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Economic and Social Commission for Western Asia (ESCWA)

Expert Group Meeting on "Promoting market-driven access to sustainable modern energy services in the Arab rural regions"
Beirut, Lebanon 18-19 April 2016

SUMMARY

This meeting follows the expert group meeting on "Methodology for Mainstreaming Appropriate Green Technology Initiatives in Rural Areas of the Arab Region" held on 25-26 February 2015 in Beirut, which focused on enhancing the functions and capacities of rural development practitioners and policymakers in promoting rural access to appropriate renewable energy technologies.

The meeting offered a forum for fresh thinking on the issue of appropriate green energy technology access in rural areas in the Arab region focusing on the rural productive sectors, and the roles of the public and private sectors and the civil society groups. The meeting gave an opportunity to address and discuss financial mechanisms and the 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.

The two-day knowledge-sharing meeting included energy experts, green technology specialists, rural development practitioners, and energy policy developers, among others. Experts were representatives of the public and private sectors in the region, financial institutions, civil society organizations and other UN organizations like ECA and ESCAP. 30 Participants from different countries around the world have participated.

Discussion started by pointing out the importance of participatory approaches in rural development, and the significance of addressing stakeholders to reach commitment in any rural development project. Furthermore, experts addressed the value of involving the rural community to insure the sustainability of any development project, and the need to take the cultural and social context in order to obtain the involvement and commitments of the rural community.

Concerning the regulatory frameworks and institutional models in the Arab region, the involvement of the private sectors and the importance of research and development were indicated. Participants from Jordan and Bangladesh have presented the importance of governmental commitment to rural development activities, and the encouragement of women engagement. Moreover, experts pointed out that the presence of policies in the Arab region does not necessarily mean that they reflect the need of the community, and still their implementation is necessary. Furthermore, capacity building at the administrative level and at the technical and managerial level was addressed as inevitable in

the process of improving rural livelihood.

With respect to the funding mechanism and micro-financing , regional and national experience were reflected and business models were presented, from full state engagement in the case of Algeria to much more private sector engagement accompanied with support from the government in the case of Morocco. As such, it was noted that private sector need to be much more involved and we need to have more incentives in terms of financial mechanisms.

Regarding the local financing mechanism in rural communities and specifically looking at the productive sector, sustainable financial institutions must have setting at the local level to service the rural communities, while urging the commitment of both the governmental level and the private sector in financing and distributing loans to increase access to modern energy technology and thus improve rural livelihood.

In order to develop a RE technology market, it is essential to instil energy entrepreneurship within the rural community. Two key messages yielded from the discussion, first of which is the importance of prioritizing the access based on the geographical location, and second is the significance of the services approach that can endure sustainability of any RE project. Several examples were given on decentralized RE, including biogas digesters, and solar water heating. Experts pointed out the necessity of technical training and the importance of educating the entrepreneurs in order to attain the knowledge they need in terms of project management and marketing, which are additional skills that entrepreneurs need to acquire.

Examples were given on the work done by United Nations organizations like UNDP and ESCAP on improving access to modern energy technologies in rural areas. The main message was the importance of involving universities and different associations. Moreover, ESCAP presented the 5 P approach; a business model based on multilevel stakeholders partnership including the community involvement, and the private sector involvement. Furthermore, experts stressed on one hand, the importance of awareness and the significance of identifying the role of the public, private sector and civil societies and on the other hand, the importance of learning from the different experience and different business models presented during the EGM, keeping in mind the significance of customizing these models to fit within the context of each specific country.

INTRODUCTION

This EGM activity falls under the UN Development Account (UNDA) 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 programmes and policies, in order to enhance livelihoods of rural communities. The UNDA project aims to:

a) Build the capacity of public and private development institutions on assessing the appropriate green technology needs in rural areas and on understanding the mechanisms that support the mainstreaming of appropriate green technology initiatives;

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 rural areas in the region.

This meeting follows the expert group meeting on "Methodology for Mainstreaming Appropriate Green Technology Initiatives in Rural Areas of the Arab Region" held on 25-26 February 2015 in Beirut which focused on enhancing the functions and capacities of rural development practitioners and policymakers in promoting rural access to appropriate renewable energy technologies.

The UNDA project's outcome is in line with the framework of the "Sustainable Energy for All" initiative and the sustainable development goal 7 (SDG 7), which call for ensuring access to sustainable modern energy for all by 2030.

The EGM sought to identify the drivers that support the establishment of a sustainable rural energy market and the challenges facing rural communities in the creation of such a market. It covered the following topics:

1. Participatory Development in Arab Rural Context
2. Energy for Improving Rural Livelihoods- Global and Regulatory Frameworks and Institutional Models
3. Funding Mechanisms for Rural Development (International, Regional, and National)
4. Micro finance Institutions
5. Instilling Energy Entrepreneurship within the rural community–Assistance and Capacity Building Assessment Need

Bringing together experts and representatives of United Nations agencies, international development institutions, and intergovernmental organizations, regional and national non-governmental organizations, the main objectives of the meeting were:

(1) To identify the building blocks essential to starting and establishing a market driven access to sustainable modern energy services in rural regions;
(2) To examine the contributions of the public, private, and financial sectors and civil society groups to the sustainability of such a market, and
(3) To assess the challenges and opportunities facing the financial sectors in conducting business in rural areas.

PRESENTATIONS & DISCUSSIONS

The meeting started by a welcoming speech by Ms. Roula Majdalani, Director of Sustainable Development and Policies Division (SDPD), then a presentation by Mr. Imad Sleiman, the project coordinator from UN-

ESCWA, where he gave a brief on the objectives of the project, its activities and explained the expected accomplishment. This was followed by a short introduction by Ms. Radia Sedaoui, providing an overview on the focus of the EGM and giving a brief on the organization of the sessions.
Several presentations were given by the experts during five sessions held over the two days of 18 and 19 of April.

