

# Water and Energy Solutions to Advance the Sustainable Development Goals

Seventh meeting of the Task Force on the Water-Food Energy Ecosystems Nexus  
Tuesday 13 December



UNITED NATIONS

الأمم المتحدة  
ESCWA

Shared Prosperity **Dignified Life**



**Mr. Sean Ratka**

Economic Affairs Officer – Sustainable Energy  
Climate Change and Natural Resource Sustainability Cluster  
UNESCWA

# The Nexus Approach



The nexus approach provides an opportunity to strengthen actions aimed at achieving the SDGs



It contributes specifically to setting complementary goals and targets that can be achieved hand-in-hand, as it helps identify interactions between goals and across sectors.



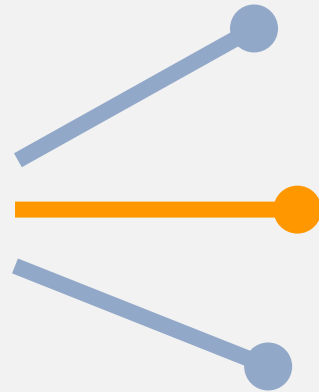
Brings stakeholders together, the approach promotes the creation of partnerships and collaboration across sectors and countries that are essential to achieving the 2030 Agenda.



Used as a framework for solutions that arise based on examination of plans for countries and entities.

# The Role of Renewable Energy within the Nexus Approach

A vital role for renewable energy in the agricultural sector, among others. If the market and synergies in the water-food-energy-ecosystem nexus are properly addressed, water sectors may benefit.



The 17 SDGs include economic, social, and environmental dimensions of sustainability, with progress of each SDG relying on the progress of the other goals.

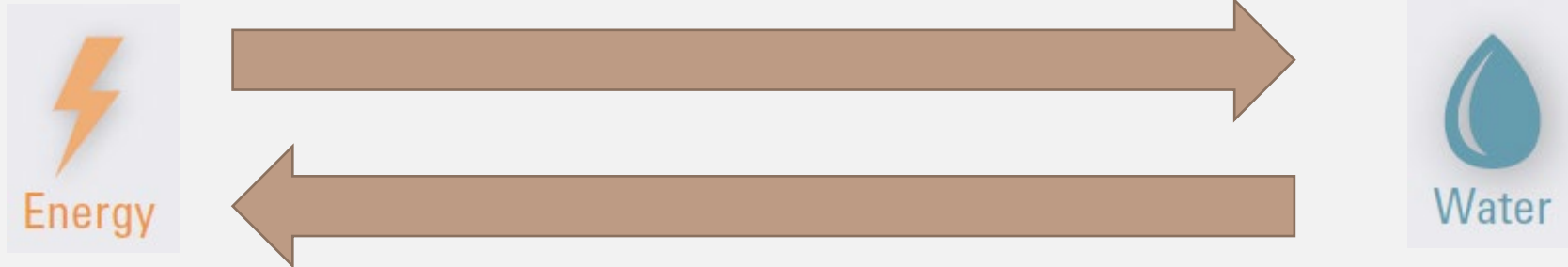
All SDGs form a network connected by linkages that are both positive and negative:

- Positive: synergies that reinforce each other's progress.
- Negative: trade-offs that hamper each other's progress.

Renewable energy technologies can be used to improve water access and increase food production. However, their deployment can also be a limiting factor that highlights the importance of inter-sectoral impacts and sustainable priorities.

# Renewable Energy Opportunities and Various Elements in the Water - Energy Nexus

Renewable energy boosts 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.

