June 4, 2025

#EU GREEN WEEK

THE WATER-ENERGY-FOOD NEXUS: BUILDING RESILIENCE TO GLOBAL CHALLENGES

Partner Event

WATER-FOOD-ENERGY SECURITY NEXUS APPROACH

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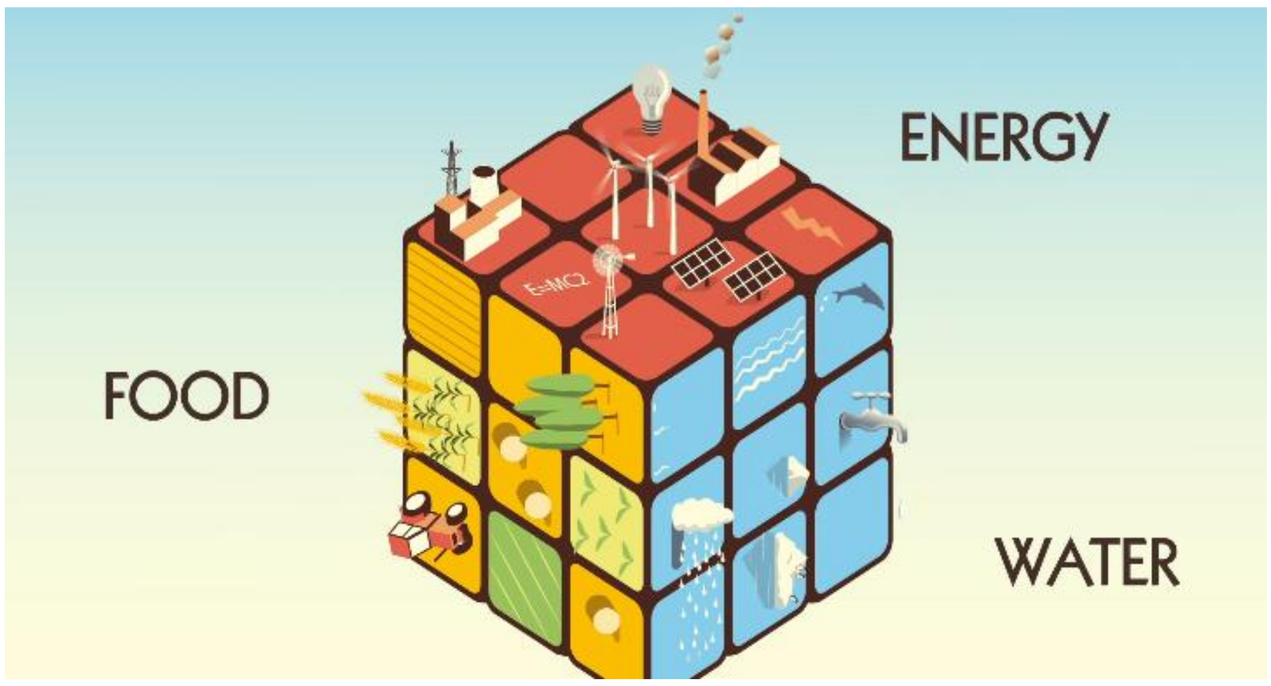
The Water-Food-Energy (WEF) Nexus is a framework that highlights the interconnected nature of water, food, and energy systems. These three resources are essential for human survival and economic development, yet they face increasing pressure due to climate change, population growth, and resource scarcity. Ensuring their sustainable use is critical for global security and environmental stability. Water is a fundamental resource for both food production and energy generation. Agriculture, which consumes nearly 70% of global freshwater, depends on water for irrigation, while energy production, particularly hydropower, relies heavily on water availability. Similarly, energy is essential for pumping, treating, and distributing water, as well as for processing and transporting food. The interdependency of these sectors means that a shortage in one can have cascading effects on the others. In regions like Southern Africa, the depletion of water sources, such as the Zambezi catchment, has resulted in energy shortages and rising food production costs. This demonstrates the urgent need for an integrated approach to resource management. By adopting sustainable policies and innovative technologies, the WEF



Problem statement: Depletion of resources as a result from climate change, urbanization, population's growth etc.

Significance of study: WEF Nexus is crucial for promoting sustainability, enhancing resource security, and addressing global challenges such as climate change, population growth, resource scarcity and accelerating implementation of sustainable development goals.

Objectives: The Water-Food-Energy (WEF) Nexus aims to promote sustainable resource management by recognizing the interconnections between water, food, and energy systems.

Challenges: lack of data to assist in policy and framework alignment, more concentration is still on water.

Methodology: Quantitative research using scenario modelling and case studies

Conclusion

Shifting paradigms: Restructuring partnerships, no longer working in silo and efficient use of resources. Promote collaboration, coordination and co-implementation of integrated plans, thinking beyond water sector and aligning of Government approaches, such as interactive policy making

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