Session 1: Participatory development in Arab rural context

This session was moderated by Mr. George Nasr, a sustainable development expert. It included two presentations, one by Mr. Olivier Dubois, senior natural resources officer at the climate change and environment division, at UN FAO, and the second presented jointly by Mr. Shadi Hamadeh, director of environment and sustainable development unit at the American University of Beirut, and Ms. Salwa Tawk, community development expert at the Lebanese University in Beirut.

Introduction

Historically land use in rural areas was not restricted to agriculture, and people performed different occupations contributing to a diversified and more sustainable rural economy. However, the ascendency and diversification of urban economies prompted increased rural to urban migration exacerbating the economic regression in rural regions. Moreover, most national rural development policies and strategies have confined public interventions to the agricultural use of the land, thus weakening further most non-agricultural activities in rural areas.

When we use the term development it implies the notion of a need for progress. It tends to negate the existence of developed communities with traditional cultures and customs and native wisdoms. Some authors rather prefer using the term redevelopment to describe a transformative process for rural economies from mainly agricultural based into more diversified, sustainable and resilient economies.

It is important to recognize the symbiotic relation between rural and urban, one growing increasingly dependent on the other, with estimated 70 per cent of the world population living in urban areas by 2050. Urban food security is becoming increasingly dependent on the local rural communities, while the opportunities found in the growing urban sectors can be translated into higher rural incomes.

1) Ways to Address Stakeholder and Energy Power in Rural Development

Main highlights of the presentation:

Mr. Dubois talked about two approaches for rural development. The first is the 4R's approach, which clarifies local stakeholder's roles via the balance of rights, responsibilities, and revenues, both within and between stakeholder groups, and the status of stakeholder's mutual relationships. This framework has been important for clarifying and agreeing on local stakeholders' roles, consequently an indirect way for assessing stakeholders' power prior to assessing capacity needs. Then he pointed out that strengthening the institutional & organizational development is most effective once power, relationships and roles are well addressed.

In regards to the second approach, the Water-Energy-Food nexus for the sustainable development of rural energy, Mr. Dubois explained that with the increase in the demand for food, more energy and water will be needed and natural resources will be stressed, therefore urging the need to "Do More for Less", "Save and Grow", and "Be Innovative" as he quoted. He then explained the FAO approach to the nexus, which is a kind of an interactive cycle of setting goals for water, energy, and food, managing the nexus upon stakeholder's

dialogue while looking into evidences scenario development, and response options, taking into consideration the resources base of land, water, energy, capital, and labor. All while assessing cultural, social and geographical drivers, not forgetting governance, policies, regional trade, market and prices, industrial development, agricultural transformations, and technology innovation. He ended the presentation by giving an example of electricity for irrigation in India and then presented solutions for problems that were encountered. These included; setting smart subsidies for farmers, reducing leakages in irrigation systems, adapting by using less water intensive varieties, and diverting via crops that provide high return per m^3 of land used.

2) Putting the donkey before the cart: Participatory models for the rural MENA

Main highlights of the presentation:

Mr. Shadi started his presentation by listing some facts for the MENA region, addressing dryness of land and scarce water resources, high percentage of rural poor, high illiteracy rate in rural communities especially for women, and youth migration from rural to urban and thus the increase of urbanization. He then noted the different challenges that rural communities are encountering, these include, the low access of safe water and sanitation in rural areas, adding to that the poor access to services, the low investment in education, lack of access to credit, and the lack of efficient subsidies for the rural farmers.

Mr. Hamadeh then stressed on the significance of participation and communication of all stakeholders, which is essential in the development process and strategic planning.

Ms. Tawk in her turn reflected the experience they developed as Environmental and Sustainable Development Unit (ESDU) working for sustainable rural livelihoods. She explained the importance of putting people in the center and listening to their needs and reflecting it in all development approaches. She also stressed on the necessity of improving skills, and empowering marginal groups.

Ms. Tawk later explained different approaches and development models for rural livelihood alleviation. These include; the local user network, which is a development model where users interact for information exchange, feedback and conflict resolution. In addition, ESDU is managing what is called KariaNet, which is a regional network for managing and sharing knowledge in agricultural rural development.

Mr. Hamadeh and Ms. Tawk ended their presentation by proposing a potential partnership between ESCWA and Karia Net, for the purpose of establishing a fund for rural development and entrepreneurship.

- Discussion

Different questions were raised and a number of issues were addressed. One of the participants brought out the issue of population growth and to what extent that is being taken into consideration when different development approaches are worked with. Other questions were raised, one on the efficiency of subsidies, and another on the ways to address the illiteracy of rural community, which might be considered as a challenge when implementing development projects.

In that context, Mr. Dubois noted that population growth doesn't necessarily have a direct relationship with the stress on resources; on the contrary, it may pressure people to find solutions. Moreover, subsidies are different for urban and rural areas and they are of a political argument and thus it is better to promote incentives.

Ms. Tawk added that there are many tools like visuals that can be used for educating the rural community; moreover, Mr. Hamade added that capacity building should go hand in hand with technology transfer, and it is about participation and interaction in a dynamic way that can make the change in the communities.
Ms. Rouls Majdalani said that very simple appropriate technologies can do the job in rural areas, and then she noted that appropriateness is not just about simplicity of technologies but it is about matching the needs of the community and fitting within the natural, social and economic context of the target community.

