati**, *Managing Director, NAFAS International LLC, Oman*

Discussant:

- **Dr. Hammou Laamrani**, *Senior Expert - League of Arab States, Cairo, Egypt*

Q&A Session

Break: 5 min

Session II: Field projects and gender empowerment through a nexus approach (60 mins including Q&A and Wrap-Up)

Moderator: Dr. Jauad El Kharraz, *Head of Research, (MEDRC), Oman*

Speakers:

- **Mr. Khaled Bedoui**, *Water and Renewable Energy Expert, Tunisia*
- **Ms. Jessica Obeid**, *Associate at Chatham House's energy, environment and resources department and Renewable energy and power Expert, Lebanon*
- **Dr. Iyad Muslih**, *Renewable and Energy Efficiency Expert, Jordan*

Q&A Session

Wrap Up of the 3rd online training seminar