

**Economic and Social Commission for Western Asia (ESCWA)****REPORT****Final Consolidation Workshop on “Sustainable Energy Access for Rural Areas”  
Le Royal Hotel Dbayeh, Beirut, 22 September 2016****Summary**

The Final Consolidation workshop on “Sustainable Energy Access for Rural Areas” of the Development Account (DA) project entitled “Building Capacities in Developing Appropriate Green Technologies for Improving the Livelihood of Rural Communities in the ESCWA Region” was held on 22 September 2016 within the framework of the International Beirut Energy Forum 21-23 September 2016.

The workshop presented the project accomplishments and the activities performed in collaboration with involved stakeholders from ESCWA member countries, experts, government, financial and research institutions. The objective was to share the lessons learned and shed the light on examples from the participating countries and experts. The workshop also provided a platform to debate and suggest appropriate course of actions for building on the project’s accomplishments.

The workshop as well addressed the socioeconomic situation of the Arab rural population while outlining regional trends in the context of the Sustainable Development Goals (SDGs). It also elaborated on policy tools, good practices and business models for enabling an environment conducive to the development and dissemination of appropriate green technologies in ESCWA rural communities. The workshop tackled the challenges of rural energy deployment in developing countries, taking into consideration the role energy access to cooking plays to improve the livelihood of rural women. Moreover, it addressed drivers that would incentivize the financial sectors to support a sustainable penetration of green energy technologies in the rural productive sectors and contribute to the improvement of rural livelihoods, and discussed the roles of the public and private sectors and the civil society groups.

Furthermore, to build on the project’s accomplishments and suggest a way forward, a brainstorming was conducted for discussing the proposal of creating Green Rural Enterprises (GREs) in the field of renewable energy applications and build additional incentives for women entrepreneurs, which would require an enabling policy environment in ESCWA member countries based on existing plans and platforms.

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## **Introduction**

ESCWA has implemented, during the period 2014 – 2016, the UN Development Account (DA) project “Building Capacities in Developing Appropriate Green Technologies for Improving the Livelihood of Rural Communities in the ESCWA Region”, which aims to strengthen the capacity of countries in the Arab region to mainstream appropriate green technology initiatives into national development programs and policies, in order to enhance livelihoods of rural communities.

The UNDA project targets to: (a) Build the capacity of public and private development institutions on assessing the Appropriate Green Technologies (AGTs) needs in rural areas and on understanding the mechanisms that support the mainstreaming of appropriate green technology initiatives; and (b) Enhance the knowledge of policymakers and decision makers on policy options and building their capacity for using policy tools to enable an environment conducive for investment in appropriate green technologies in the Arab rural areas.

The UNDA project’s outcome is in line with the framework of the UN Secretary General Initiative “Sustainable Energy for All” and Sustainable Development Goals (SDGs) of the Agenda 2030, particularly SDG7 that call for ensuring access to sustainable modern energy for all by 2030.

In light of the above, ESCWA organized a consolidation workshop as the final outcome of the project in order to present its accomplishments and the activities performed in collaboration with involved stakeholders from member countries, experts, governmental, financial and research institutions. The objective was to share lessons learned, shed the light on examples from experts and participating countries, and initiate the discussion on possible options on the way forward. The workshop also provided a platform to debate an appropriate course of actions for building on the project’s accomplishments. The Workshop was convened within the context of the 7th edition of Beirut Energy Forum held from 21st to 23rd September 2016. The relevant documents are available on the web: [www.unescwa.org/node/44098](http://www.unescwa.org/node/44098)

The Consolidation Workshop covered the themes of (i) Addressing socioeconomic situation in the Arab rural population while outlining regional trends and benchmarking them with the SDGs, (ii) Elaborating the manual developed under the DA project on appropriate green technology needs assessment, (iii) policy tools, good practices and business models for enabling an environment conducive to the development and dissemination of appropriate green technologies in ESCWA rural communities, (iv) Presenting challenges of rural energy enterprise in developing countries, and the energy service approach with the example of the cooking energy service parameters for the sake of improving the life style of rural women, (v) Addressing drivers that would incentivize the financial sectors to extend their activities to support the sustainable penetration of green energy technologies in the rural productive sectors and contribute to the improvement of rural livelihoods, (vi) the role of the public and private sectors and the civil society groups are closely examined, (vii) presenting the countries’ present, planned and future activities in the field of RE, and (viii) discuss proposals for promoting sustainable energy access in rural areas through