SESSION 2: ENERGY FOR IMPROVING RURAL LIVELIHOODS- REGULATORY & INSTITUTIONAL MODELS IN THE ARAB AND OTHER COUNTRIES

This session was moderated by Ms. Carol Nakhle, Director of Crystol Energy, England. It included three presentations and one intervention, one by Ms. Wijdan Alrabadi, commissioner & general secretary of the commission, at the Energy & Minerals Regulatory Commission in Jordan. The next one was presented by Mr. S.M Monirul Islam, deputy CEO and chief financial officer, at the Infrastructure Development Company Limited (IDCOL) at Bangladesh. The third presentation was made by Ms. Hala Zawati, CEO at Jordan Strategy Forum. The Last intervention was given by Mr. Monga Mehelwana, economic affairs officer, at the United Nations Economic Commission for Africa (UN ECA).

- Introduction

While access to energy does not guarantee better livelihood for rural areas, energy is essential for rural economic and social development. However, there are many barriers to the dissemination of RE technologies in rural areas. High on the list is the upfront cost of RE technologies, which is beyond the reach of most rural people. The importance of developing financing and investment policies for the benefit of rural communities is crucial to the penetration of RE technologies in rural areas.

Different questions defined the context of this session;

Are there energy investment policies specific to rural areas at national and/or international level?

How can governments in the Arab region intervene to improve the RE technology financing situation in rural areas?

What tools and measures can governments use to make a difference?

1) Renewable Energy Policies and Regulation in Jordan Electricity Sector,

<u>Main highlights of the presentation:</u>

Ms. Alrabadi identified challenges of the energy sector in Jordan, which is dependent on imported energy, with almost no indigenous energy resources, and a high growth of primary energy demand. Still, the country has a huge potential for renewable energy utilization like wind and solar, energy resources like uranium.

She then noted that Jordan issued a renewable energy and energy efficiency law in 2012 and has been amended in 2014. The country set a target of 10 % renewable energy input into the energy mix by 2020, with a strategy aiming for about 1000 MW of wind and 600 MW of solar.

Then she explained different approaches for the development of RE in Jordan, including; the Direct Proposals Approach, Competitive Bidding Approach, and the Turn Key Approach. Later on, she discussed

subsidies for RE, in which she described it as the best suited instrument to promote the introduction of RE. These include; the price-based subsidization like the feed in- tariff, quantity-based subsidization like the tradable green certificate scheme, and tax incentive, which can promote the introduction of renewable energy.

She ended the presentation by giving recommendations for decision makers, while taking into account their national circumstances, these include;(1) developing and implementing appropriate national, regional and international policies and measures to create an enabling environment for the development, utilizing and distributing renewable energy sources in rural areas, (2) developing domestic programmes to increase the contribution of renewable energies to total energy consumption, (3) encouraging the role of the private sector in the development and utilization of RE technologies, through the provision of appropriate incentives and regulation, and (4) strengthening research, development, demonstration and institutional capacities in the field of RE utilization.

2) Mobilizing Private Finance- The Success of RE Projects in Bangladesh

Main highlights of the presentation:

Mr. Islam presented the status of RE in Bangladesh stating that 75% of the population has access to electricity where RE covers 12% , and although 80 % of population live in rural, the electrification rate is still 43%. He added that the government has a vision to make electricity available for all, while intending to ensure 10% generation form RE by 2030.

In this context, IDCOL, which is a fully governmental owned financial institution, has launched several initiatives including; the solar home system program, the domestic biogas program, improved cook stoves program, and other RE projects like solar irrigation pumps, solar mini-grid project.

Mr. Islam then clarified the fund flow and role of different parties. He explained that multiple agencies, and the government of Bangladesh provides grants and soft loans for IDCOL that in turn provides soft loans, training, promo support, and monitors and evaluate implementation for participatory organization that install RE technologies and provide after sales services for households that are responsible for maintaining the system and repaying loans in monthly instalments.

Mr. Islam then identified challenges and mitigations of implementing RE projects and these include; (1) lack of awareness that can be faced by launching promotional campaigns and training programs, (1) untested business models that can be addressed by the presence of multiple participatory organizations to ensure healthy competition and phase out the reduction nature of grants, (3) the high cost of the solar home systems equipment that can be tackled through capital down grants and local support industry development, (4) lack of quality assurance, which can be faced by creating technical standard committee and a quality control mechanism .

Furthermore, Mr. Islam listed some of the success factors for RE projects implementations as lessons learned, and these include; (1) Innovative financing structure - results based financing, (2) Financial contribution of all parties – Ownership model, (3) Cost-efficient standardized technical design, (4) Development of local support industries, (5) Support from the Government and multiple development partners, (6) Sustainable business model – phased out subsidy scheme toward commercialization, and (7) quality control, after sales service and strong monitoring.

3) Renewable Energy, Reaching Rural Areas in Jordan

Main highlights of the presentation:

Ms. Hala Zawati started her intervention with a message from his Royal Highness Prince El Hassan bin-Talal conveying his regards and appreciation to ESCWA for following on such important topic related to sustainable development. He stressed on the Water-Food-Energy nexus, where he said that the issue of sustainable energy cannot be addressed without addressing the three pillars. Moreover, he expressed the need to concentrate on relevant policies, regional cooperation, and collective research capacities, which can make us, move forward with sustainable development approaches.

Ms. Zawati noted that electricity covers about 99% of the areas in Jordan; however, 97% of the energy used is imported. She pointed out that the cost of energy as percentage of Jordan exports was about 83% in 2014, and the 20 % deficit are covered by electricity prices and subsidies.