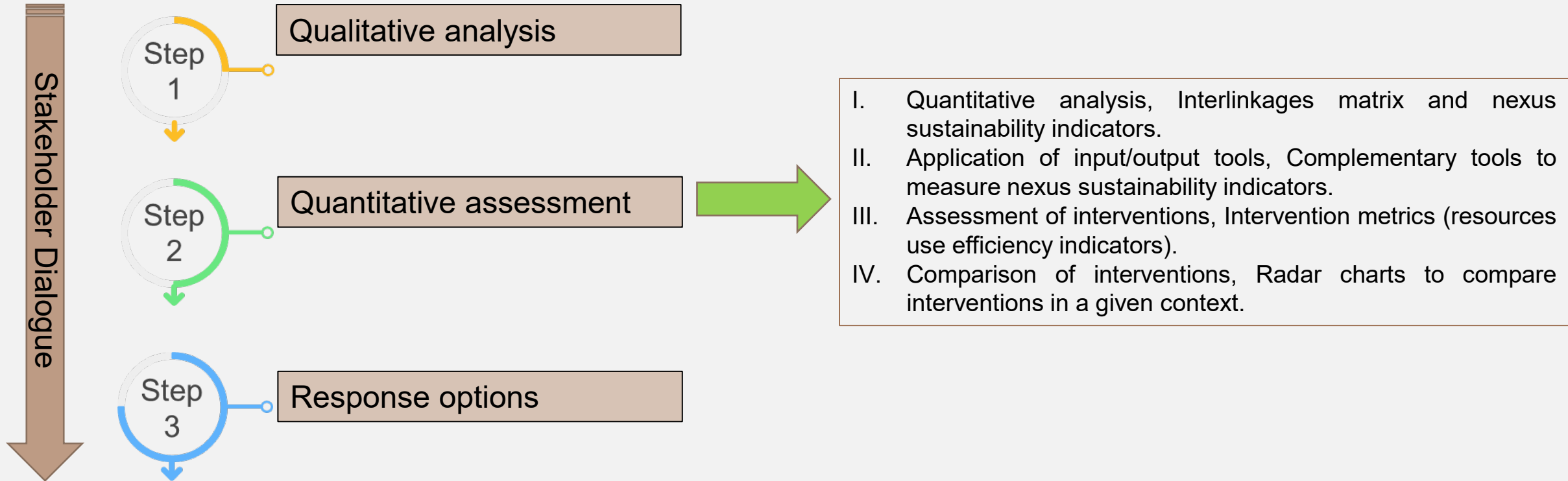


An energy system with substantial shares of renewable energy could be less water-intensive; extraction and mining, fuel processing, thermoelectric cooling, transportation, waste disposal and emission control, constructing, operating and maintaining energy generation facilities.

