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Economic and Social Commission for Western Asia (ESCWA)

Report

Seminar on: “Monitoring the Implementation of Energy Related SDG Indicators in the Arab Region” Beirut, Lebanon, 17-18 April 2019.

Summary

The United Nations adopted the Sustainable Development Goals (SDGs) in September 2015, along with the Paris climate conference (COP21) in December 2015, with the aim to end poverty, protect the planet and ensure prosperity for all with specific targets to be achieved by 2030. However, the primary current concern relates to the implementation programs that countries can develop to achieve those SDGs, including the ones in relation to developing more sustainable energy systems, as indicated by SDG7 aiming at “ensuring access to affordable, reliable, sustainable and modern energy for all”.

The Seminar on: “Monitoring the Implementation of Energy Related SDG Indicators” in the Arab Region was convened in Beirut, Lebanon with the aim to consult on the progress achieved by ESCWA’s member countries on the implementation of SDG7 indicators. The topics discussed highlighted the progress achieved by the Arab region in terms of access to electricity and cooking fuel technologies, enhancing energy efficiency in economic sectors (building, industry and transportation) and increasing the share of the renewable energy in the energy mix. Member countries also discussed the challenges they still face in achieving sustainable energy development and shared their success stories in various areas of achievements.

Furthermore, given the importance of energy efficiency (EE) and renewable energy (RE) in the global carbon reduction process, establishing interlinkages between SDG7 and Climate Action (SDG13) and accelerating the progress of sustainable energy development in Arab countries have become ever more eminent given that the region is characterized as having some of the highest per capita emissions.

Data accuracy and availability was highly stressed during the seminar. The collected inputs at the seminar will be integrated into the Arab regional report “Tracking SDG7: The Energy Progress Report 2019 – Arab Region” which is a regional report providing a country by country breakdown that is highly important in bringing the process and the findings of the Global Tracking Framework closer to national level energy policy makers and statisticians.

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INTRODUCTION

The United Nations Economic and Social Commission for Western Asia (ESCWA), in collaboration with The Islamic Development Bank (IsDB), organized the *Seminar on: Monitoring the Implementation of Energy related SDG Indicators in the Arab Region* which was held in Beirut from 17-18 April 2019 to strengthen the capacity of the governments of the Member Countries (MCs) on mainstreaming the energy-related SDGs and the Paris Agreement into their national development plans.

The conference aimed to bring together representatives of the Arab MCs' Committee of Energy (CoE), the Statistics National Directorate, the international and regional energy and statistics agencies, as well as energy experts and senior representatives from academia and civil society.

II. MAIN TOPICS OF DISCUSSIONS

Presentations and discussions are summarized in the following sections and are organized in accordance with the meeting agenda. The main theme of the seminar revolved around the implementation progress of the SDG7 - which is part of the SDGs adopted in 2015, along with the Paris climate conference (COP21) - aiming at "ensuring access to affordable, reliable, sustainable and modern energy for all".