Ms. Zawati indicated that by end of 2015, 117 MW and 55 MW of wind and solar energy respectively were connected, and in pipeline, there is 400 MW of wind and 503 MW of solar. She later explained the different initiatives developed to reach remote areas and needy customers, like the Royal and the Global Initiatives. The Royal Initiative is for installing solar system for 1000 houses and this project is already running, whereas the Global Initiative is for what is called the "Solar Mamas" project that gives the opportunity to a Jordanian Bedouin mother to study at the Barefoot college in India and becomes a solar engineer capable of bringing power to the remote places in Jordan.

In addition, she explained about the governmental policies and measures taken like the "Fills Al Reef" where consumers of electricity pay 1 fills (1.43 $ cent) per Kwh consumed and this aims to deliver electricity to all the villagers and community across the kingdom, thus increasing the utilization of RE resources to produce electricity at remote rural areas. Other governmental measures include financial incentives, where the central bank in Jordan offers all banks a special RE loan with one-year grace period and 10 years of instalments. The Jordanian Renewable Energy and Energy Efficiency Fund (JREEEF) is another governmental measure that is funded by donor agencies and governments for installing solar systems in rural areas north of Jordan with a total capacity of 600KW.

4) Strengthening local institutions for integrated and sustainable energy delivery: Lesotho Case Study

Main highlights of the intervention:

Mr. Monga Mehlwana explained the ECA UNDA project on the "5 Ps" for Resilience of rural communities in Southern Africa. He stated that the success of process was due to political commitment and stakeholders' engagement (NGOs, and local private sector).

He added, based on lessons learned, that access to energy is not enough and it is essential to optimize whatever structure is available, moreover, for any development project, the involvement of women and youth, and the mobilization of the private sector is necessity.

- Discussion

Participants indicated the importance of implementation and execution of law and policies. Moreover, they stressed on the importance of the involvement of the private sector in project development. Furthermore, governments can have a crucial role for improving energy access in rural areas, and it's a multidimensional

approach from involving/engaging the private sector to encouraging research to building administrative capacities.

A couple of questions were addressed by the Jordanian participants related to the nuclear policies in Jordan and its impact on RE development in the country, where they identified that Jordan is in need for the diversification of its energy mix even had plans for generating nuclear power that will not affect RE development in the country,.

A. SESSION 3: FUNDING MECHANISMS FOR RURAL DEVELOPMENT

This session was moderated by Mr. Ian Walker, Executive Director, at Windsor Energy Group. It included three presentations, the first by Mr. Ahmed Badr, Executive Director at the Regional Center for Renewable Energy and Energy Efficiency (RECREEE). The second one was given by Ms. Amel Bida, a regional energy policies expert, and the third was presented by Mr. Sami Marrouki, chief executive officer at the Enameled Technology Industry (ETI.sa).

- Introduction

Middle income and lower middle income countries need funding to promote RE penetration in rural areas. Governments seeking funding must have the capacity to conceive a viable development programme for rural areas based on valid need assessments, to estimate the cost and to produce a comprehensive business plan including a credible implementation plan. On the other hand international and regional development funding institutions tend to prioritize the sectors they want to fund, and not all funding institutions cater for rural development.

Different questions defined the context of this session;

- What steps should governments take in approaching funding institutions?
- What institutional structures should governments have in place for sustainably managing received funds?
- On what criteria do funding institutions weigh their funding approval decisions?
- What financial mechanisms work better for RE development in rural areas at the national level?

1) Opportunities and Challenges for investing in Sustainable Energy in the Pan Arab World

Main highlights of the presentation:

In his presentation, Mr. Badr stated that 50 % of the Arab region has public financing channels for RE projects, where Masdar in UAE and SIE (Société d'Investissements Energétiques) in Morocco are two major private sector companies. He then added that international funding is also active in the region, and these include, the European Bank, the International Finance Corporation (IFC), and the European Investment Bank.

Mr. Badr then identified investment opportunities in the region like the utility scale power plant, on grid residential and houses of worship PV solar rooftop, RE self-consumption in productive sector (both on-grid and off-grid), off-grid rural electrification, and solar PV pumping.

He then gave examples of supporting policies for small-scale projects that include; the National Energy Efficiency and Renewable Energy Action (NEEREA), Net Metering, and the Rural Electrification Project.

Mr. Badr then explained investment risks in RE projects and these are; building and testing risks, which is the risk of property damage, business/strategic risk that is the risk affecting the viability of the business, for example, the risk of technology obsolescence, and the environmental risk, which is the risk of damage to the environment caused by the power plant. In addition to the above, Mr Badr mentioned the financial risk, market risk, operational risk, geopolitical and regulatory risk, and the weather-related volume risk.

He later defined the role of RECREEE in addressing different challenges through public and private investments, national policies and regulations, institutional capacities and technical standards, and awareness of stakeholders.

2) Rural RE Projects' Financing and Sustainable Development

Main highlights of the presentation:

Ms. Amel Bida started her presentation with some facts of RE investment in the Arab Region. She specified that RE financing varies with the type and size of RE projects as well as with the local socio-economic conditions, and larger initial capital costs would discourage investors from approaching RE projects especially in rural areas where the market is small and isolated. Moreover, there is no universal rule or a standard approach for financing RE projects especially in rural areas (RE projects are intensive capital for poor population), and each RE program requires its own specific adequate mix of funds and conditions to be financed, and that rural RE programs in the Arab region are benefiting mainly from public financing sources.

Ms. Bida then provided examples of RE technologies in rural areas that need to be affordable as they allow better access to energy, and these include; off-grid Renewable electricity systems, water pumping, and cooking and heating devices. She pointed out that subsidies or other financing support can help rural consumers (poor and dispersed population) afford the high upfront costs of different technologies.

