

Water Energy Food Nexus (WEF) in the Context of Sustainable Development and Climate Change

Webinar : Tuesday, 29th September 2020

Regional Initiative for Promoting Small-Scale Renewable Energy Applications in Rural Areas of the Arab Region (REGEND)

Integrated and Multi-stakeholder Approach for rural and economic development



UNITED NATIONS

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Shared Prosperity Dignified Life



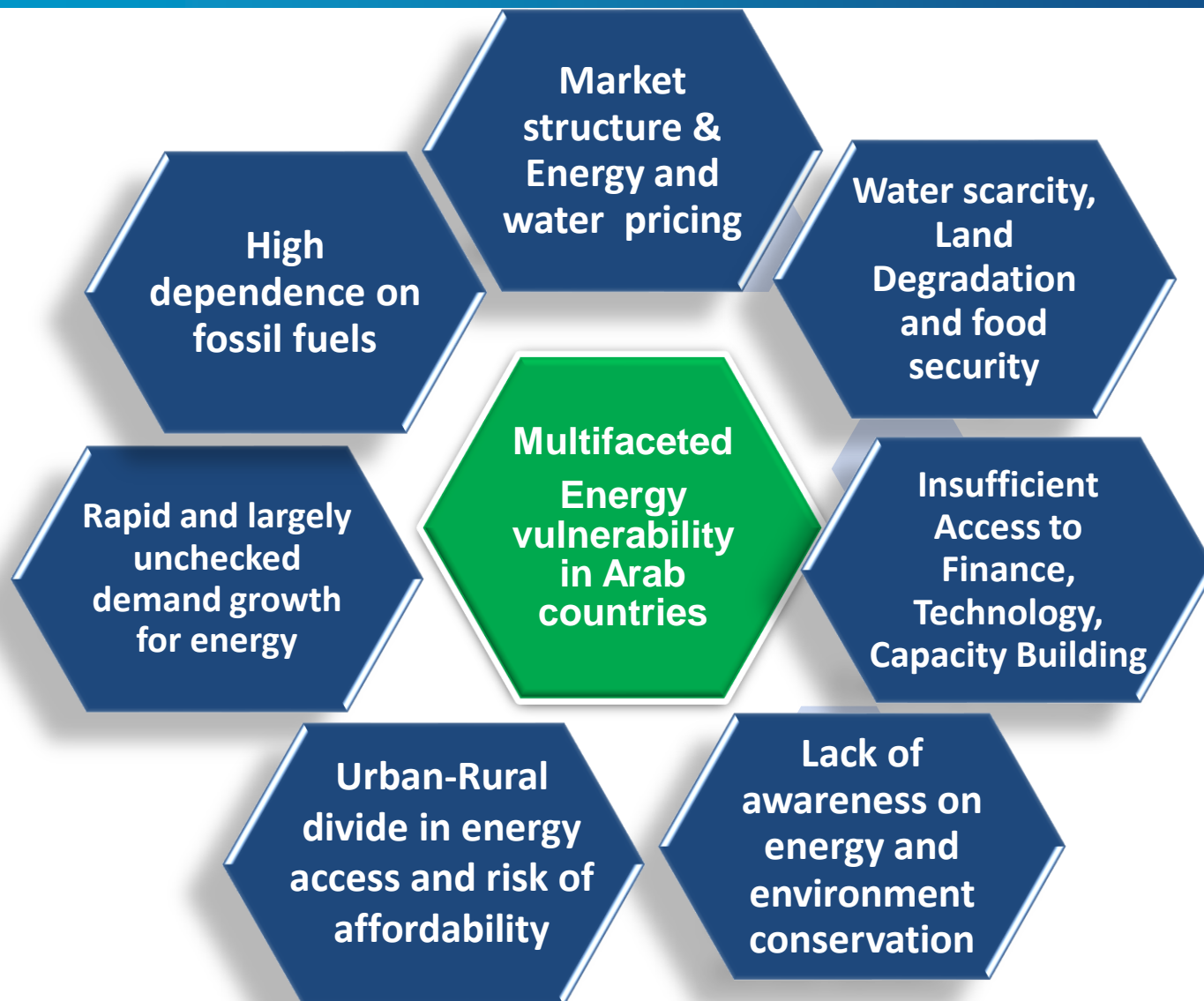
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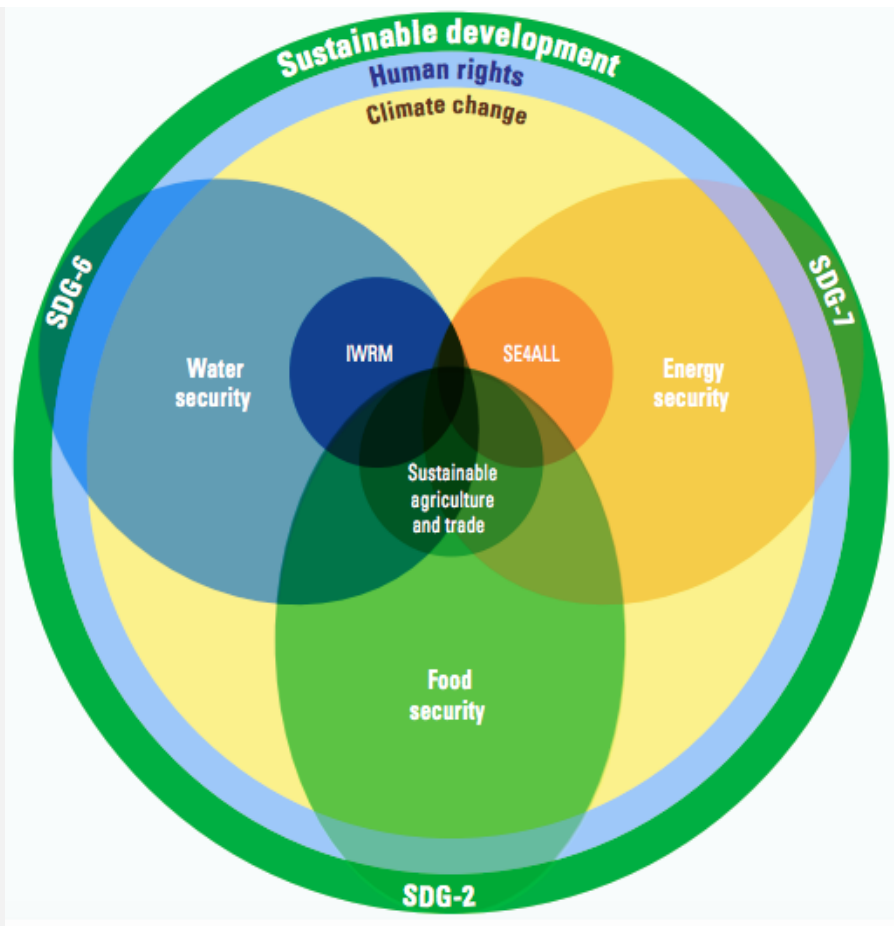