## **I. MAIN TOPICS AND OUTCOMES**

### **A. ENERGY FOR IMPROVING RURAL LIVELIHOODS**

This session focused on sustainable energy access as a mean for social inclusion in rural areas, the socio-economic context of the rural Arab region, the need for green technology assessment and appropriate policy tools, and the efforts of financial institutions (Banque Du Liban example was presented) to promote green technologies. These attempts should improve rural livelihood and act as a catalyst for developing

rural economy, through the integration in the rural value-chains in agriculture, small agro-businesses and industries, rural traditional manufacturing.

The discussion and interventions revealed that: (i) Renewable Energy (RE) sources could help improving living standards, health and environmental sustainability, in addition to creating more jobs and allowing more successful overall rural development, (ii) the widespread adoption and installation of the needed technology to harvest this energy remains challenging at the technical, financial and policy levels, (iii) the lack of access to affordable modern energy services is usually associated with poverty in rural areas where facing socio-economic challenges, (iv) capacity development and the structural inclusion should comprise the disadvantaged groups such as rural youth and women and have to promote access to basic services, (v) rural development is addressed through different policies in the Arab countries, most often with a special consideration for rural development integrated within the national agricultural policy, (vi) the need for a conducive framework for a participatory development process for investment in Appropriate Green Technologies (AGTs) in the Arab rural areas based on a multi-stakeholder policy formulation and action planning that touches on a large number of rural management areas, (vii) adoption of AGT, such as RE technologies, is sustainable if it generates additional “value” to rural businesses, and (viii) policy options and finance mechanism appropriate for the local conditions are key elements for the promotion of AGTs/RET

## B. CASE STUDIES ON BEST PRACTICES AND POLICY OPTIONS

This session gave a window to learn more about a success story relevant to the promotion of appropriate green technologies in rural area in an Asian country (Bangladesh). It also highlighted some lessons learnt by some Arab countries to improve living conditions, increase local income and create job opportunities with a focus on empowering the rural women.

Consequently, the keynote presentation was about Bangladesh, a pioneer in introducing micro-credit, working with poor people in rural areas, empowering women and lending without collateral to ensure energy access through the deployment of RE technology, based on a vision known as “The Three Zero Theory”, in line with the SDGs, to achieve Zero poverty, Zero unemployment and zero emissions. Accordingly, 1.7 million solar home systems were installed by end of August 2016, more than 32.5 thousand biogas plants were constructed, around 950 thousand cooking stoves were installed, 6000 bank jobs were created, the economic power of rural people increased, the quality of health was maintained and the livelihood was improved.

Representatives of Jordan, Oman, Lebanon, Mauritania, Palestine and Sudan, also presented national approaches, good practices, challenges and lessons learnt regarding the dissemination of RE technology and solutions in rural areas.

The comments and interventions indicated that increasing RE would not solve rural energy needs. There should be more emphasis on rural areas to improve energy access, energy production and energy sustainability. The focus should also be on importing the knowledge and localizing industries rather than importing the hard wares and assets. Furthermore, Entrepreneurship would be created and the system would be operational as a continuous activity. There might be a need for a corpus to finance and regulate those activities. In addition, safety nets for the private sector should play the role of key driver to encourage them to penetrate the market and increase their investments. The Public and private sectors should be incorporated although the government should be the main body in charge. These efforts to improve livelihood should not only tackle the energy sector, innovation is needed in this era and the “Business As Usual” approach should be left. Although there is no one size fits all approach, synergy approach is important to match agenda 2030.

### C. THE WAY FORWARD: PERSPECTIVES & PROSPECTS, PLANS, CHALLENGES AND NEXT STEPS

It was discussed that for the development in rural parts of the ESCWA region to be sustainable, the new economic activities should build on locally available, and to the best extent possible, RE resources. Gender disparity in economic and social sectors is also a critical issue faced by the region, which needs to be further addressed for equitable development. This will require a three-pronged strategy involving identifying appropriate RE technologies to suit local conditions and building business propositions around them, creating suitable financing models within the local banking structure, or through donor/corporate social responsibility (CSR) funding, and creating an enabling policy environment favorable to Green Rural Enterprises (GREs) in the field of RE applications. The strategy proposed for future project should also build in additional incentives for women entrepreneurs. This type of approach has successful precedents in other parts of Asia, namely the Gramin Shakti model in Bangladesh which was presented on earlier session. However, in most countries the approach was implementing using an existing microfinance organization and/or more favourable social and economic conditions. The unique challenges of the ESCWA region must be kept in mind while adapting these successful approaches to the countries in this region.