She then gave some examples of business models for decentralized electrification systems, such as , the photovoltaic electrification program conducted by Sonelgaz to provide electricity to 1000 rural homes with state grants (100%) in Algeria; direct financial benefits are granted to renewable energy in rural area under the energy management law n° 9-2009 with a subsidy of 40% to cover part of the end user down payment (13000 rural homes electrified by PV s) in Tunisia; and the fee for service contract approach with a resulted beneficiaries 25% of the system cost and cash advance upon taking out of a subscription plus monthly payments over10 years in Morocco (PERG).

Ms. Bida ended the presentation stating that there is no universal financing mechanisms for RE program and that each RE program requires its own specific adequate mix of funds and conditions, moreover, governments in the Arab region remain the main stakeholders in financing renewable energy in rural areas, either for distributed or centralized systems, and although international funds are needed for supporting RE activities, the establishment of well designed national financing fund is the most effective way to ensure the perennity of financing RE, and she stressed on the involvement of private operators in a participatory approach, which is a key element in the success of small RE projects development.

3) Funding Mechanisms for RE Rural Development: Which instruments?

Main highlights of the presentation:

Mr. Sami Marrouki stated that rural electrification programs already implemented are unsustainable, though electrification such as in Tunisia covers nationally 98%, and in rural areas is 95%. He then stress on the need for integrated financing mechanisms, and a multi-stakeholder approach aiming for credit mobilization and management, credit distributing and recovering, awareness and communication, monitoring and evaluation, and reporting. In this context, he defined the Prosol program, which is a public private financial mechanism.

Mr Marrouki added that there is no problem for financing sources identification and fund raising, however the constraints are with the feasibility, hence, the need for development of local capacities, regulations, profitability and impact assessment. Moreover, there is a need for articulating financing sources with incentive mechanisms aiming to develop local energy services.

- Discussion

A couple of issues were raised during the discussion. the first presentation by Mr. Badr give a pessimistic perception of to the financial funds and mechanisms within the Arab region, while the next two speakers presented rather optimistic views reflecting different models for RE project development. In this context, Mr. Badr responded that financial mechanisms and aids for rural areas represented less than 2% of total financing while subsidies do not reach such areas, therefore a lot of the funding are directed towards urban and not rural communities.

Another issue was raised by experts who pointed out that all of the three presentations didn't address subsidies or financial mechanisms for the development of the agricultural sector, which is the main productive sector for rural areas, and consequently the need to integrate RE within larger supply-chains within rural economies, such as agriculture, forestry, traditional manufacturing and green tourism.

SESSION 4: LOCAL FINANCING MECHANISMS

This session was moderated by Mr. Imad Hamze, a community development expert in Lebanon. The first presentation was given by Ms. Nurjahan Begum, managing director at Grameen Shakti, Bangladesh. The second one was given by Mr. Bachar Kouwatly, General Manager at Ibda'a Microfinance, Lebanon. The Third presentation was given by Ms. Diala Hawila, which is an associate programme officer at IRENA, UAE. The Last one was given by Ms. Bettina Bastian, a professor at the Olayan School of Business at the American University of Beirut, Lebanon.

Introduction

For the funding to reach its intended beneficiaries in rural areas sustainable financial institutions must have setting at the local level to service the rural communities. However, national banks have little interests in expanding their operations to disperse and impoverished rural communities, and creating public institutions for the purpose of distributing loans will unlikely reach the operational effectiveness of the private financial institutions.

Different questions defined the context of this session;

- In addition to servicing and distributing small loans to dispersed rural communities, what other roles can microfinance institutions (MFI) assume in promoting RE penetration?
- How can the public sector support MFI toward these ends?
- What capacities are needed for MFI to be able to assess and evaluate relevant RE projects?

1) Creating Access to Renewable Energy: Experiences of Grameen Shakti, Bangladesh

Main highlights of the presentation:

Ms. Nurjahan Begum indicated that 32% of people in Bangladesh have no access to electricity. Then she defined Grameen Shakti as a non-profit company foreseeing a future where rural households of Bangladesh would have access to clean energy at affordable cost as she stated. It aims to empower the rural people with access to green energy to generate income, reduce poverty and improve the quality of life. There is also the Grameen Technology Center for creating green jobs for women, where over 3000 local women technicians have so far been trained on RE technologies.

She also described Grameen Bank as the world-famous pioneer of microcredit, where 75% of the paid up capital of Grameen Bank comes from its borrowers and the rest comes from Government of Bangladesh. She added that microfinance ensures access to renewable energy in two ways, first, it increases economic capability of the poor and hence increases demand for and ability to afford renewable energy and secondly, microfinance institutions can offer loans to its beneficiaries to purchase RE systems.

At last she listed a number of challenges encountered. These include, high cost of capital, unexplored opportunities in the use of solar technologies, competition with low quality products in the market, high operational costs, return of Solar Home Systems by users when grid electricity becomes available, high dropout rate of staff, access to very remote areas/islands, and socio-political stability. She then identified the importance of empowering the rural poor with green jobs, and pointed out the significance of financial and policy supports from Government, and monitoring and supervision.

2) Microfinance and Access to Renewable Energy Technologies

Main highlights of the presentation:

Mr. Bachar Kouwatly explained about the energy inclusion initiative, which combines microloans and clean energy to open up access to renewable energy technology as a service utility model to low income households and micro entrepreneurs in rural areas of developing countries through providing access to innovative lending, matching loan payments with energy expenditure or income flows, or by **providing innovative payment solutions like lease to own - Pay as you go.**

He then introduced the IBDAA – AGFUND with network growing microfinance network that is present in **8** MENA countries, with an outreach of 450,000 clients mostly providing RE financing. An experience of this network is a BDL dedicated fund of $10.0 Million in Lebanon for solar programs' subsidized lending to end users for the deployment of solar energy under a clean development mechanism targeting rural households through their municipalities. So far, 4,800 beneficiaries have installed their solar systems (Solar Water Heating or Solar Photovoltaic Power Back-up) on their rooftops at subsidized cost while being served locally by more than 48 certified technicians trained through the program.