## 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

# Nexus Assessment

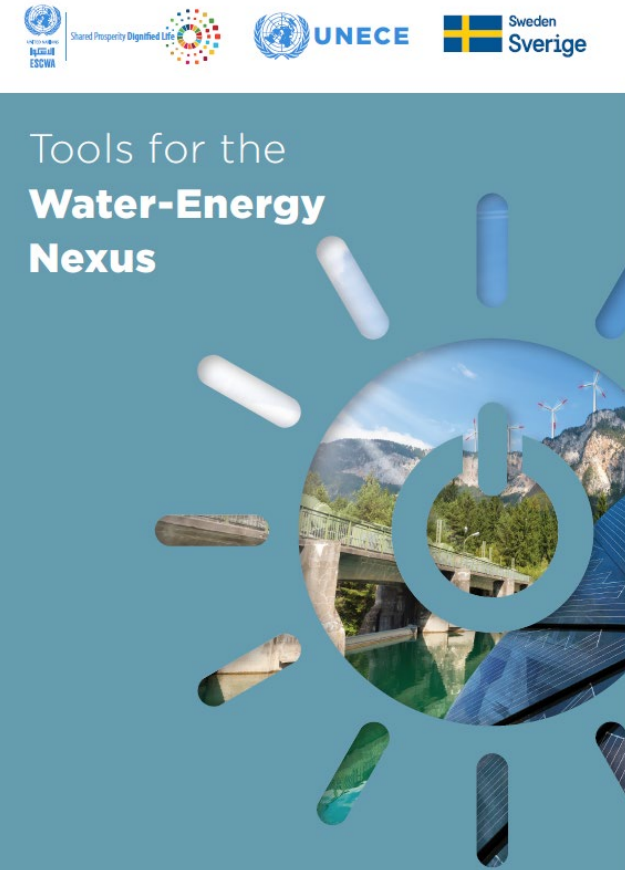


# Dialogue for Nexus Cooperation

- Although the benefits of a coherent water-energy nexus are apparent, the political, socioeconomic and security realities faced by the Arab countries often complicate the implementation of nexus solutions.
- Due to the interdependence of water and energy sectors, understanding the trade-offs and synergies that can be made between them is a good starting point to achieve a consensus.
- Policy incentives (typically economic) are highly effective in encouraging cooperation. Further incitements include awareness-raising, public participation and institution building, each of which should be encouraged in the Arab region.
- A multi-stakeholder dialogue should involve policymakers from relevant sectors and key actors from civil society, industry and investment groups.
- Transboundary cooperation and coordination are needed to exploit regional synergies and to ensure the sustainability of renewable energy deployment.

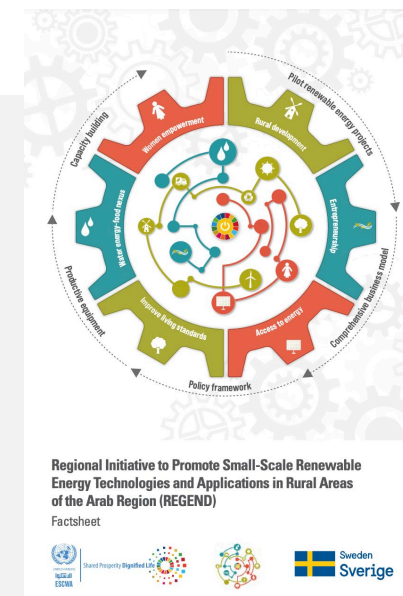
# Recommendations

- There is no one-size-fits-all model for the production, consumption and governance of natural resources. The water-energy-food nexus must be needs oriented and context-sensitive.
- Human rights and access to water, energy and food resources should be the foundation for producing and managing these primary resources.
- Capacity of local structures and institutions must be built by creating indicators and local accountability mechanisms to bring global SDGs to a local scale.
- The public sector should be viewed as a major stakeholder in nexus implementation.
- Strategies that allow Arab countries to implement national and international commitments on economic and sustainable development must be developed.
- Energy requirements and the carbon footprint of water technologies, such as desalination and treatment, should be considered when planning policies in the water sector.



# REGEND Project Summary

<b>Title:</b>	<b>Regional Initiative for Promoting Small-Scale Renewable Energy Applications in rural areas of the Arab Region</b> ( <a href="https://www.unescwa.org/regend">https://www.unescwa.org/regend</a> )
<b>Implementing Division</b>	ESCWA Climate Change and Natural Resource Sustainability Cluster with inputs from other ESCWA Clusters
<b>Key Partners</b>	SIDA Partners in implementation include LAS, line ministries, National Instructions, local authorities, Local and regional NGOs, UN organisations, various regional organizations,...
<b>Duration</b>	4 years: 2018 – 2021 including an Inception Phase
<b>Target Countries</b>	ESCWA Member States and Sweden’s Regional Strategy for Development Cooperation in MENA 2016-2020 target countries. Focus on Jordan, Lebanon and Tunisia
<b>Main Beneficiaries</b>	<ul style="list-style-type: none"> <li>Primary beneficiaries: Rural population with emphasis on marginalized and vulnerable groups</li> <li>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;</li> <li>Project results and recommendations will be shared in national and regional workshops with other Arab countries.</li> <li>31 projects completed, 257 kWp, 2,900 beneficiaries across three countries</li> </ul>







Shared Prosperity **Dignified Life**



**Sean Ratka**

Climate Change and Natural  
Resource Sustainability Cluster

ESCWA

ratka@un.org

Thank you