

# The Nexus Governance Guidebook

## Developed by



## Tested in

5 case studies

## Thematic Area

WEFE Nexus, Policy, Informed  
decision making



## Challenges

The Water-Energy-Food-Ecosystems (WEFE) domains are a tightly **interlinked nexus**, where changes in one domain impact the others. However, current policy frameworks often operate in silos and do not consider all stakeholder perspectives, needs and knowledge; incoherent strategies and a **lack of coordination** across fragmented institutions fail to reflect the nexus interdependencies. This shortcoming undermines the efficient and equitable management of WEFE resources, which is necessary to **de-escalate vulnerabilities** to systematic risks associated with intensifying resource demands coupled to ecological degradation, water scarcity, large-scale pollution and climate change induced disasters, amongst other challenges. Poorly integrated governance of the WEFE nexus has direct consequences across all spheres of society:

- **Society** – Heightened water scarcity and pollution leads to public health risks around food security and drinking water supplies. In such contexts, tensions among stakeholders may exacerbate, eroding social cohesion, with disputes over access and priorities becoming entrenched, making collaborative solutions harder to reach during crises.
- **Ecosystems** – Unsustainable water withdrawals degrade ecosystems and biodiversity, which underpin essential services and benefits such as clean water and climate regulation.
- **Economy** – Sub-optimal water allocation among WEFE sectors lead to economic losses in industries reliant on stable water access and conflicts when there is uncertainty if there may disruptions in critical supply chains.

## The Nexus Governance Guidebook



### How it works

The Guidebook codifies the NEXOGENESIS approach, which is a practical framework for facilitating stakeholder-driven policy co-creation in WEFE nexus resource management. This framework presents a comprehensive structured methodology to map, assess, and manage governance and policy synergies and trade-offs within the WEFE nexus. The framework can be applied in multilayered political and administrative contexts, as demonstrated by its testing in the five case studies with different institutional contexts.

The Guidebook includes:

- **A step-by-step outline and instructions of the methods and tools** applied within the NEXOGENESIS framework to map and assess nexus governance challenges, and develop strategies for improved nexus governance. For example, constructing system dynamic models, developing governance roadmaps, developing a stakeholder engagement plan, using the NEPAT (Nexus Policy Assessment Tool), etc.
- **Best practices** for implementing the methodologies used in the NEXOGENESIS approach
- **Lessons learned** from case studies on applying the methodologies in their local context (including mild adaptations necessary and navigating contextual challenges)



### Technology & Methodology

The Guidebook was produced by reviewing the initial co-creation framework for nexus governance that was developed in NEXOGENESIS and the NEXOGENESIS consortium's co-creation plan (which outlined the mechanisms for interdisciplinary exchange) and collating insights from its comparative implementation in different case studies. Lessons learned from these implementations were integrated to refine and strengthen the overall framework, as it is presented now in the Guidebook. Insights were collated from surveys conducted at workshops which explored stakeholders' expectations of, experience and satisfaction with the co-creation process. They were also gathered from discussions at consortium co-creation meetings and General Assemblies, which were forums to share experiences and ideas and engage in adaptive management to meet evolving challenges.



## **Users**

Local and regional governments (e.g., municipalities), national-level ministries (water, environment, agriculture, energy, development planning) water management organisations (e.g., river basin management authorities), civil society organisations, international development agencies, researchers, academia, consultants in sustainable development, and even private sector entities in water, energy and food industries.



## **Key benefits**



### **Environmental impact:**

Improved conservation of biodiversity and ecosystem services by reducing overexploitation and pollution of water resources. This supports long-term ecological resilience which can buffer against negative impacts of climate change. It also preserves nature for future generations to enjoy.



### **Economic benefits:**

Improving the allocation and multiple use of scarce natural resources and reducing interconnected nexus risks (e.g., water-related risks to food or energy production), supports sustainable economic development.



### **Social benefits:**

Involving stakeholders in decision-making fosters the development of inclusive and equitable policies. This leads to increased public trust, reduced nexus conflicts (improved diplomacy) and improved capacity of communities to manage evolving nexus resource challenges enhanced social cohesion.



## Scalability & replication potential

Because the NEXOGENESIS framework applies a coherent approach across the data, modelling, and policy components and it was tested across case studies with diverse socio-ecological contexts, it has demonstrated to be robust and adaptable. Therefore, the Guidebook supports its out-scaling to other river basins and broader geographic regions.



🔗 Access the Nexus Governance Guidebook directly here:  
<https://nexogenesis.eu/the-nexogenesis-solutions/>

📖 Explore the full project: <https://nexogenesis.eu/>

📱 Stay tuned for updates and results on our social media channels!



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## The NEXOGENESIS consortium

