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Bridging Policy and Practice in WEF+ Nexus Projects in Europe: Towards More Effective Impact Indicators

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



Introduction

- Urbanization, population growth and environmental degradation demand integrated solutions
- **WEF Nexus** → initially focused on water, energy and food → evolved into **WEF+ Nexus** (includes climate, land use, ecosystems, biodiversity, health, soil, minerals,...)
- WEF+ Nexus isn't just about theory - it's about action:
 - *shift from Nexus thinking to Nexus doing*
 - *from research to real-world impact*
- **WEF+ Nexus projects (NPs)** → aim to break siloed approaches to create sustainable and systemic solutions and to support broader development goals by:
 - implementing integrated solutions
 - aligning environmental, economic and social goals
 - supporting SDGs and resilience to global risks (climate change, inequality, resource scarcity)
- **Challenge: Even when projects are well-designed, their real-world impact often falls short** → need for:
 - translating WEF+ NPs into tangible policy and governance outcomes
 - integrating research findings into decision-making processes
 - strategic frameworks that promote cross-sectoral implementation

Goals

Based on a survey of more than 50 European Nexus experts (EU COST Action CA20138), we identified **key factors influencing the „real-world impact” of WEF+ NPs**, including their current status, impact dimensions and indicators, and existing challenges and opportunities (recommendations for increasing the impact of WEF+ NPs).

Survey themes & structure (28 questions):

- A. Current status and impact of WEF+ NPs
- B. Key impact aspects and indicators
- C. Challenges and opportunities (recommendations) for enhancing impact



Although the respondents are mainly from Europe, the findings speak to broader global dynamics, especially in the Global South.

Table 1 Likert scale values, meanings, and example of survey questions.

Example of survey questions	Likert scale values and meaning				
	1	2	3	4	5
Rate the necessity / importance of WEF+ NPs					
Assess the most important aspects of an impactful WEF+ NP	Not important at all	Not important	Moderately important	Important	Very important
Assess the extent of coverage of individual Nexus dimensions by WEF+ NPs	Very weakly covered	Weakly covered	Moderately covered	Strongly covered	Very strongly covered
Assess the importance of the barriers preventing WEF+ NPs from having an impact	Very minor barrier	Minor barrier	Moderate barrier	Major barrier	Very major barrier
Assess the extent to which the WEF+ NPs address issues related to the SDGs	To a very small extent	To a small extent	To a moderate extent	To a large extent	To a very large extent

I. Need/importance of WEF+ Nexus initiatives and projects

I.1. How important are the following outputs, outcomes, and impacts for disseminating the overall scope and impact of WEF + Nexus initiatives/projects? * multiple choice grid based on Likert scale (1 – not important at all, 2 – not important, 3 – moderately important, 4 – important, 5 –very important)

- Output - appropriate presentation and interpretation of the WEF+ Nexus concept (e.g., reports, publications, forums, conferences, social media)
- Output - data from multiple sources (biophysical assessment, i.e., modelling, simulation, other approaches to quantify Nexus elements) and data sharing
- Output - socioeconomic indicators related to Nexus (e.g., societal/community benefits; culture, heritage and tradition benefits)
- Output - common Nexus frameworks and methodologies
- Outcome - inter- and transdisciplinary teams of strong experts and good communicators
- Outcome - policy analysis at different levels (local and international policy, SDGs, Green Deal)
- Outcome - linkage to Sustainable Development Goals
- Impact - policy changes
- Impact - new innovative transdisciplinary approaches towards sustainability challenges (e.g., co-action, co-design and co-creation) by different stakeholders

II.3. How significant are the barriers that prevent WEF+ Nexus initiatives and projects from having an impact?

