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Priorities and challenges for a sustainable management of water resources in Kazakhstan

Marat Karatayev\textsuperscript{a*}, Zhanna Kapsalyamova\textsuperscript{b}, Lazat Spankulova\textsuperscript{c}, Aizhan Skakova\textsuperscript{d}, Galiya Movkebayeva\textsuperscript{d}, Adilet Kongyrbay\textsuperscript{d}

\textsuperscript{a*} Energy Technologies Research Institute, Innovation Park, University of Nottingham, Nottingham, NG7 2TU, United Kingdom; Marat.Karatayev@nottingham.ac.uk, m.karataev@gmail.com

\textsuperscript{b} School of Humanities and Social Sciences, Nazarbayev University, 000001, Kabanbay Batyr Ave, Astana, Kazakhstan; zhanna.kapsalyamova@nu.edu.kz

\textsuperscript{c} Finance & Economics Research Laboratory, Narxoz University, 050035, Zhandosov St, Almaty, Kazakhstan; lazat.spankulova@narxoz.kz

\textsuperscript{d} Institute for Environmental Studies, UNESCO Department on Sustainable development, Al-Farabi Kazakh National University, 050040, 71 Al-Farabi Avenue, Almaty, Kazakhstan; E-mail: Aizhan.Skakova@kaznu.kz

\textsuperscript{e} Center for Eurasian Studies, Al-Farabi Kazakh National University, 050040, 71 Al-Farabi Avenue, Almaty, Kazakhstan; E-mail: Galiya.Movkebayeva@kaznu.kz; kongyrbay@kaznu.kz

\textbf{Abstract}

The water availability in Kazakhstan is 37000 m\textsuperscript{3} per one km\textsuperscript{2} and 3650 m\textsuperscript{3} per capita a year, an amount that is lower than the world average (around 6000 m\textsuperscript{3}) (Knoema, 2016). It is expected that water availability falls to 2300 m\textsuperscript{3} per capita in a year by 2030 (FAO, 2016a). Water pollution is a further problem for exploiting available water resources. In fact, 50-70\% of surface water resources in Kazakhstan have been rated “polluted” and “highly polluted” in terms of ecological status (ICSD, 2016). Apart from that, water use efficiency remains very low. The average efficiency of canal water delivery systems is only 15-20\% compared to 70-90\% in most developed countries (FAO, 2016b). A number of institutional and policy measures have been implemented to enhance the sustainability of water resource use and water security; however, the country is still facing a number of problems of water use in a sustainable manner. This study provides stakeholders’ assessment of the critical factors that affect the sustainable management of water resources in Kazakhstan. The study rests on the results from the interviews that are further examined using the SWOC approach (Strengths, Weaknesses, Opportunities, and Challenges) and the Analytic Hierarchy Process (AHP) technique. The study demonstrates and prioritizes 32 critical SWOC factors relevant to the sustainable management of water resources in Kazakhstan. The study also determines four key stakeholder groups with
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