



RESOURCE

Working with the Water-Energy-Food-Ecosystems (WEFE) Nexus

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Description / Abstract

This policy note provides a summary and perspectives of the Water-Energy-Food-Ecosystems (WEFE) Nexus for climate-resilient sustainable development. It show-cases the strong inter-relationship between water resources, energy generation, food production and freshwater ecosystems and the links between the WEFE nexus and integrated water resources management (IWRM).

The WEFE nexus emphasises using a systems approach to give equal consideration to all four sectors and accelerate sustainable, equitable and resilient socio-economic development for all. Recommendations to successfully implement the WEFE nexus are, including management instruments and tools to guide decisions, actions and finance for investment.

1. There is a strong inter-relationship between water resources, energy generation, food production and freshwater ecosystems. Understanding the key interactions, potential synergies and trade-offs, between these is important for addressing growing societal demands in a situation of accelerating climate change, growing biodiversity loss and damaging pollution.
2. Improving policy coherence and planning across water, energy and food production, as well as freshwater ecosystems, is vital to accelerate sustainable, resilient and equitable socioeconomic development.
3. Effective and sustainable implementation of Water-Energy-Food-Ecosystems approaches involves taking a systems approach to assess the potential efficiencies, synergies or trade-offs that exist within specific inter-connected contexts – including considerations of climate change impacts and the integrity of all the ecosystems that provide the required goods and services.

4. Expert knowledge and tools to support countries with such an approach are available through the UNEP-DHI Centre and the UNEP Copenhagen Climate Centre. The two centres can provide support to identify and quantify key interactions and evaluate various cost-benefit scenarios taking ecosystem impacts into account. The use of such tools must be balanced with qualitative decisions linked to broader social, political and environmental considerations.

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