In this respect, in their interventions, the representatives of the ESCWA member countries tackled ways to build the capacity of local rural communities, the role of subsidies for improving access to modern energy sources, the coordination and involvement of NGOs, civil society, local municipalities and private sector, factors and lessons learned for mapping realistic way forward and setting an enabling political framework, and suggestions to scale up the project through the implementation of the GRE that needs to be build based one existing platforms and institutions.

The interventions indicated that media, public awareness schemes, training programs, coordination with the NGOs, and allocated funds from the "Rural Fills Electrification Funds" as applied in Jordan, are some of the strategies followed by Jordan to build the capacity of local rural communities. Moreover, it was noted that subsidies is a necessary condition for improving access to modern sources of energy in poor remote regions, especially at the early stages of the projects.

In the case of Lebanon and as per council of Ministers Decree No.30/2012, three axes were adopted: lighting for saving energy, public lighting on the roads, and solar heaters. As for

Palestine, it is relying on building models and learning from success stories as key element for capacity-building in rural areas along with introducing training programs for improving capabilities of local technicians.

In this respect and after brainstorming on the proposal of the GRE as a way forward for the UNDA project at its completion, interventions focused at building sustainable energy entrepreneurs through:

- a) Focusing on critical enablers: enterprise and entrepreneur
- b) Combining services and capital bringing with resources from multiple sources
- c) Targeting customized tools and activities
- d) Real time, working, evolving partnerships to plan, implement & improve
- e) Cross platform learning

This approach promotes and finances partnerships, bringing together the hard and soft resources that must be blended to launch sustainable enterprises, getting both the governance expertise and local, and delivering services & capital to the entrepreneurs.

The importance and key role of the civil societies and other local partners in promoting GRE, and building a road map based on the results of the workshops, in each country. Moreover, the identification of the responsible entity for drafting GRE proposals after discussion with the local stakeholders and the necessary funding, setting up a clear strategy and implementation plan are essential in this respect.

## **II. STRUCTURE OF THE WORKSHOP**

### **A. DATE AND VENUE**

The Workshop was held on 22 September 2016, from 9:30 am to 5:00 pm, at “Le Royal Hotel Beirut-Dbayeh”, Beirut- Lebanon.

### **B. OPENING**

The Director of ESCWA’ Sustainable Policies Division (SDPD) delivered a welcome speech, followed by an introductory presentation by the chief of ESCWA’ Energy Section, briefing the objectives of the project and its activities, and explained its accomplishment. She also provided an overview on the expected outcomes from the workshop and gave a brief on the organization of the sessions.

### **C. ATTENDANCE**

Around 23 Experts from ESCWA member countries from Governments, public and private sectors in the region, financial institutions, civil society organizations as well as representatives of the UN-ESCAP and UN-ECA participated in the workshop. Besides, the Director of the League of Arab States’s Energy Department and some of the members of ESCWA’ CoE of Jordan, Lebanon, Palestine, Mauritania and Sudan also, attended the workshop.

### **D. EVALUATION**

An evaluation questionnaire was distributed in order to assess the relevance, effectiveness and impact of the workshop, whereas 21 experts responded to the questionnaire. The results revealed that 95% rated the overall quality of the workshop as good to excellent quality and 90% thought that the objectives of the workshop were met “to a satisfactory extent” and “to a great extent”. In rating the preparations of the workshop, 100% found them good to excellent.

Regarding the usefulness of the workshop for reaching its objectives, the results showed that: (i) 90% rated the relevance of one’s expertise to the subject as good to excellent, (ii) 85% rated the relevance of other experts’ expertise to the subject as good to excellent, (iii) 90% rated the workshop as a forum for exchange of information and experience among experts, as good to excellent, (iv) 95% rated the workshop provided an opportunity to establish new useful contacts as good to excellent, and (v) 85% rated that the workshop provided useful input for future work as good to excellent.

