



Water, Energy, Food and Ecosystems NEXUS: Gaps and opportunities to increase the policy impact of nexus research in Europe

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Water, energy, food, and ecosystems (WEFE) are key resources that support human well-being and, as such, are security concerns for countries across the world. Awareness about the interconnection and interdependence between resource securities, the so-called “WEFE nexus”, is not new but the combination of intensifying resource demands, growing global uncertainties related to the ongoing climate crisis, and the geopolitical atmosphere, have intensified the interlinkages and amplified the cost of inaction and mismanagement of existing policies.

Promoting the development of sound and effective policies to deal with the growing security challenge and its spillovers on other sectoral domains, require actions across different fronts. A fundamental one is to strengthen the nexus research agenda in such a way that sufficient evidence is available and well communicated to inform the development of a more coherent and aligned policy framework. This requires developing analytical frameworks that can help to unravel the complex interlinkages across sectors. But as important is to research how greater policy coherence can be achieved in practice and how to create the appropriate enabling environment i.e. nexus governance.

Scientific evidence on WEFE in Europe is substantial, and there is a wealth of scientific evidence probing the high interconnectedness that exists between natural resources, and how the sustained pressures we are exerting over them are generating cascading impacts and trade-offs. Despite the level of nexus science, there is barely any information available on the level of impact nexus research projects have had in shaping the policy agenda at the national or European level.

Our research builds on the efforts developed within the COST ACTION NEXUSNET (CA 20138) to map the nexus research projects funded by key European funding schemes (FP7, H2020, HORIZON, JPI Urban Europe, PRIMA) in the course of the last decade, and explore the type of nexus challenges addressed, main policy recommendations provided and the level of implementation of the proposed measures. Preliminary results show that between 2013 and 2022

more than 70 research projects and innovation actions have been funded, with over 222 case studies and demonstrators across European countries. A survey targeting case studies showcased that the level of implementation and adoption of proposed nexus policy measures was below 20%. These preliminary findings showcase that while the research effort in Europe on nexus has been substantive, the policy impact of such research remains unclear, and efforts are required to understand barriers and enablers to increase the relevance and policy impact of nexus research.