



The Water-Energy-Food Nexus in Kazakhstan: Trends and Analyses

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The concept of the water, energy and food nexus is extremely relevant to Kazakhstan as the country faces population growth, economic progress and environmental challenges such as water scarcity, desertification, and climate change. Furthermore, poor sectoral coordination and institutional fragmentation have caused an unsustainable resource use and threaten the long-term sustainability of water, energy and food security in Kazakhstan. Specifically, low tariffs in the water and electricity sectors have led to under-investment in water and energy efficiency measures, leading to extensive water losses, soil salinity, as well as degradation of agricultural land. Using the nexus approach, this study aims to investigate and map the linkages between water resources, energy production and food security in Kazakhstan, with an emphasis on the current coordination framework. This will enable the identification of critical interdependency issues in the management of these resources. The results will provide a better understanding of the current interconnectedness of the sectors, and support the coordination of decision-making at various levels of governance and research of land, water and energy to meet sustainable development goals.