

The Water-Energy-Food-Ecosystems (WEFE) Nexus is a holistic approach to achieve all the SDGs

Results summary by the WEFE Expert Group
from the AGUASAN Workshop 2022

The idea in a nutshell

The Challenge Addressed

The main challenge of the Water-Energy-Food-Ecosystems nexus is the coordination amongst relevant stakeholders to implement sustainable solutions emphasizing ecosystems and prioritizing marginalized communities.

The Vision

Capture the interrelationships, synergies, and trade-offs between resources for the WEFE Nexus to ensure a climate resilient world through more sustainable and integrated solutions.

The Potential Solution

A recognised value, incl. a standard of the Water-Energy-Food-Ecosystem Nexus to improve coordination amongst relevant stakeholders and to implement sustainable solutions.

Key target group

Government ministries for water, energy, food and the environment, and regional bodies.

Countries, Region

Selected countries from the Middle East North Africa region, including Jordan, Lebanon, Turkey, Iraq, plus others.

The ideas and results presented have been co-created by one of the five water and climate experts groups during the [36th AGUASAN Workshop “Water Management in Times of Climate Change - Finding Actionable Solutions for Fragile Contexts in the Middle East”](#), taking place in Jordan in June 2022. Through an innovative format, the 5-day workshop supported the five thematic working groups to co-develop potential actionable solutions for water-climate issues, highly relevant for the region.

water/agriculture sectors and isolate the true monetary value of the ecosystem they support. The impact is widespread, supporting the realisation of many SDGs, and potentially touching all people in the surrounding community, especially the most vulnerable.

Based on this quantitative socio-economic analysis, together with a robust analysis of the current national governance structures of selected countries, the next step will be to bring together the ministries and decision-makers that represent the different sectors and provide recommendations and opportunities for collaboration.

The idea

A simple step for attracting investment interest in the WEFE Nexus is to demonstrate the socio-economic value of the second ‘E’ for ecosystems. It counters the belief that protection or improvement of ecosystems has no value and is not taken seriously as an added benefit to development in the water-energy-food arenas. The concept is to select 3-4 existing or new projects in the water/energy and/or

“The WEFE Nexus is a holistic approach to achieve all the SDGs. The Water-Energy-Food-Ecosystem Nexus is an approach that describes and addresses the complex and interrelated nature of the global resource systems, on which we depend to achieve different social, economic, and environmental goals. It is used as a framework that captures the interrelationships, synergies, and trade-offs between resources for water, energy, and food, while protecting our ecosystems; allowing for more sustainable and integrated solutions to achieve a climate secure world.” – Definition developed by the expert group.

It will be important to emphasize the impact on marginalised communities by including their representatives in the discussions and decision-making process from an early stage.

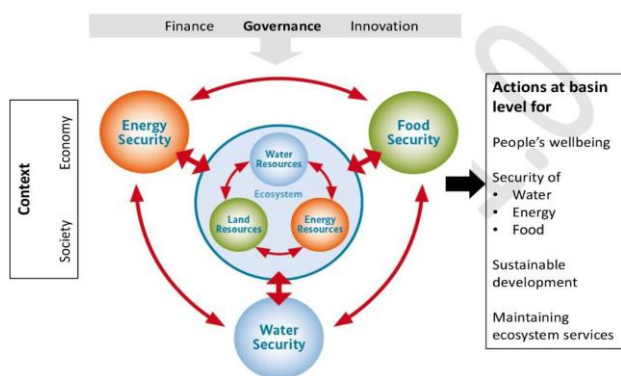
The ecosystem is valued by the following:

1. **Avoided cost** e.g., healthier environment
2. **Replacement cost** e.g., restoration of wet-lands cost less than construction

Specific Aims:

There are four specific aims of the programme. The first two will be built around the results from the demonstration of value provided in the third and fourth aim.