A: ENERGY ACCESS (EA): UNIVERSAL ACCESS TO AFFORDABLE, RELIABLE AND MODERN ENERGY

1. The first session provided a presentation on the first two indicators of SDG7: access to electricity and access to clean cooking fuels and technologies (CFTs). The access to electricity is a bright spot for the Arab region especially when it is compared to the global average. It is evident that the annual absolute change in population with access is growing in the Arab region which means population with electricity access grew faster than population growth. This is shown especially in the Least Developed Countries (LDCs) where population with access grew at double the rate as that of the population. If the region continues in the same track, then it will require an annual 0.5% to reach the goal of 2030. However, in some countries like Mauritania, Morocco, Yemen, Libya, Syria and Sudan, the issue lies in tracking the reliability of the service and the frequency of disruptions.
2. In terms of access to CFTs, the Arab region is above the global average, but the progress is still below expectation; to reach the 2030 target the region will need to grow by 4% annually.
3. Disaggregated data by gender, off-grid solutions, type of fuel, urban-rural divide and on the impact of refugees is still lacking in the region. Household surveys are the ones that can help get the required substantial data.
4. When addressing access to energy, the access to clean fuel technologies needs to be adjusted to find a balance between access to electricity and to CFTs, as well as a balance between policies and subsidies. The potential for improvement in this matter relies on the use of renewable energy technologies.
5. The second presentation during this session highlighted the Multi-tier Framework on Energy Access (MTF) provided by the World Bank. This framework is designed to track the energy access in terms of affordability, reliability, quality and modernity of supply. The MTF doesn't give a number to indicate an electrification rate but gives an indication to governments for a better understanding of the country's situation.
6. A discussion followed whereby all the participating member countries shared their experiences:
 - In **Jordan**, electricity access is almost 100% especially with the country moving to clean energy. The cost of connection to the grid for households that are far away from it is high and the government's interference is needed. There are special rural programs adopted where a fund

subsidizes the electricity tariff. Some issues facing Jordan are the electricity theft in rural areas and the use of off grid solutions like solar panels that change the percentage of electricity access as such data is not captured in the analysis. **Jordan** noted the large number of influx of refugees and the pressure it adds on the country's economy and infrastructure and in sectors such as health, education, municipal services and electricity supply. As of March 2019, Jordan hosted some 660,000 Syrian refugees. Host communities pay for the electricity supplied to refugees through cross – subsidies. Service quality and reliability are affected due to the increased load shedding and electricity service disruption that are due to capacity constraints in both generation and transmission. The Jordanian government estimates the cost of electricity subsidies to Syrian refugees to have reached around 119 mn USD in 2017, down from 247 mn in 2014, with an estimated total bill of 704 mn USD for the tracking period.

- In **Sudan**, the problems are found in technical and non-technical losses as well as in the load shifting. They are encouraging the industries to work in the off-peak time to save energy by thermal or any other power generation thus reducing the costs. The electrification rate does not reach 40%, but rather reaches a maximum of 37%. As for urban areas, it reaches 70%.
- For the **State of Palestine**, electricity access is 100% but the problem lies in the quality of the service and the frequent disruptions. In Gaza, electricity access only reaches 8 hours per day with power utilities providing the rest.
- For **Libya**, the low value of electricity access only reflects the conflicts that are happening in the country and the fact that the re-location of people did not affect greatly the access to electricity. Many people have access to electricity in Libya with rural areas benefitting from solar power systems.
- In **Syria**, infrastructure destruction led to access problems. The last survey showed electricity access at 99.2% but not all people are having electricity due to embargo or due to power stations not being powered. People are using batteries or generators working on benzine. Syria has a lot of disruption with only 4 to 6 hours of electricity per day. This situation should be reflected in the indicators. Syria objected to taking the World Bank's data and clarified that it should be taken directly from the Syrian statistics bureau or Ministry of Energy.
- **Mauritania** is working on raising the electrification rate in rural areas. Currently, the rate in rural areas is 5% while it has reached 80% in urban areas compared to 39% back in 2010. The total electrification rate of the country is 43%. Usually in rural areas the population doesn't exceed 1000 persons and the towns are at far distances from each other which economically speaking doesn't encourage electrification. In addition, the household's income is low in rural areas so even if the infrastructure is available, it is likely to be unprofitable for the companies to deliver electricity. Regarding the reliability of the electricity service in Mauritania, the country suffers from service disruptions.
- For **Tunisia**, the issue addressed is related to data gathering. There are always discrepancies between the general census for population and the values given by the national generation company. The data should always come from primary sources and the household survey is one of the credible sources.
- **Lebanon** has an electrification rate of 100%, but the problem is the lack of generation due to lack of investment in the infrastructure. Currently, Lebanon is considering generating electricity from natural gas. Lebanon also hosts 945 000 refugees as of March 2019 which is adding a pressure on the economy, the infrastructure and other sectors in the country. Electricity supplied to refugees is paid by host communities through cross – subsidies. However, Lebanon has had endemic structural electricity sector problems well prior to the influx of Syrian refugees starting in 2011-2012. The generating capacity for Syrian refugees is by 2018 between 450 and 500 MW which means a 5 hour of supply by day. The direct economic cost of this power is divided between the Lebanese citizens, who are forced to cover this 5 hours gap through private generators, and the Government, who subsidizes the cost of fuel for electricity and who is providing these 5 hours to the refugees instead of to the Lebanese citizens. This total cost amounts to an average of 370 mn