A total of 95% found that presentations have good to excellent clarity, and 100% found that the organizational arrangements for and during the workshop were good to excellent. With regard to follow-up action, 90% of respondents were positive.

## ANNEX 1 WORKSHOP AGENDA

*Thursday, 22 September 2016*

- 8:30 – 9:00**      **Registration**  
Please bring your passport, visa stamp and airline ticket stub with you to the meeting.
- 9:00 – 9:30**      **Opening and Introduction**  
**Moderator:** Ms. Radia Sedaoui, Chief, Energy Section, Sustainable Development Policies Division (SDPD),
- Ms. Roula Majdalani, Director, ESCWA' SDPD
  - Objectives and outcomes of the UNDA Project, Ms. Radia Sedaoui
  - Overview of the Workshop Agenda, Ms. Radia Sedaoui
- 10:00 – 11:15**      **Session 1: Energy for Improving Rural Livelihoods**
- Lack of access to affordable modern energy services is usually associated with poverty in rural and remote areas, which account for 43 % of the Arab population. Several rural areas in the Arab region face socio-economic challenges. Amongst are the insufficient and unequal national support, growing population, and shortages in modern energy supply, relying instead on unsustainable traditional biomass energy, etc.
- The dissemination of appropriate green technologies to rural areas if rightly pursued can gradually improve rural livelihood and act as a catalyst for people to acquire new sellable skills and contribute to rural economy. Appropriate renewable energy technologies (ARETs) can contribute to the sustainable development of rural society, through integration in the rural value-chains in agriculture, small agro-businesses and industries, rural traditional manufacturing, etc.
- Moderator: Mr. Habib El Andaloussi, Energy Department, Plan Bleu, France**
- 10:00 - 10:15      • “Sustainable Energy Access as a Mean for Social Inclusion in Rural Areas”, Mr. Riccardo Mesiano, OES, UN-ESCAP, Bangkok.
- 10:15 - 10:30      • “Socio-Economic Context of The Rural Arab Region”, Ms. Salwa Tawk, associated professor, Lebanese University, Faculty of Agriculture
- 10:30 - 10:45      • “Green Technology Needs Assessment & Appropriate Policy Tools”, Mr. Imad Sleiman, Energy Expert, Lebanon
- 10:45 - 11:00      • “Banque Du Liban incentives for promoting green technologies”, Mr. Mazen Halawi, Head of Subsidized Loans and Financing Programs Divisions, Central Bank of Lebanon
- Discussion

- 11:00 - 11:15 Key questions:
- What are the required tools/instruments to facilitate dissemination of appropriate green technologies in rural areas with the Arab countries?
  - Are there Entities responsible for assessing the potential of small-scale renewable energy options to meet rural livelihoods needs?
  - How the study of the socio economic context is important for the definition and adaptation of green technologies in rural areas, and how we see the major differences among the Arab countries?
  - How remote communities in poverty conditions could attain a satisfactory level of human, social and financial development by the best use of sustainable natural resources through energy technologies?
  - Why successful service expansion to un-served rural areas has remained unclear and not well planned in many areas in the Arab region.
  - Despite the fast acceptance of the technologies, particularly photovoltaic, and interest of governments and others in expanding off-grid solutions to rural areas, Why the progress in planning and development of assessment methods remains slower than decision-making and actual expansion and implementation.
  - What are the enabling factors to encourage SMEs to play a significant role in promoting appropriate RE technologies in rural areas, as a mean of social inclusion?

**11:15 – 11:30 Coffee break and Group Photo**

**11:30 – 13:15 Session 2: Case Studies on Best Practices and Policies Options**

Many Arab countries have endorsed programs for promoting ARET for developing rural areas, in terms of improving living conditions, increasing local income and creating job opportunities with a focus on empowering the rural women. ARETs can play a significant role in this respect in terms of electrification, water heating, pumping and desalination, drying crops, solar cooking, etc. In spite of existence of some success stories in several Arab countries in the field of dissemination programs for solar water heaters in the residential sector, mostly in Palestine, Tunisia, Jordan, Egypt, and Morocco, and PV systems (to a certain extent), still application of ARETs, particularly biomass, remain largely untapped in the Arab rural region.

**Moderator: Mr. Ziad Jaber, ESCWA Regional Advisor**

- 11:30 – 11:50 **Case Study of Bangladesh**, Ms. Nurjahan Begum, Managing Director, Grameen Shakti.