He ended his presentation with recommending designing RE loans carefully, and properly training loan officers, introducing energy specific M&E processes, forging reliable partnerships, subsidizing financing,

ensuring reliability of product (adaptability, serviceability, and durability), and ensuring reliability of the suppliers with providing high technical standards and training of community technicians.

3) The Impact of Productive Uses on Financing Decentralized Solutions

Main highlights of the presentation:

Ms. Diala Hawila has indicated that the International Renewable Energy Agency (IRENA) has been involved in different projects, among which , agro-processing micro-enterprise and rural electrification through improved watermills (IWNs) in Nepal, promoting domestic biogas digesters in Vietnam, food and material processing using solar dryers, and refrigeration using solar thermal.

Ms. Hawila ended her presentation with key messages and lessons learned from experiences acquired through the different projects implemented. She stated that electricity is not the only application of decentralized RE for productive uses and that impact is mostly observed where there is potential for economic activity with access to markets. Moreover, she added that an enabling environment based on effective policies and regulations, tailored financing models and technology solutions is necessary and that the private sector participation is critical. Furthermore, frameworks for delivering affordable capital need to be developed to make financing more accessible to entrepreneurs and end-users, tariffs need to be flexible and tailored to the specific contexts to ensure the viability of projects, and Capacity Building is a must to improve the sustainability of projects by reducing dependence on foreign know-how.

4) Finance of Community Development

Main highlights of the presentation:

Ms. Bettina Bastian indicated that the Environment and Sustainable Development Unit (ESDU) through KariaNet work to support rural development projects, increase the number of entrepreneurial ventures in agriculture and in related fields, and help increase competitiveness of the Lebanese agricultural sector by connecting it to the knowledge-based economy. ESDU receives grants mainly from AUB as well as international organizations, such as the UN Food and Agriculture Organization, USAID, and the International Fund for Agricultural Development.

One of the major problems encountered with community development projects is that funding is temporary, and projects are being left in the development phase. She added that in Lebanon, four millions spent on entrepreneurship and nothing on sustainable energy and only few on agriculture. Most money is spent on IT and e-commerce, thus funding the rich people.

Ms. Bastian then indicated that we need to think about finance of community development as a ‘business’ in order to achieve economic sustainability, and it’s important to render agriculture and community development beneficial for all stakeholders. Moreover, it’s essential to align people with resource with people with no resources, and capitalize on the current entrepreneurship mood.

Discussion

Different questions were raised and a number of issues were addressed. One of the participants brought out the issue of the lack of governance sponsoring for projects and the need for governmental support to ensure

projects' sustainability. In the same context Ms. Karve added that it is not the product that is being pushed but rather the loan product.

Mr. Monga indicated that based on his experience, systems connected to the grid are more certain for population, and Mr. Kouwatly pointed out that clusters of houses can be created and given funds with easy payments on monthly basis.

Mr. Dubois asked about the issues of guarantees for banks and the way subsidies are addressed. Mr. Marrouki said that subsidies are needed to reduce payback period to make the technology more profitable. Then Mr. Kouwatly added that subsidies come as an incentive and can be given on medium to long term. Moreover, investors need to understand that there is no guarantee, and what can be done is reducing the risk of failure and they have to think as entrepreneurs even in the social context.

SESSION 5: INSTILLING ENERGY ENTREPRENEURSHIP WITHIN THE RURAL COMMUNITY- ASSISTANCE AND CAPACITY BUILDING ASSESSMENT NEEDS

This session was moderated by Ms. Radia Sedaoui, chief of energy section at SDPD ESCWA. The first presentation was given by Ms. Priyadarshini Karve, CEO at Samuchit Enviro Tech Pvt Ltd, India. The next presentation was given by Mr. Ahmed Medhat who is a project manager working for the UNDP, Egypt. Third presentation was given by Ms. Jun Tian, associate economic officer, UN ESCAP in Thailand. Last presentation was by Mr. Abed Elhadi Zein who is an energy expert from Syria.

- Introduction

In order for a RE technology market to develop in rural areas a number of ancillary services are needed for support, such as minimal technical knowhow on installation, operation and maintenance, raising awareness on the benefit of RE both at the level of potential users and traders, etc. Apprehensive about setbacks in budding RE infrastructure and RE market should be developed in concert. Setting the infrastructure with no clear timeframe for market development involves as high risk as launching a market for RE technologies with no technical support. A balanced strategy is needed where both tracks are pursued in parallel. Encouraging local young people to take the lead in these activities will instill an entrepreneurial mindset which has the potential to open up opportunities into other sectors.

Questions defining the context of this session include;

- How do we start building the capacity of local rural communities to close the need gaps for trading in RE technologies?
- What would be a generic road map and priorities for such endeavour that could guide the implementation wherever it is required?

1) Energy Service Delivery Approach for Rural Renewable Energy Entrepreneurship

Main highlights of the presentation:

In her presentation, Ms. Priyadarshini Karve talked about the importance of renewables for rural energy entrepreneurship. She added that rural areas continue to be deprived, that's why decentralization is needed, given the advantages of such systems providing more control of entrepreneur, low tech and low cost, low skill requirement for manpower involved, and typically more potential for local livelihood generation.

Ms. Karve then addressed the importance of the service approach to meet client needs in the most efficient, convenient, and affordable manner, therefore giving potential for long term continuous income from the same client base.