1. Improving the governance environment to enable the WEFE Nexus
2. Improving cooperation between sectors through capacity building, knowledge, sharing and communication
3. Attract financial support by showing the socio-economic value of ecosystems
4. Demonstrate actionable programmes with WEFE Nexus activities



The Water, Food, Energy and Ecosystem security Nexus showing their interdependences: Modified after ©Hoff, 2011

Each of the activities will be inter-related and conducted concurrently rather than sequentially:

1. Improving the governance environment to enable the WEFE Nexus:

3. **Factor income** e.g., enhance incomes through better water quality -> productivity of fisheries
4. **Travel cost** e.g., demand of tourism
5. **Hedonic pricing** e.g., perceived value of area
6. **Contingent valuation** e.g., alternative uses such as entry to national parks

- Identify gaps on governance (laws, policy, regulations, strategies) to understand the current structure
- Make recommendations based on the analysis of current governance structure
- Policy dialogue
2. Improving cooperation between sectors through capacity building, knowledge, sharing and communication:
 - Show ecosystem value by socio-economic valuation of real examples
 - Incorporate this value system into government plans and budget to include in activities for investment in WEFE
3. Attract financial support by showing the socio-economic value of ecosystem:
 - Show ecosystem value by socio-economic valuation of real examples
 - Incorporate into government plans and budget to include in activities for investment in WEFE
 - Attract private financing, e.g. green economy, ESC investment
4. Demonstrate actionable programmes with WEFE Nexus:
 - Research development in technical solutions and innovations
 - Identify projects (existing or new) to provide evidence of WEFE value
 - Develop monitoring indicators for WEFE to
 - a) Create checklist for solution criteria, b) Track performance, c) Define success

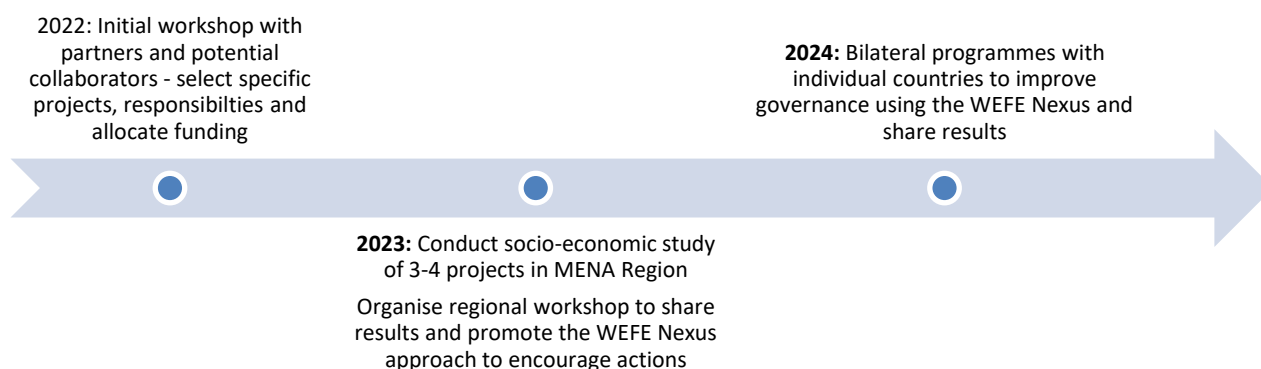
Potential partners

Partners will be mainly drawn from the region, including a mix of expertise and project experience. Initial partners include members of the WEFE Nexus team, plus additional interested parties:

- USAid/Jordan WGA, Amman
- Turkish Water Institute, Istanbul
- Lebanese Red Cross, Beirut

- Human Right 2 Water, Switzerland
- UNICEF, Middle East and North Africa
- Blue Peace Program representative from INWRDAM
- The University of Jordan, Amman
- IHE-Delph Institute
- Mercy Corps
- SDC Regional Offices

Roadmap with key milestones



The project will start in small steps, justifying the value of the ecosystem in projects, analysing existing policy for inclusion of the WEFE Nexus and its coordination across sectors. Once we have some example projects, the next step is to share the learnings in a regional workshop and encourage ministers to adopt a more collaborative WEFE Nexus policy.

Potential outcomes of the implementation of the idea

Collaboration between different ministries to encourage cross-sectoral project thinking that gives priority to the WEFE Nexus rather than individual resources. Specifically:

- There is a value given to ecosystems in all new projects
- Water, Energy and Food projects and investments must consider the best way to optimise all three resources together, and not in isolation, and should include the added value of ecosystems
- There is collaboration between ministries and authorities to optimise the whole WEFE Nexus, and not only their individual responsibilities, with policy incentives to make this happen

It is expected that a holistic WEFE Nexus approach will assist in the acceleration of all the SDGs, and in particular those that support greater welfare, health, and a healthy environment.

WEFE Expert Group

Contacts

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