



Concept Note: Dresden Nexus Conference 2022

Overview

Changes in demographics, urbanisation, climate, and their human causes have resulted in significant impacts and pressures on the availability and quality of environmental resources. Current approaches to environmental resources management are often based on 'siloes thinking' whereby the interconnectedness between resource systems is ignored. Against this background, the Dresden Nexus Conference (DNC) is dedicated to advancing the Resource Nexus to enable the sustainability of environmental resources. Co-organised by United Nations University – Institute for Integrated Management of Material Fluxes and of Resources (UNU-FLORES), the Leibniz Institute of Ecological Urban and Regional Development (IOER), and the Technische Universität Dresden (TU Dresden), the conference provides a platform for inter- and transdisciplinary exchange on the Resource Nexus. By bringing together actors from a diverse range of disciplines and sectors, DNC fosters dialogue on how nexus thinking contributes to achieving the UN Sustainable Development Goals (SDGs) and a deep transformation towards Strong Sustainability in its ecological, economic, and social dimensions.

Nexus Topics at its Core

The biennial conference focuses on complex and dynamic interrelationships between sectors and resources, to increase understanding of conflicts, synergies, and trade-offs between them. Furthering Resource Nexus research and practices requires working in-depth with all relevant sciences as well as on the science-policy interface, implementation, monitoring, and real-world cases in an inter- and transdisciplinary perspective. This implies, for instance, modelling at various spatio-temporal scales, dealing with interdependencies between ecosystem functions and services, understanding the role of institutions and culture in decision making, or developing strategies for different governance contexts.

The conference discusses a broad diversity of key Resource Nexus topics. These are brought together with a view to cross-cutting challenges linked to climate change, biodiversity, agri-food, urban and regional development, circularity, as well as organisational development. The conference tracks support discussions with a focus on:

- *Theory*: Advancing the concept of the Resource Nexus and its relevance for policy and practice
- *Technologies*: Addressing the conception, design, and societal embeddedness of technical resource solutions and infrastructures
- *Governance*: Understanding (collective) problem-solving strategies, policy designs, and implementation processes
- *Health and wellbeing*: Examining interlinkages between resource systems, human health, and liveability
- *Society and justice*: Exploring disparities and inequalities in resource access and distribution
- *Data*: Identifying Resource Nexus data needs and contributing to data integration and interpretation
- *Sustainability Assessment*: Embedding the economic, ecological, and social dimensions of sustainability in their temporal and spatial contexts
- emergent perspectives (open track)

Focus on Biodiversity

While the conference generally discusses all of the above topics related to the Resource Nexus, each conference edition foregrounds one overarching theme that is given special attention. DNC2022 focuses on “Biodiversity – Stewardship for Vital Resources”, following immediately the celebration of the International Day for Biological Diversity (22 May 2022).

Biodiversity forms one of the cross-cutting challenges for the Resource Nexus. The UN Convention on Biological Diversity (CBD) already recognises the intrinsic value of biodiversity and its ecological, social, economic, cultural, and aesthetic value. CBD also calls for the conservation of biodiversity, the sustainable use of its various components, as well as the fair and equitable sharing of the benefits arising from the utilisation of underlying genetic resources. However, the IPBES Global Assessment Report on Biodiversity and Ecosystem Services states that out of eight million animal and plant species worldwide, around one million are threatened with extinction and such biodiversity loss represents the most significant crossing of planetary boundaries beyond a safe operating space ([Rockström et al. 2009](#)).

To reverse the trend of biodiversity loss by 2030, an effective post-2020 agenda learning from the progress made by the Aichi Targets of the UN Decade on Biodiversity, but also from the obvious shortcomings and challenges ahead, is pivotal. According to the World Wildlife Fund For Nature (WWF), while greater species protection and more protected areas are hugely important, they will not in themselves reverse current trends: it is also vital that we change patterns of land use and/or food production and consumption. The European Commission intends to suggest such legally binding targets by the end of 2021, not least to also further contribute to the achievement of the SDGs.

For science, it is therefore vital to conceive of socio-ecological systems in a variety of ways in order to map their reciprocity, dynamics, and complexities. In doing so, we can identify and establish leverage points for instruments, strategies, and landscape planning as well as values and worldviews that help to safeguard biodiversity and ecosystems at different scales and to create impact. Against the backdrop of global urbanisation and the cumulative effects of biodiversity degradation and climate change, there is an

urgent need to analyse and evaluate diverse individual and collective human-nature relationships in urban areas and to regulate these in the context of nature-based solutions and combined grey-green infrastructure. Examples of such positive trends are urban agriculture and the promotion of more balanced human-food relationships. These aims are also reflected by the UN Decade on Ecosystem Restoration (2021–2030), which was designed to spotlight the need for significantly increased global cooperation to restore degraded and destroyed biodiversity and ecosystems.

Join Us and Be Part of the Nexus Discourse

Since the inception of the DNC in 2015, the international conference provides a platform to discuss current research and initiatives involving the Resource Nexus. It is a meeting point for academics, UN agencies, decision- and policymakers from UN Member States, businesses, and civil society from the local to global scale to discuss current research and initiatives applying the Resource Nexus approach. DNC2022 further welcomes particularly the ‘epistemic community’ working on biodiversity, including both scientific experts and practitioners. By addressing these audiences, DNC2022 (23–25 May) will enable the sharing of experiences and foster new thinking to advance inter- and transdisciplinary approaches to the Resource Nexus.