Sweden
Sverige

Inclusive and integrated approach for natural resource management and building resilience to climate change



The Nexus Approach within the Sustainable Development Goals and Climate Change



WEF Nexus and role of RE: Aspects and Opportunities

Renewable energy can boost water security by improving accessibility, affordability and safety; abstraction and conveyance, treatment, distribution, end-use, waste water collection and treatment, constructing, operating and maintaining water-supply facilities



An energy system with substantial shares of renewable energy could be less water-intensive; extraction and mining, fuel processing, thermoelectric cooling, transportation, waste disposal and emission control, constructing, operating and maintaining energy generation facilities

RE opportunities in the energy and water nexus

- . Reduce water-intensity of power sector
- . Improve access to water
- . Enhance reliability of water supply
- . Bridge the water gap in arid regions
- . Replace traditional water heating

Project Justification: major challenges in the Arab region

- Limited knowledge and awareness on policy tools to incentivize the dissemination and use of appropriate small scale RE technologies in rural communities;
- Focus of many governments in the Arab countries on the development of large scale RE power generation systems;
- Centralized systems are driven more by the demands of big industries and urban population;
- Less importance is given to develop, install, assemble and undertake maintenance work for small scale RE systems;
- Absence of an enabling environment for the private sector to invest in small scale RE technologies, especially in rural areas;
- Lack of accessible financial support for small scale projects able to facilitate private consumers to install RE technologies;

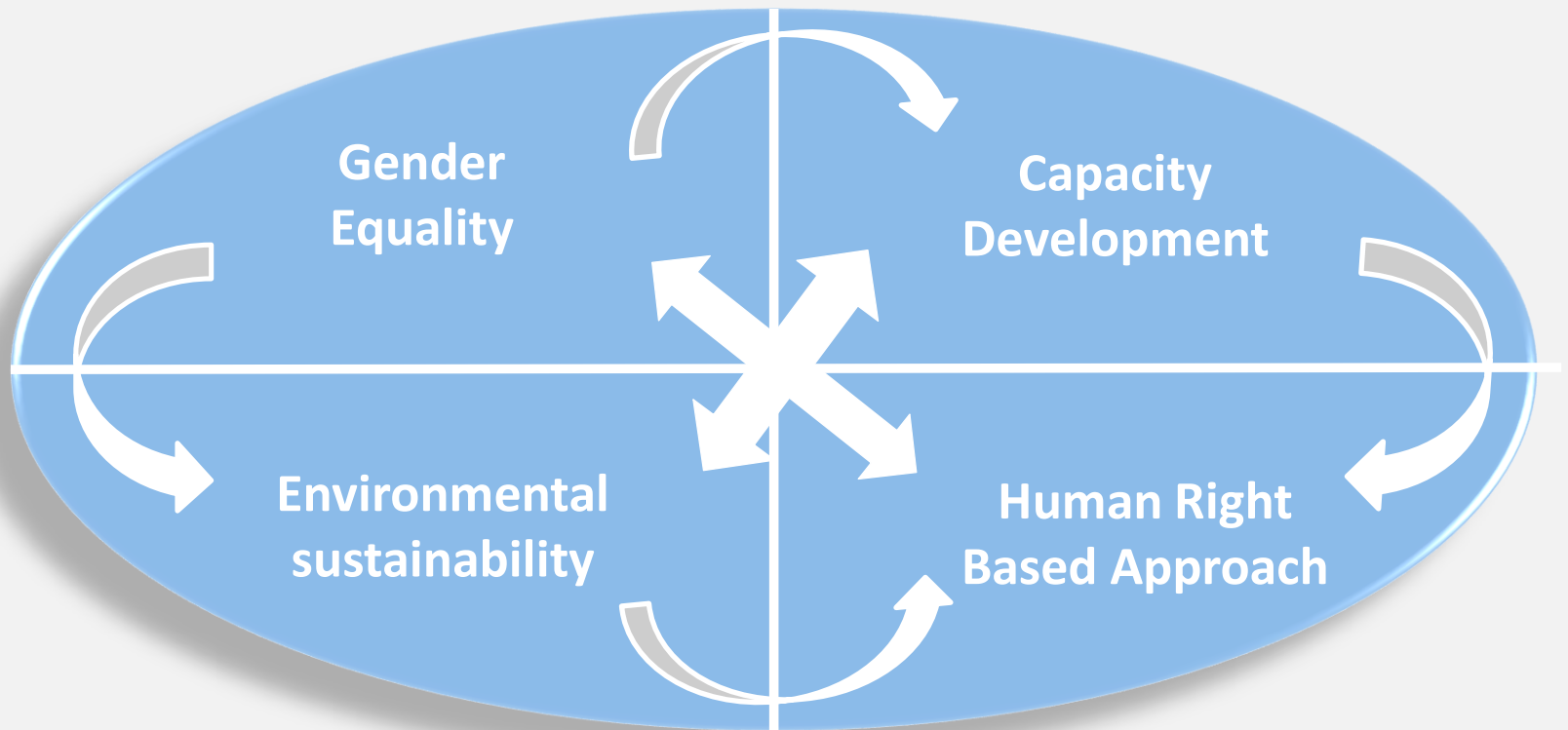
RE applications if used adequately to meet the needs of rural communities:

- will open up more **entrepreneurial** opportunities in **productive** sectors beyond agriculture
- will ease the pressure of **migration** to urban areas
- will contribute to **reducing the social strife, gender disparity, potential rise of conflict** and build resilience to climate change.