She later stressed on the importance of capacity needs for technology and enterprises with the need to identify and quantify energy service and priorities in the target communities, access to R&D facilities and experts to develop the service-focused decentralized RE technologies tailored to local conditions, and technical training, and periodic refresher courses. Moreover, she talked about the importance of training in basic entrepreneurial skills (sales, marketing, accounting, inventory management, etc.), mentoring and counselling, and the importance of access to financing institutions in order to develop special consumer finance packages for the target communities, and develop incentives in terms of tax breaks, low interest loans, etc.

2) Enhancing Capacity of The Local Supply Chain to Market and Deliver Sustainable Rural Energy Products and Services

Main highlights of the presentation:

Mr. Ahmed Medhat described the Bio-energy for Sustainable Rural Development Project he was in charge when working for UNDP. The project was implemented under the partnership of UNDP, Ministry of Environment (MOE), and the Global Environmental Facility (GEF). Mr. Medhat then explained that the solutions for problems encountered by rural communities, for example, the lack of energy services in rural areas, the increase in waste generation, and the need for large amount of fertilizers for agricultural activities, is with the use of appropriate technologies, and the development of sustainable markets, open trade policies and national programs.

Mr. Medhat indicated that the project did address different aspects, including; the creation of jobs while addressing the importance of training of engineers within the village, the involvement of youth, the empowerment of women, and the participation of different NGOs.

3) Enhancing Sustainability of Rural Energy Projects: Pro-Poor Public Private Partnership (5P) Approach

Main highlights of the presentation:

Ms. Jun Tian explained that the 5P approach aims to enhance rural productivity and create income-generating opportunities. It works to establish multi-level stakeholder partnerships, including PPPs, in which community mobilization and co-ownership of the energy utility has proven to be key to 5P project sustainability as Ms. Tian stated.

To choose RET technologies and their sizing, it is important to do resource assessment, environmental and socio-economic impact assessment, technology and financial assessment, and figure out community needs.

Based on ESCAP experience, partnership and counterpart capacity building has been a major component to effective project implementation and scalability (with the involvement of NGOs, private sector, and technical advisors). Moreover, she identifies that the major issue is not availability of financial capital, but the mechanisms to access funds at affordable rates and de-risk off-grid energy projects. As such, strong public sector support and understanding on the role of the private sector as an investor and provider of energy services is critical.

4) Promoting Renewable Energy Entrepreneurship in Rural Communities

Main highlights of the presentation:

Mr. El Zein indicated that to create a truly robust and sustainable RE infrastructure, with a view to stimulate the market and thereby attracting project developers & finance in ESCWA countries, the following policy toolbox and ancillary services, should provide a *basic set of guidelines* , which should be carefully considered:

- Reforming energy subsidies;
- Simple RE system design;
- Assurance of maintenance and repair service for RE systems;
- Market-based instruments to exploit cost effectiveness of RE;
- Attracting investors in RE facilities in rural areas;
- Encouraging partnerships and voluntary agreements with rural communities as partners;
- Rural credit options;
- Capacity building;
- Raising public awareness of the benefits of RETs

He ended his presentation with the following recommendations:

- Energy services and RETs must be explicitly addressed within the planning for poverty reduction and for meeting the broader MDGs;
- Provide access to modern energy services at the community level for all rural communities;
- Enable the use of improved cook stoves in order to reduce the adverse health effects from cooking with biomass;
- Ensure reliable access to electricity to all rural areas in ESCWA countries. National Governments should focus on the concrete investments and public policies needed.

- Discussion

The participants indicated the importance of projects' adaptation with countries' specificities. Moreover, the issue of guarantees for RE deployment was brought out to be better addressed.

Participants indicated the need to develop performance indicators to assess the impact of financing mechanism. They expressed the importance of building a road map to go further and to build up on the outcomes of the workshops implemented. Furthermore, participants suggested moving to an action plan and forming a group that will coordinate with various stakeholders to have pilot projects in different Arab countries.

IV. ORGANIZATION OF WORK

A. VENUE AND DATE

The Expert Group Meeting of the Development Account Project "Promoting market-driven access to sustainable modern energy services in the Arab rural regions" was held at UN-House ESCWA in Beirut, Lebanon on 18-19 April 2016.

The Expert Group Meeting falls under the Development Account (DA) project on "Building Capacities in Developing Appropriate Green Technologies for Improving the Livelihood of Rural Communities in the ESCWA Region".

B. OPENING

24. The EGM of the DA project was formally opened by Ms. .Roula Majdalani, Director of SDPD, and Ms. Radia Sedaoui, Chief Energy Section, at UN-ESCWA.

C. PARTICIPANTS

25. The EGM was attended by experts and representatives of United Nations agencies, international development institutions, and intergovernmental organizations, regional and national non-governmental organizations. The list of participants is contained in the annex to this Report.

D. AGENDA

26. The agenda of the event included the following:

(a) Welcoming remarks, and presenting on the projects objectives and expected outcomes

(b) Presenting on the participatory development in Arab rural context

(c) Presenting on energy for improving rural livelihoods - regulatory frameworks and institutional models in the Arab and other countries

(d) Presenting on funding mechanisms for rural development (international, regional & national)

(e) Presenting on local financing mechanisms

(f) Presenting on instilling energy entrepreneurship within the rural community - assistance and capacity building assessment needs case studies by participants.

