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Towards a Resource Nexus Agenda

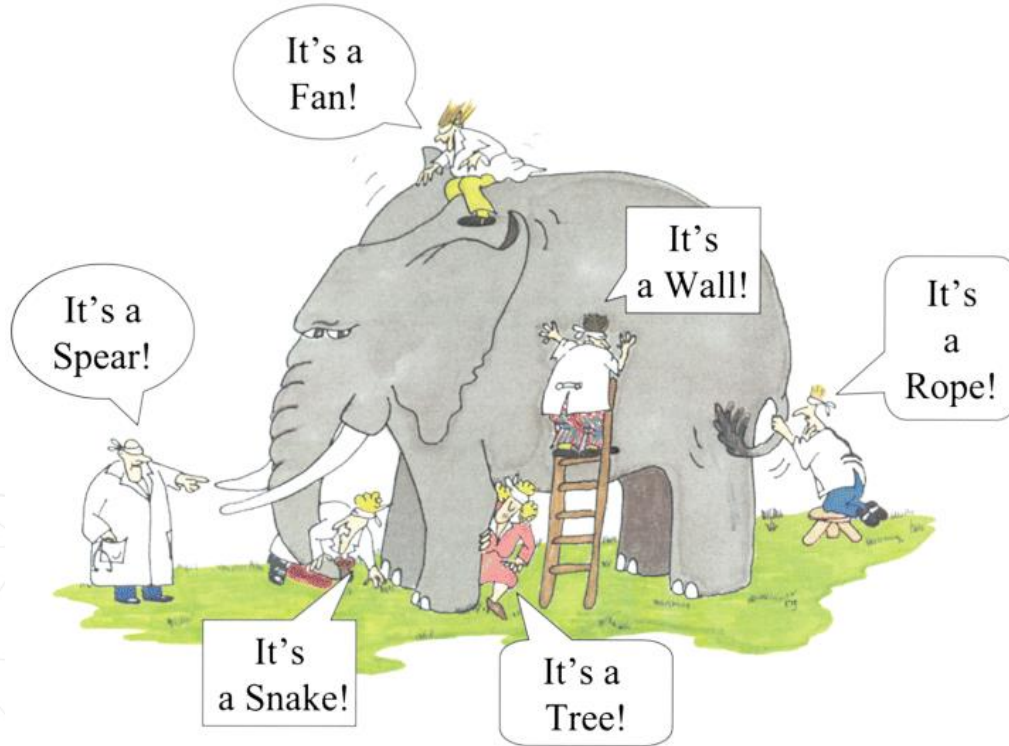
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Advancing a Nexus Approach to the Sustainable
Management of Environmental Resources



Construct Validity Matters!



Cronbach/Meehl (1955):

“to make clear

- what **interpretation** is proposed,
- how adequately the writer believes, this interpretation is **substantiated**,
- what **evidence and reasoning** lead him to this belief.”

<https://www.searchenginewatch.com/2011/02/20/market-researchers-and-online-video-blind-men-and-the-elephant/>



Construct Validity for the Resource Nexus

- (1) **measurement** of the nexus
(meaning, measurement / **data**, variance not included)
- (2) **theories** and potential determining factors
(i.e., moderators and mediators): nomological network
- (3) **design** decisive for reaching reliability and generalizability

(Cronbach/Meehl 1955; Schwab 1980; Edwards 2003; Scandura/Williams 2000)



Consensus vs. Stretching

A **certain degree of consensus** on the definition and the measurement of the focal constructs and/or their dimensions is a prerequisite for effective research and the advancement of knowledge

(Bisbe, J./Batista-Foguet, J.-M./Chenhall, R. 2007)

“the more we have resorted to **conceptual stretching**, or conceptual straining, i.e., to vague, amorphous conceptualizations ... and would produce indefiniteness and elusiveness”

(Sartori, G. 1970)



Perspectives of a Nexus Approach



<https://flores.unu.edu/en/events/archive/other-event/international-dialogue-on-working-at-the-science-policy-interface.html#overview>



