

Session A2

A robust definition of the Nexus:

LEARNING FROM RESOURCE NEXUS AND WATER- ENERGY-FOOD-ECOSYSTEM NEXUS APPLICATIONS

09.04.2025 | 12:50 - 14:20 (CET)

Session DNC 2025



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DNC 2025: The Future of Resources – Resources for the Future
A2/A4/C7/C8: WEF & Resource Nexus: Advancing concept and application
Venue: Plenary Hall, German Museum of Hygiene Dresden (DMHD), Dresden

A robust definition of the Nexus: Learning from Resource Nexus and Water-Energy-Food-Ecosystem Nexus applications.

09.04.2025 | 12:50 - 14:20 (CET)

Venue: Plenary Hall, German Museum of Hygiene Dresden (DMHD), Lingnerplatz 1, 01069 Dresden

Introduction:

The Water-Energy-Food-Ecosystem (WEFE) Nexus has gained significant attention as a critical framework to address the complex interdependencies among these vital resources. Since the 2011 Bonn Conference, several definitions of the Nexus have been proposed, yet there is no universally accepted definition. This lack of consensus creates challenges for its consistent application across disciplines and sectors. A robust and practical definition is essential to enhance its relevance and utility for funders, policymakers, academia, and practitioners.

This session aims to contribute to the development of a comprehensive and actionable definition of the Nexus by leveraging insights from case studies and practical applications of the WEFE Nexus and Resource Nexus. Participants are encouraged to use their experiences to refine the understanding of the WEFE Nexus and Resource Nexus, proposing definitions that are grounded in real-world contexts.

Objectives:

This session will:

1. Provide a platform for sharing case studies and lessons learned from WEFE Nexus and Resource Nexus applications in various regions and sectors.
2. Facilitate discussions on the theoretical foundations and operational challenges of defining the Nexus.
3. Encourage participants to propose robust definitions of the Nexus that address the needs of funders, policymakers, academia, and other stakeholders.
4. Identify knowledge gaps and future directions to improve the applicability and impact of the Nexus framework.

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Time	Session
12:50	Welcome by the session chairs
12:55	<p>Panel discussion moderated by Antonella Autino, Programme Coordinator, PRIMA</p> <ul style="list-style-type: none"> • Dr. Giulio Pattanaro, European Research Executive Agency, Brussels, Belgium • Dr. Maria Vracholi, Department of Production and Resource Economics, Technical University of Munich, Germany • Prof. Dr. Ali Rhouma, PRIMA • Prof. Dr. Floor Brouwer, United Nations University – Institute for Integrated Management of Material Fluxes and of Resources • Prof. Dr. Daniel Karthe, United Nations University – Institute for Integrated Management of Material Fluxes and of Resources • Mr. Zeeshan Tahir Virk, MSc, Doctoral Researcher, University of Oulu, Finland
13:30	Questions and discussion
13:40	<p>SureNexus Project: An innovative methodology for technology selection utilizing Artificial Intelligence within the WEFE Nexus framework</p> <p>Prof. Dr. Jordi Morato, UNESCO Chair on Sustainability, Universitat Politècnica de Catalunya · Barcelona Tech</p>
13:48	<p>WEFE nexus analysis for climate change adaptation: The EcoFuture approach for the Jordan Valley</p> <p>Prof. Dr. Nikolaos Nikolaidis, Technical University of Crete, Chania, Greece</p>
13:56	<p>A Decision-Analytic Framework for Water-Energy-Food-Ecosystem Management in the Nile Basin</p> <p>Dr. Veronica Piuri, Politecnico di Milano</p>
14:05	Questions and Discussion
14:10	<p>The WEFE and Resource Nexus Community Survey – Key observations and main findings</p> <p>Prof. Dr. Ali Rhouma, PRIMA Prof. Dr. Floor Brouwer & Prof. Dr. Daniel Karthe, United Nations University – Institute for Integrated Management of Material Fluxes and of Resources</p>
14:15	<p>Concluding remarks and looking forward</p> <p>Prof. Dr. Floor Brouwer, United Nations University – Institute for Integrated Management of Material Fluxes and of Resources and Prof. Dr. Ali Rhouma, PRIMA Foundation</p>