USD/year between 2014 and 2018, which is equivalent to 1.85 bn USD over the 5 years period. Increased load shedding and electricity service disruptions, affecting service quality and reliability for large parts of the population are due to the capacity constraints on generation and transmission.

- In **Iraq**, damage to and destruction of national infrastructure has included power generation plants and transmission infrastructure.

B: ENERGY EFFICIENCY (EE): SUSTAINABLE GROWTH

7. In this session, a presentation on energy intensity (EI) highlighted the global and Arab trends which are affected by how technologies are used over the years. Energy intensity is defined by the value we get for a unit of energy. All the region has reached a gradual improvement due to energy efficient technologies and structural changes towards services economies. Most of the change has been autonomous; as the equipment are being replaced, technologies are becoming more energy efficient. Demographics, income levels, change in fuel mix and the structure of the economy are all relevant factors that affect energy intensity. However, EI is not affected about the source of energy rather than about the total energy consumed.
8. Global EI improved by 2.7% mostly because of industrialization which is measured by the share of industry (manufacturing and extraction) in GDP. In the Arab region, there is a divergence between the GCC - where EI is moving upwards - and the other countries where EI is converging downwards.
9. Industries in Arab countries do not really explain the high EI levels. The industrial sector witnessed a 2.7% increase due to computer technologies which are drivers for the improvements of the sector. However, there is a lot of losses and low human capital efficiency.
10. On the other hand, the Arab region has lowest energy intensity in the building sector. The need for cooling is essential in this region and there should be efficient appliances and buildings. Usually electricity is used for cooling purposes in this region.
11. For example, Jordan has a regulation in place to import only efficient electricity equipment.
12. A discussion followed whereby all the participating member countries shared their experiences:
 - In **Jordan**, light bulbs in municipalities have been replaced by led lights since 2017 while solar panels have been installed in poor areas and even given for free to poor households with very low consumption.
 - **Egypt** saw an increase in energy efficiency after the removal of subsidies in the past 3 years. As for its transportation sector, vehicles such as taxis are working on natural gas or electricity.
 - In **Oman**, wind and solar are used to cover the cooling load. The government subsidizes the cooling, but it is different with respect to each service (restoration, residential etc...). There is also a current study on pricing for residential and plants. Moreover, the Municipality approves the efficiency regulations for buildings which are determined by the building owners.
 - In **Sudan**, there are green buildings. However, what is more important is having good ventilation and glass to allow more sunlight and reduce the need for lighting. Also, enforcing regulations for appliances and buildings is the biggest challenge. Even if u have efficient appliances, if the building is not efficient then there would be a waste of energy. Energy efficiency (EE) programmes require an increase to the setting of the rooms from 21 to 23 degrees along with some regulations on the import and classification of refrigerators. Sudan also uses water cooling which accounts for 75% of the total cooling.
 - **Tunisia** is known to have high EE standards, however there is the issue of the informal market.
 - In **Egypt** and **Iraq**, the residential sector uses up to 50% of the total energy consumption of the country. **Syria** has a numeric goal to reduce EI by 10% during the reconstruction process.