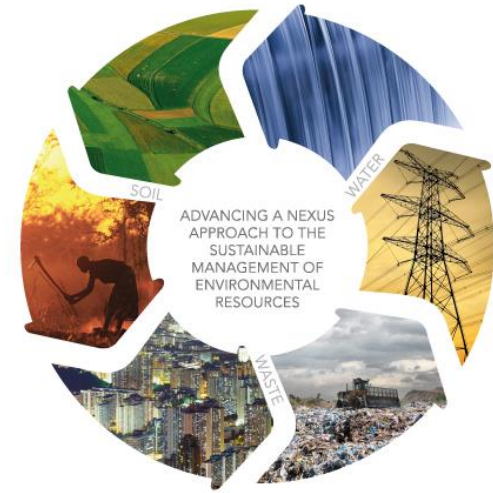
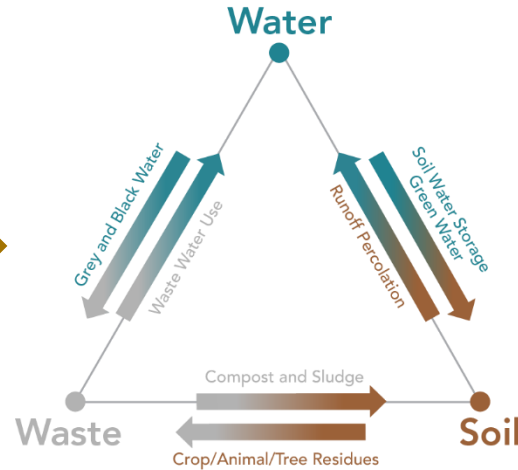
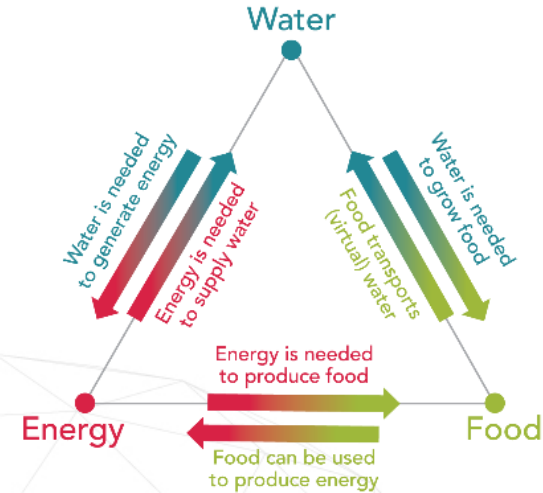
Nexus Approach at UNU-FLORES

“The Nexus Approach to environmental resources’ management examines the **interrelatedness** and **interdependencies** of **environmental resources** and their transitions and fluxes across spatial scales and between compartments.

Instead of just looking at individual components, the functioning, productivity, and management of a **complex system** is taken into consideration.”



Perspectives on the Nexus



Water-Energy-Food Nexus

Water-Soil-Waste Nexus

Resource Nexus



Challenges Identified at UNU-FLORES

- What makes the Nexus Approach **different**?
- Is there **one** Nexus Approach **or many**?
- How is the Nexus Approach connected to **transformation research**?
- How can the Nexus Approach be **communicated** to policy-makers
- Complexity is increased by **temporal** (daily, monthly, yearly, seasonal etc.) and **spatial effects** (from global scale to small scale): How do they interrelate to each other?
- How can **collaboration** between experts from different fields be achieved?
- How can the Nexus Approach be kept **dynamic**?



How to move forward

- going beyond case studies, by using **context-sensitive approaches** (e.g., governance models for types of nexus problems / contexts)
- going beyond the call for inter- and transdisciplinarity, by **intelligent designs of inter- and transdisciplinarity approaches** depending on context (e.g., defining the degree and form of participation)
- moving forward **socio-economic relevance** of the Nexus Approach
- demonstrating **applicability on larger scale**
- following a co-participatory **approach** to the studies / implementation
- **merging Nexus communities** and finding commonalities with other programmes initiatives (i.e. Green Deal)



Five perspectives

Resource perspective

different elements of a resource nexus
(e.g., water, soil, waste, energy)

Stakeholder perspective

discourse of different actors and audiences

Sustainability perspective

economic, ecological and social dimension in decision-making, with both trade-offs and synergies across sectors
spatial and temporal dimension, i.e. values depend on regions and time horizons

Evaluation perspective

costs, risks, unintended consequences
benefits, opportunities – action vs. non-action

Governance perspective

policy visions, policy cycles, policy instruments,
policy interventions



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Quarterly newsletter: bit.ly/nexnews