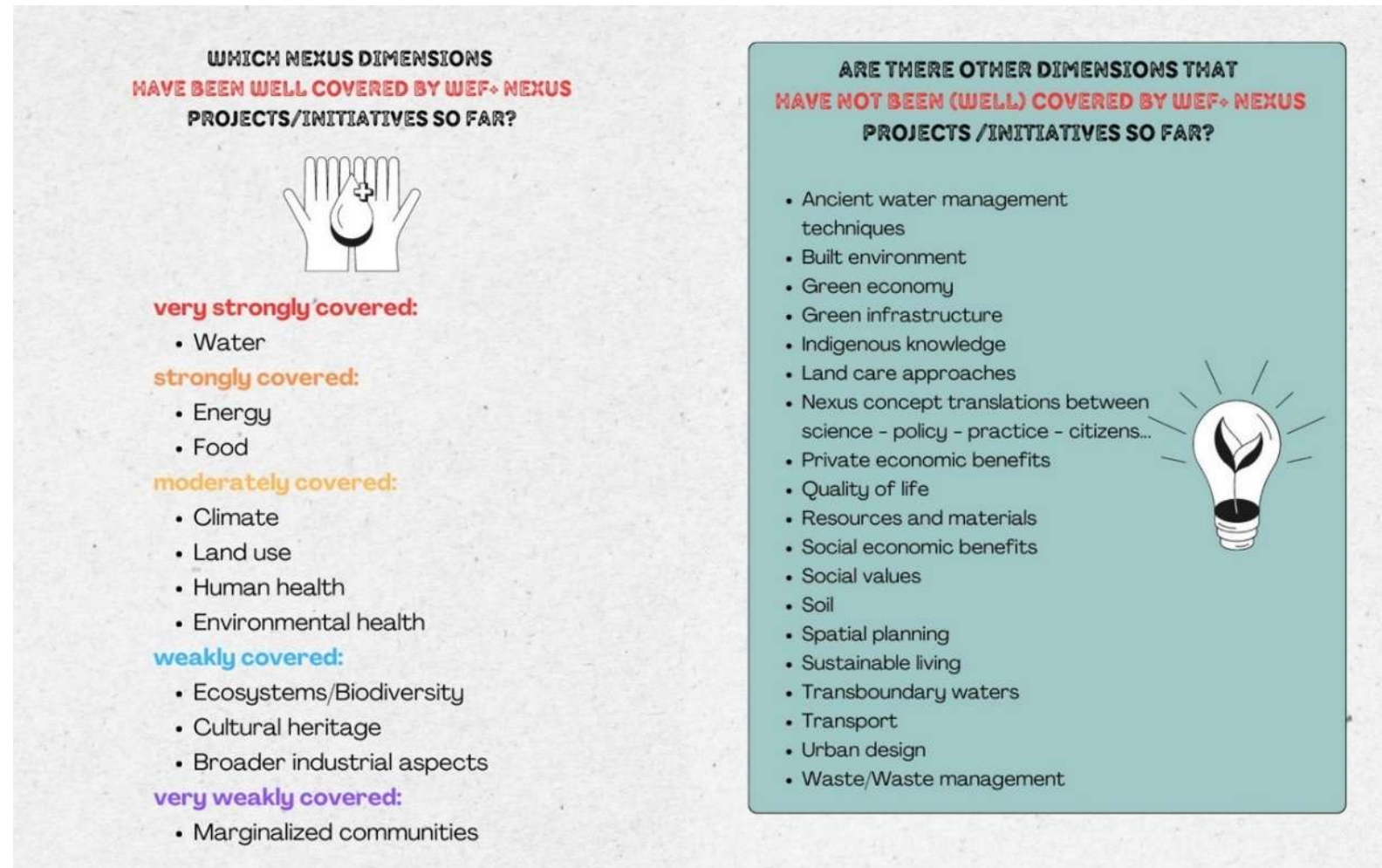
* multiple choice grid based on Likert scale (1 - very minor barrier, 2 - minor barrier, 3 - moderate barrier, 4 - major barrier, 5 - very major barrier)

- Scarce data from various sources/data collection
- Lack of representation from various stakeholders
- Lack of cross-sector partners
- Lack of policy implementation of Nexus solutions
- Lack of systemic thinking/Silo thinking
- Academic hierarchy
- Resistance to change, especially with political opinions
- Lack of a common framework/common understanding of Nexus
- Inertia in policy making
- Miscommunication between different dimensions
- Lack of meaningful interaction between stakeholders and Nexus network developers
- Lack of biophysical assessment in the Nexus projects
- Lack of global socioeconomic indicators
- (Multi)cultural differences
- The pace of adoption of new technologies
- Lack of adequate representation of NEXUS / lack of understanding of NEXUS concept
- Lack of adequate data integration

Results

A. Current status and impact of WEF+ NPs

Fig. 1 Key points extracted from the survey responses (N = 51), highlighting the coverage of WEF+ Nexus dimensions. The analysis identifies both well-covered and underrepresented areas within the WEF+ NPs.