- The parallel market is also an issue in the Arab region. And the public awareness should be highly stressed as it alters the consumer behaviour. The supply mix of energy is also another important issue to take into consideration when talking about energy efficiency in the Arab region.
- As for transportation infrastructure in the Arab region, it is limited in **Jordan** and inexistent in **Lebanon**. In **Jordan**, hybrid cars exist and 47% of the population use their own cars for transport because using the public transport takes a lot of time. Jordan is currently constructing a plant for electric cars. The metro system is coming soon to **Saudi Arabia**, but the real impact is in the Maghreb region where the metro and tramway are yielding good results compared to the past 10 years. Developing countries should enhance their public transport system like using underground commuting to reduce transport emissions. On the other hand, **Oman** set the fuel price at the international prices and removed the subsidies on petrol which led the people to use less cars.
- On the availability of data on the transport sector: **Palestine** has surveys that show the type of cars used and the type of fuel; **Tunisia** gathers this information from two sources: departmental sources and transportation surveys; **Jordan** is working with the Ministry of Energy on new surveys regarding several sectors (residential, industry...) and they are working on updating the questions with the help of ESCWA to obtain the necessary indicators.
- For **Syria**, 5.5 million Syrians were registered as refugees in 2017, while another 6.15 million people were internally displaced, with no formal records about their energy situation. The considerable destruction of the country's energy infrastructure will likely be a long-term liability that will affect de facto access to modern energy and electricity service quality in a post-conflict Syria for many years to come.

C. RENEWABLE ENERGY (RE): CLEAN ENERGY FOR SUSTAINABLE DEVELOPMENT

13. In this session, a presentation on renewable energy (RE) highlighted that Arab countries have set their RE targets but their share in the energy mix is still very low. Globally, RE share in total final energy consumption is plateauing except in North America and Europe. In the Arab region, it is Sudan, Egypt, and Morocco which accounted for 83% of the region's total RE consumption.
14. Solid biofuels constitute 81% of RE consumption in the Arab region with solar being the second largest RE source accounting for 7%. RE still does not play a large role in the Arab region, although recent years have seen a pick-up in modern RE technologies, particularly in solar power. Countries with highest off-grid access are Morocco, Tunisia and Mauritania.
15. Decentralized generation offers significant market potential, including in conflict-affected countries. Furthermore, more market uptake requires a more proactive legislation
16. A discussion followed whereby all the participating member countries shared their experiences:
 - In 2012, the RE share in **Jordan**'s energy mix was only 1%; however, the RE and EE Laws issued during that year acted as a catalyst and resulted in three bidding rounds which enabled low prices through competition: 17 cents per kWh in the first round, 6 cents per kWh in the second round, and 2.48 cents per kWh in the third round. Currently, there is 1,130 MW of solar energy connected with another 800-900 MW in the pipeline. Jordan plans to have 35% of installed capacity from RE by 2030. Small solar PV systems are already being installed for poor households (3,000 in quantity with 2 kW capacity each) and for rural farmers for water pumping. **Jordan**'s renewable energy uptake in heat generation is illustrated by the use of solar water heaters. In 2016, the total number of installed solar water heaters funded by civil society institutions reached 3,500 systems. This number almost tripled in 2017 -2018 reaching 16,000 installed solar water heaters and saving around 53 GWh of energy. By 2020, the solar water heating market is expected to save 82.5 GWh of energy and avoid around 50 kt of CO₂ emissions through 25,000 installed solar water heaters with the target to increase the dissemination rate of SWHs in the residential sector to reach 25% by 2020. The use of decentralized solar based systems is promoted by the Jordanian government through offering incentives such as a net metering scheme, wheeling regulations and a tax incentive regime. In order

