Sustainability in the Water-Energy-Food Nexus

Guest Editors:

Anik Bhaduri (Global Water System Project)
Claudia Ringler (International Food Policy Research Institute)
Rabi Mohtar (Texas A&M University)
Waltina Scheumann (German Development Institute, DIE)
Ines Dombrowsky (DIE)
Selected contributions from the International Conference „Sustainability in the Water-Energy-Food Nexus. Synergies and Tradeoffs: Governance and Tools at various Scales“, this Special Issue addresses the sustainability of the W-E-F Nexus as a key research-for-action initiative. It constitute three overarching conference themes:

1. Environment and wellbeing;
2. Implementation of W-E-F nexus at different scales;
3. Governance of the nexus
This Webinar authors will address:

1. How can the WEF nexus be implemented across scales?
2. How can governance and management practices reduce trade-offs and exploit synergies?

Among other Nexus challenges and opportunities
Special Issue: Sustainability in the water–energy–food nexus

Sustainability in the water–energy–food nexus
Anik Bhaduri, Claudia Ringler, Ines Dombrowski, Rabi Mohtar & Waltina Scheumann

The impact of water users’ associations on the productivity of irrigated agriculture in Pakistani Punjab
Dawit K. Mekonnen, Hira Channa & Claudia Ringler

Water–energy–food (WEF) Nexus Tool 2.0: guiding integrative resource planning and decision-making
Bassel T. Daher & Rabi H. Mohtar

Bioenergy, food security and poverty reduction: trade-offs and synergies along the water–energy–food security nexus
Alisher Mirzabaev, Dawit Guta, Jann Goedecke, Varun Gaur, Jan Börner, Detlef Virchow, Manfred Denich & Joachim von Braun

Application of a water–energy–food nexus framework for the Duero river basin in Spain
Beatriz Mayor, Elena López-Gunn, Fermín I. Villarrooy & Esperanza Montero

Reuse of oil and gas produced water in south-eastern New Mexico: resource assessment, treatment processes, and policy
Enid J. Sullivan Graham, Anne C. Jakle & F. David Martin
special issue: sustainability in the water-energy-food nexus

Water–energy–food nexus in a transboundary context: the Euphrates–Tigris river basin as a case study Aysegül Kibaroglu & Sezin Iba Gürsoy

Water–food–energy nexus in Chile: the challenges due to global change in different regional contexts Francisco J. Meza, Sebastian Vicuna, Jorge Gironás, David Poblete, Francisco Suárez & Melanie Oertel

How would the Rogun Dam affect water and energy scarcity in Central Asia? Maksud Bekchanov, Claudia Ringler, Anik Bhaduri & Marc Jeuland

Governance of transitions towards sustainable development – the water–energy–food nexus in Cyprus Johannes Halbe, Claudia Pahl-Wostl, Manfred A. Lange & Christina Velonis

The water–energy–food (WEF) security nexus: the policy perspective of Bangladesh Animesh K. Gain, Carlo Giupponi & David Benson

Where is the power? Transnational networks, authority and the dispute over the Xayaburi Dam on the Lower Mekong Mainstream Oliver Hensengerth

Application of payments for hydrological ecosystem services to solve problems of fit and interplay in integrated water resources management Jochen Hack
Case Studies to define interconnectivity of W-E-F systems.

Shared Platforms with national, int’l data components to serve the WEF community.

Document Data Needs for multi-scale, transdisciplinary research.

Indicators to monitor governance in management - the role and effectiveness of practices.

50-year scenarios for w-e-f outlooks, in support of planning for impact of climate change, trade-offs, externalities, ecosystem services, food waste.

Pilot projects: test & implement solutions at local/regional-scales.

Common Accounting Framework for ecosystem services, in support of holistic regional resource mgt approaches.