Results

B. Key impact aspects and indicators

Indicator Type	Description
SDG and local context indicators	Measures impact using adapted SDG indicators tailored to specific local contexts.
Economic and adoption rate indicators	Evaluates economic performance, adoption rate of Nexus practices, and their integration into sectoral policies.
Multidimensional and quality indicators	Assesses water quality, energy consumption, food production, ecosystem impact, and overall environmental quality.
Surface and groundwater indicators	Monitors the quality and availability of surface and groundwater for various uses, including drinking and agriculture.
Energy and resource efficiency	Tracks reductions in energy and resource use, with a focus on energy efficiency.
Resource use ratios and green energy proportion	Measures the ratio of resource consumption relative to the availability of natural resources and monitors the proportion of green energy in total energy production.
Project-related metrics	Tracks the number of new partnerships established through Memoranda of Understanding (MoUs) and the number of project deliverables produced.
Training, workshops, and guidelines	Analyses the number and feedback of training sessions and workshops conducted, tracks the number of policy makers actively participating, and monitors the development of guidelines and successful policies emerging from NPs.
Population involvement and social responsibility	Evaluates public engagement and social responsibility in resource use and sustainability.
Perception, satisfaction, and awareness	Assesses public perception, satisfaction levels, and awareness of Nexus impact.
Overall Nexus integration index	Creates an index to measure the overall integration of WEF+ Nexus components/practices.

Table 2 Indicators for measuring the impact of WEF+ NPs derived from survey responses (N = 51). The table presents impact indicators suggested by participants, organized into broader thematic categories (indicator types) for clarity. Both the categories and accompanying descriptions were developed through qualitative coding of open-ended responses, in which individual answers were grouped based on conceptual similarity.

Results

C. Challenges and opportunities (recommendations) for enhancing impact

Improvement area	Suggested actions
Data-driven research	➤ Enhance data analytics to understand WEF+ Nexus interdependencies and drive mission-oriented research for actionable outcomes.
Stakeholder collaboration and co-creation	➤ Foster co-creation and interdisciplinary collaboration with diverse stakeholders across sectors to better align research, policy, and practice.
Youth and community engagement	➤ Encourage active participation of youth and local communities to initiate innovative approaches and ensure inclusivity.
Long-term strategies	<div>➤ Integrate long-term sustainability plans in projects to ensure enduring impacts and secure inclusivity.</div> <div>➤ Consider the afterlife of WEF+ NPs, focusing on securing ongoing funding, partnerships and resources to sustain progress and innovation over time.</div>
International cooperation and education	➤ Expand Nexus-focused education and international collaboration to build global capacities and share best Nexus practices.
Policy integration	➤ Engage with policy makers to integrate NPs within existing political and environmental frameworks, and develop comprehensive policies to support cross-sector integration.

Table 3 Key recommendations for enhancing the impact of WEF+ NPs. This table summarizes practical steps from survey responses (N = 51) to enhance the future WEF+ NPs, emphasizing efficient approaches and sustainable outcomes.

Invitation for co-development

We invite your input on:

- Refining proposed impact indicators
- Identifying strategies to sustain impact

Your perspectives are vital to shaping meaningful, lasting outcomes.

If we truly want to realize the transformative potential of WEF+ Nexus projects, we need to commit to better coordination, evaluation and collaboration.

It's time to move decisively from thinking to doing – together!

Invitation for co-development

**Please complete the questionnaire by the end
of this session or day.**

**Drop it in the marked box at the registration
desk.**

**Your input is essential – turn research into
impact.**