- to make green technology financially more attractive, Jordan has since 2013 exempted systems equipment for renewable energy sources and energy efficiency from customs duties and sales tax, with further legislation (Bylaw No. 13 of 2015) since 2015 reinforcing this decision.
- **Sudan** also has plans for 6,000 solar PV water pumps in areas far away from national grid, with 28 pumps installed in the North (rural area) where water networks don't exist.
 - **Iraq** switched its hydro power plants to natural gas plants after 2003. This was due to the lack of maintenance on hydro power plants caused by the political instability. Meanwhile, solar energy projects are being increasingly implemented. However, data collection has been weak over the period 2014 – 2017 and not reflected in official documentation.
 - In **Egypt**, data collection for final energy consumption is done at the consumer level whereas RE generation data is done at the central level. Some of the projects include a 1,450 MW solar PV park to be developed. The initiation of independent power producers and auctions allowed for very competitive prices: 2.75 cents per kWh. 4,000 MW of solar PV capacity in the pipeline with another 2,000 MW from wind energy. Egypt has also put in place an energy strategy to have a 42% RE share in the energy mix by 2030. The EGYSOL project encourages the use of solar water heaters by implementing a mechanism that support financing the dissemination of solar water heaters in hotels and resorts in the Red Sea and the Sinai by providing a subsidy to the initial cost of equipment and maintenance over a period of four years.
 - **Tunisia** has a low RE share in the energy mix with biomass having the biggest share and consumption being mainly in rural areas whereas solar, wind, and waste-to-energy are more consumed outside the rural area. Data is provided by the energy generation agency of Tunisia. The 2030 plans are for RE generation to grow to 30% of energy mix (up from 3% in 2016). **Tunisia's** Solar Water Heating program adds to the uptake of Renewable Energy in the country.
 - **Mauritania** is leading in the RE share of the energy mix with a current share of 40%. RE has started penetrating the energy mix, since 2010, thanks to a 15 MW solar PV farm donated by the UAE, then wind energy and hydro projects became operational. By the end of 2019, a new wind farm of 100 MW will become operational; thus, increasing the RE share in the energy mix to 50%.
 - In **Palestine**, data sources come from administrative records and field surveys. Fifty – Six percent of households have solar water heaters although this figure had dropped from 70% in 2001 due to the Israeli embargo on Gaza, high costs, and the use of vertical/tall buildings for residential housing which minimize the roof surface area per household to be used for solar water heating. There are currently no wind energy projects in Palestine due to land scarcity. Solar PV are mainly small-scale projects totalling 30-40 MW because of scarcity of land and the fact that 60% of the land is under occupation. The remaining 40% of the country's land is classified as residential and therefore, renewable energy projects cannot be built there.
 - As **for Syria**, renewable energy contributed some 17.5% to Syria's total energy consumption in 2016, most of it from traditional biomass and hydro resources (2.3% hydropower) that have been in use in the country for many decades. The share of Syria's renewable energy consumption as part of its TFEC halved since 2000, the result of declining share of hydro and solid biofuel vis-à-vis fossil fuels. However, because of the war, the Syrian population increased its reliance on the consumption of fuelwood for heating and cooking purposes which drove the consumption of traditional biomass to around 15% of the country's energy consumption in 2016. Syria's conflict economy throughout the tracking period has not allowed the central government to focus on policies designed to increase the share of renewables in its energy mix in the long-term. During the conflict period, the Syrian government has offered soft loans for solar water heaters, with additional plans to equip public buildings with solar water heaters as well. The Syrian Agricultural Bank has also started providing farmers with soft loans to install solar photovoltaic systems to power well pumps while the government is currently establishing a Renewable Energy fund to support the use of renewables and raise the energy efficiency in Syria.
 - For **Oman**, no data is currently available, but the country is in the process of collecting data which will be concluded in October 2019. Libya also has limited data which exists only exists for biofuels

because the use of other RE technologies is very low and there are only plans for RE development for the moment.