**Presentations** on best practices of modern technologies utilization and policies:

11:50 – 12:00

- Jordan, Mr. Mohammed Almoush, Manager of the Institute for Sustainable Development Practices (former)

12: 00 – 12:10

- Mauritania, Mr. Mohamed TEGHRE, Advisor for Regional Development Ministry of Economy and Finance

12:10 – 12:20

- Oman, Mr. Khalil AL Zidi, Acting Renewable Energy Manager Public Authority for Electricity and Water

12:20 – 12:30

- Sudan, Mr. Abuobeida Abbas Ahmed Sleiman, Solar Energy Division Manager, Sudanese Electricity Distribution Company

12:30 – 13:15

Discussion

Key questions

- In spite of existence of some success stories in several Arab countries in the programs of dissemination for solar water heaters and PV systems, Why application of ARETs, particularly biomass, still largely untapped in the Arab rural region?
- There are success stories in several developing countries, e.g. China, India, Indonesia, Bangladesh, Brazil, to what extent can the Arab region benefit from such successful experiences?
- What are the success stories/business models in the Arab region?
- To what extent do the RE technology options depend on the local resources?

**13:15 – 14:30**

**Lunch Break**

**14:30 – 16:15**

**Panel Discussion: The Way Forward: Perspectives & Prospects, Plans, Challenges and Next Steps**

The process of disseminating appropriate green technologies is multidimensional. Development institutions must have the capacity to design and implement initiatives for introducing appropriate technologies to rural communities based on reliable technology need assessment. Meanwhile, efficient national policies to encourage RE business in rural areas particularly at small and medium scales are indispensable, to realize the anticipated development.

**Moderator: Ms. Radia Sedaoui, Chief of ESCWA Energy Section**

14:30 – 14:50

**Key Presentation:** “An Insight on Green Rural Entrepreneurship: Success Factors”, Ms. Priyadarshini Karve, Managing Director, Samuchit Enviro Tech Pvt Ltd, India  
14:50-15:10

**Case Study:** “African Experience in Disseminating Green Energy Technologies for Rural Remote Areas”, Mr. Monga Mehlwana, Regional Integration & Trade Division, UN-ECA  
**15:10 – 16:15**

**Interventions** by participants from national/regional/international entities and the focal points of some member countries in ESCWA Committee on Energy (CoE);  
15:10 – 15:15

15:15 – 15:20 ■ **Jordan**, Mr. Mohammed Dabbas, Secretary General Assistant for Energy affairs, Ministry of Energy and Mineral Resources

15:20 – 15:25 ■ **Lebanon**, Ms. Aurore Feghaly, General Director of Oil, Ministry of Energy and Water

15:25 – 15:30 ■ **Palestine**, Mr. Ayman Ismail, General Manager Palestinian Energy and natural Resources Authority, Ramallah

15:30 – 16:15 ■ **Sudan**, Mr. Salaheldin Hassabelgabo, Director in the department of Nuclear and Renewable Energy, Hydro Resources and Electricity

Discussion/Interventions

Key questions

- How do we build the capacity of local rural communities to close the gaps for trading in RE technologies?
- Are subsidies often a necessary condition for improving ‘access’ (availability and affordability) to modern sources of energy in poor rural/remote regions, particularly through development initiatives and policy-making.
- How should be the coordination and involvement of the NGOs, civil society, local municipalities and private sector important in formulating appropriate strategies and projects on the “improvement of access to Green technology in rural area” within the Arab countries?
- Based on the outcomes of this DA project, What are the most important factors and lessons learnt for mapping a realistic way forward and setting up the related enabling political framework?
- What are your suggestions to scale the project up and present it for Fundraising?

**16:15 – 16:30**

**16:30 – 17:00**

**Coffee Break**

**Closing Session**

**Wrap up & Closing remarks** by the Director of ESCWA’ SDPD

**ANNEX 2  
LIST OF PARTICIPANTS**

**Bangladesh**

**Ms. Nurjahan Begum**  
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Grameen Shakti, Bangladesh

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Manager of the Institute for Sustainable  
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**Lebanon (Contn'd)**

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**Mauritania**

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**Oman**

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**Palestine**

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**Mr. Basel Tahseen Yaseen**

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**Sudan**

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