ANNEX

LIST OF PARTICIPANTS

Egypt
Mr. Ahmed Medhat Mohammed Ali
Project Manager
Bioenergy for Sustainable Rural Development
P.o.B: 28 Misr Helwan Agricultural Street, Maadi, Cairo, Egypt
Tel/Fax: + 202 25256261
Mob: + 2 011 11966869
Website: www.egyptbiomass.com
E-mail: a.medhat@egyptbiomass.com

Mr. Ahmed Abd EL- Aziz Mohammed Badr
CEO
Regional Center for Renewable Energy and Energy Efficiency (RECREE)
Phone: +20 100 175 4088
Email: Ahmed.Badr@rcreee.org

London
Mr. Ian Walker
Director
Windsor Energy Group
180 Piccadilly
London W1J 9ER
Tel 020 7591 4816
E-mail: walkerlondon@blueyonder.co.uk

ALCOR
Mr. Sami Marrouki
Chief Executive Officer
Enameled Technology Industry (ETI.sa)
Energy and environment Expert,
ALCOR, Tunisia
Tel: + 216 71234854
Mobile: + 21625520018
Fax: + 216 71234857
E-mail: s.marrouki@gnet.tn

India
Dr. Girija Priyadarshini Anand Karve
Director, Samuchit Enviro Tech
P.o.B: 6, koyna apts, s.no.133, kothrud
Mob: 91 9226894206
Web site: www.samuchit.com
E-mail: pkarve@samuchit.com

London/UK
Ms. Carole Nakhle
Energy Economist
Surrey Energy Economics Centre (SEEC)
University of Surrey
Guildford, Surrey, UK
GU2 7XH
Tel.: + 44 7867 954320
Mob: + 961 (0) 3972123
Fax: + 961 1 99 15 91
E-mail: c.nakhle@surrey.ac.uk
carole@nakhle.co.uk

Syria
Mr Abed Elhadi Zein
Energy Expert
Damascus, Syria
Tel.: + 963-11-3111954
Mob: + 963-932884397
E-mail: zein@netcourrier.com

Canada
Mr. George Nasr
ESCWA Expert
Associate Professor
Mob: + 961 03 320331
E-mail: George.j.nasr@gmail.com

Sudan
Mr. Salaheldin Hassabelgabo Abdelraziq Ibrahim
Policies and Planning M.D
Ministry of Water Resources and Electricity

Mobile: +249123484360
Phone: +249183 771951
E-mail: salahelgabo@yahoo.com

Tunisia
Ms. Amel Mrad Bida
Senior Sustainable Energy Policies Expert
Phone: +216 21 376 689
Email: amelbida@yahoo.fr

Bangladesh
Ms. Nurjahan Begum
Managing Director
Grameen Shakti
Phone: 880-2-8035347
Email: mdshakti@grameen.com
nurjahan@grameen.com

Mr. S.M. Monirul Islam
Deputy CEO & Chief financial Officer
INFRASTRUCTURE DEVELOPMENT COMPANY LIMITED (IDCOL)
Phone: +880-1-729293737
Email: MISLAM@IDCOL.ORG

United Arab Emirates
Ms. Diala Hawila
Associate Programme Officer
International Renewable Energy Agency (IRENA)
Phone: +971 50 1026172
Mobile: +971 50 102 61 72
Email: dhawila@irena.org

Jordan
Ms. Hala Zawati
CEO
Jordan Strategy Forum
Phone: +962799618518
Email: Hala.zawati@gmail.com
hzawati@jsf.org

Ms. Wijdan Alrabadi
Energy & Minerals Regulatory Commission
Phone: +962799079617
Email: rabadiw@emrc.gov.jo

Thailand
Ms. Jun Tian
Energy Section
The United Nations Economic and Social Commission for Asia and the Pacific
Rajadamnern Nok Avenue
Bangkok, 10200, Thailand
Phone: (66-2) 288-1394
Email: Tianj@un.org

Palestine
Mr. Ayman Ismail
Director General of the Palestinian Center for Research on Energy and Environment
Palestinian Energy & Natural Resources Authority
Phone: +970599202678
Email: aismail@menr.org

Italy
Olivier Dubois
Senior Natural Resources Officer & Leader Energy Programme
Climate and Environment Division (NRC);
UN Food and Agriculture Organisation (FAO)
Via delle Terme di Caracalla
Rome 00153, ITALY
Phone: 0039 06 570 56497; Fax: 0039 06 570 53250
Website: http://www.fao.org/energy/en/
E-mail: Olivier.Dubois@fao.org

Lebanon
Ms. Nesreen Ghaddar
Director
Institute of Energy and Natural Resources
American University of Beirut
Phone: 961-1-350000 ext. 3590/3594
Mobile: 961-3-174406
Email: farah@aub.edu.lb

Mr. Ali Ahmed
Lecturer
Energy studies Program at American University of Beirut
Phone: 961-1-350000 ext.
Email: aa264@aub.edu.lb

Mr. Shady Hamadeh
Chairman
Department of Animal Science at AUB
E-mail: shamadeh@aub.edu.lb>

Ms. Salwa Tohme Tawk
Associate Professor,
Lebanese University, Faculty of Agriculture
Mobile: +9613231025
Email: salwatawk@gmail.com

Mr. Bachar Kouwatly
General Manager
IBDA'A Microfinance S.A.L
Kaskass, Main Street – Beirut
Tel: +961 1 640777
Email:
bachar.kouwatly@ibdaalebanon.com

Ms. Majida Mcheik
Head of Program department
Ministry of Agriculture –
Lebanon
Tel: + 961 01 849615
Mob: + 961 03 602615
+ 961 03 270289
E-mail: ma_mcheik@yahoo.com

Mr. Imad Hamzeh
International Economic Development Expert
Mobile: +961-70-920030
Email: hamze_imad@yahoo.com

Mr. Nassim Njeim
Tel: Tel: +49 (0) 15168781909
Email: njeimnassim@gmail.com

Bettina Lynda Bastian
Professor at the American University of Beirut (AUB)
Email: bb21@aub.edu.lb

Yasmina El Amine
Lecturer at AUB
Email: yasminael-amine_8@hotmail.com