- **Kuwait** just started recently with its RE projects. The Shagaya solar project of 1.5 GW will help Kuwait achieve its target of 15% RE of the energy mix by 2030. Solar PV carports are also being developed throughout the country with great success.
- **Lebanon** had pledged to achieve a 12% share of RE in the energy mix by 2020 and a 30% share by 2030. Hydro plants currently provide 3% of electricity generation. There are also 226 MW wind farms being developed in Akkar and 180 MW of solar PV parks (15 MW each). The second round of wind farms, totalling 200-400 MW, is also progressing, along with the second round of solar PV projects, consisting of 24x15 MW. The third round of solar PV with storage 300 MW is in the pipeline as well. The main heating activities in **Lebanon** are for space heating and water heating in the building sector; using Solar Water Heaters (SWHs) and biomass bricked boilers and more recently air-water heat pumps. Finally, by the end of 2017, NEEREA funded 533 solar PV projects valued at 42 million USD and totalling 22.5 MW-peak.

D. SUSTAINABLE ENERGY AND CLIMATE ACTIONS

17. In this session, a presentation on sustainable energy and climate action in the Arab region highlighted the pressing issue of accelerating the progress of sustainable energy development in the region since energy efficiency (EE) and renewable energy (RE) are crucial in the global carbon reduction process. The Arab region is the second lowest in terms of energy intensity but with some of the highest per capita emissions. The region constitutes 5% of global emissions and has higher prospects to be affected by climate change.
18. The climate is getting worse before we can mitigate and adapt. For example, in the GCC, the cooling demand is expected to nearly triple by 2030. Moreover, relative indices reveal significant warming trends for the majority of stations in all seasons. Water scarcity in the region is also another factor showing how this region will be increasingly challenged. Furthermore, most of the Arab countries face adverse land productivity impacts as a result of frequent temperature increases which result in irrigation water deficits and pests and plant disease.
19. The Arab region's annual mean exposure to fine particulate air pollution exceeds WHO guideline. Moreover, data gaps and the potential of industrial centres exceeding country average levels are highly concerning.
20. The interlinkages between SDG7 and SDG13 are significant and the region needs to integrate them through their NDCs and national energy plans. Furthermore, the region has significant potential of integration in EE improvements and the increase in RE which should be addressed. People in EE and RE should work more closely to overcome institutional challenges. Cross regional cooperation is important but each country needs to look at its own NDC and see what fits best for its unique position and resources.
21. Another presentation on the World Bank's regulatory indicators for sustainable energy (RISE) highlighted the RISE indicators. These indicators assess where a country stands in terms of the presence of policies and to whom countries can look up to but not the quality of these policies nor their implementation progress. The indicators cover four pillars (electricity access – cooking fuel technologies access – RE – EE).
22. A discussion followed whereby all the participating member countries shared their experiences:
 - **Jordan** is improving in retrofitting to enhance energy efficiency in design, construction and commissioning.

- **Tunisia** is working on proactive policies to mitigate the climate change effect and aims to reduce 46% of carbon intensity especially in the energy sector.
- **Sudan** has ambitious NDCs but no policies to support them.
- **Egypt** finalized its action plan 2019 – 2022 that focuses on solar power and energy efficiency, alongside guiding policies for all governmental sectors. By 2035, Egypt expects to increase its renewable energy to reach 42% and witness an 18% improvement in energy efficiency.