Project Summary

Title:	Regional Initiative for Promoting Small-Scale Renewable Energy Applications in rural areas of the Arab Region
Implementing Division	ESCWA Climate Change and Natural Resource Sustainability Cluster with inputs from other ESCWA Clusters
Key Partners	SIDA Partners in implementation include LAS, line ministries, National Instructions, local authorities, Local and regional NGOs, UN organisations, various regional organizations,..
Duration	4 years: 2018 – 2021 including an Inception Phase
Target Countries	ESCWA Member States and Sweden’s Regional Strategy for Development Cooperation in MENA 2016-2020 target countries. Focus will be on Jordan, Lebanon and Tunisia
Main Beneficiaries	<ul style="list-style-type: none">▪ Primary beneficiaries: Rural population with emphasis on marginalized and vulnerable groups▪ The second category of beneficiaries: Governmental relevant ministries and Agencies (Energy, Economic Development, Industry, Agriculture, Planning, Social Affairs, ..), local government bodies, civil societies, relevant NGOs and women associations, SME, Financial institutions, Academic Research institutions, Universities;▪ Project results and recommendations will be shared in national and regional workshops with other Arab countries.

Sustainability and national ownership aspects



INCLUSIVE , SUSTAINABLE, ENVIRONMENTAL AND ECONOMIC REVIVAL & DEVELOPMENT OF THE ARAB RURAL COMMUNITIES

RE Technologies

- Effective/innovative RE- Small scale decentralized and modular, energy systems.
- Water-Energy-Food nexus
- Access to productive resources, appropriate and reliable services.

Human Capacity

- Model based on knowhow
- Trainings, Knowledge skills/Advisory Services.
- Brining change among rural community from resource poor living standards to reliable, affordable and modern sources of energy.

Women's Empowerment & Social inclusion

- Economic power in rural women's hands
- Female mentor
- Participative and bottom-up approach

Entrepreneurial development

- Economic transformation, Environmental and socio-economic development priorities
- Entrepreneurial jobs in productive sectors
- Spawn energy-based enterprises around RE based service providers

Policy and institutional Framework

- Pro-poor investments and private sector involvement
- Synergies among national/regional stakeholders.
- Innovative incentive mechanisms.

Human Rights, Gender equality, resilience to Climate Change

Untapped RE Resource, high Unemployment, chronic poverty, water scarcity, food insecurity, energy poverty and vulnerability to climate change of the rural communities of the Arab countries



Pillars for the Community's Identification and Selection

- Relatively vulnerable rural area
- Availability of natural resources (agricultural land, springs, rivers, etc.)
- Infrastructure and ease of access
- Human resources and active population
- Availability of productive activities, with growth potential
- Active participation of women in the labor force (or potential)
- Low security risk
- Strong local governance (municipalities)
- Active NGOs



REGEND: Field Projects under implementation

Tunisia

- 6 solar PV projects (122 kilowatt-peak (kWp))
- 7 types of productive equipment

Lebanon

- 2 solar PV projects (35 kWp)
- 2 SWH projects
- 1 LED lighting retrofit project
- 9 types of productive equipment

Jordan

- 6 solar PV projects (totaling 73 kWp)
- 3 SWH projects
- 2 efficient irrigation projects
- 2 electrical and EE building renovation projects
- 4 types of productive equipment



Women's Agro-Food Cooperative of Akkar El Atika, Lebanon



Woman's Home-Based Food Production, Jordan



SMSA ElFawoz, Chorbane, Mahdia, Tunisia



Water pumping in Ashaari Farm, Jordan



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Thank you

<https://www.unescwa.org/sub-site/renewable-energy-rural-arab-region-regend>