E. COUNTRY PERSPECTIVE

23. Every country representative was asked to comment about their RISE score and to talk about their initiatives in RE and EE:
- **Egypt:** In the transport section, studies are being done for fuel switching to natural gas as well as electric vehicles. The building code is present, but its application is not uniform in all areas. New buildings conform with the code, but for older ones, it's very costly to retrofit. 100 million LED bulbs have been replaced and inefficient lighting equipment cannot enter the country due to the enforced quality standards. Plans also exist to expand the metro's coverage across the country.
 - **Iraq:** Electric vehicles and natural gas cars are rare. There exists large data gaps and data discontinuity in Iraq regarding RE and EE due to all the instability that the country went through since 2003.
 - **Jordan:** Wants to send additional data and information to the RISE team to update their score which they believe is being underreported by the RISE programme.
 - **Kuwait:** In 2017, the Ministry of Energy was instructed by the Council of Ministers to start forming plans for RE and EE. Teams were formed to transform manufacturing plants into smart ones where EE would be maximized.
 - **Libya:** Libya is not covered by RISE.
 - **Mauritania:** No significant EE work is being done in Mauritania.
 - **Tunisia:** The indicators for Tunisia are green and great. Tunisia continues to develop its plans and projects to reach its 2030 target and reduce fuel imports while creating jobs.
 - **Syria:** Access to electricity was 100% before the war, but this number has dropped due to damage inflicted on the grid. Regarding decentralized RE not connected to the grid, it accounts for 22 MW. The war also led to a drop in power plant efficiency due to the scarcity of spare parts. Syria also looks forward to visiting Egypt and Jordan to learn more about their work and lessons learned in the RE and EE fields.
 - **Sudan:** Electrification rate is actually 37% and not 53% as reported by RISE. Sudan started working on solar rooftops systems as well as solar water pumps. Capacitor banks are also being mandated for industries and manufacturing plants to improve the quality of power. In public buildings, lighting has been completely switched to LED. Combined cycle technology is also being installed for power generation. Utilities also worked with manufacturing plants to reduce or shift their peak load using kVAr meters.
 - **State of Palestine:** Regarding RE, a law was enacted to promote RE and a strategy was put in place and a RE equipment was exempted from customs duty. PV rooftop systems are also being installed in public schools. The Order of Engineers approved an EE building code, but some areas are not within the jurisdiction of the Palestinian authorities and therefore these codes cannot be enforced there. Old buildings are also not covered by this code. Regarding transport, there are plans to import EVs and ban the import of old inefficient cars. EVs will also be exempted from customs duty. Israelis are currently banning Palestine from importing EVs. Most rural households use LPG.
 - **Oman:** Solar PV rooftops are making their way onto public buildings. There are no specific regulations or plans for the development of RE.

ORGANIZATION OF WORK

A. VENUE AND DATE

The Seminar on: “Monitoring the Implementation of Energy Related SDG Indicators in the Arab Region” was held at the United Nations House in Beirut, Lebanon, on the 17th – 18th of April 2019

B. OPENING

The meeting was formally opened by Ms. Roula Majdalani, Director of the Sustainable Development Policies Division (SDPD) at ESCWA. Then the conference objective and agenda were outlined.

C. PARTICIPANTS

The conference was attended by 25 participants and gathered members of the ESCWA Committee on Energy or their delegated representatives.

D. AGENDA

1. Presentations and discussions were made over five sessions. The agenda of the meeting is summarized below:

Opening Session and Introduction

Session 1: Energy Access (EA): Universal Access to affordable, reliable and modern energy

Session 2: Energy Efficiency (EE): Sustainable Growth

Session 3: Renewable Energy (RE): Clean energy for sustainable development

Session 4: Sustainable energy and climate actions

Session 5: Country Perspective

E. EVALUATION

2. An evaluation questionnaire was distributed to participants to assess the relevance, effectiveness, and impact of the meeting. The feedback received from 22 participants was positive with all of them agreeing or strongly agreeing that this meeting met their expectations (100%) and achieved its purpose (100%).
3. Almost all of the participants agreeing or strongly agreeing that the quality of the presentations provided, and the facilitation of the discussion was more than good.

4. Only one participant found the seminar as not well organized while another found the invitation letters sent to be late. All the remaining 20 participants strongly agreed or agreed that the seminar was well organized.
5. Some of the comments received from the participants included: receiving the presentations prior to the seminar, extending the duration of the seminar, introducing the section's ongoing and finished projects, sending invitation letters earlier than two weeks and providing participants with some preparatory homework prior to the seminar to be prepared for the discussion.

ANNEX

LIST OF PARTICIPANTS

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