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Assessing access to drinking water and sanitation and willingness to pay for the piped water services in rural Kazakhstan: A social survey study

Kamshat Tussupova (1,2) and Linus Zhang (1)

(1) Department of Water Resources Engineering, Lund University, Box 118, SE-221 00 Lund, Sweden (kamshat.tussupova@tvrl.lth.se, linus.zhang@tvrl.lth.se), (2) Center for Middle Eastern Studies, Lund University, Box 221, SE-221 00 Lund, Sweden (kamshat.tussupova@tvrl.lth.se)

The UN Sustainable development goals declare to provide water, sanitation and hygiene for all and to involve local water users and local best practices for water provision. Its agenda is full coverage with access to safe drinking water and safe management of excreta disposal. These goals do not discriminate between the different water sources and sanitation services unless the access is safe and the excreta is disposed. The aim of the current study is to use a survey to assess local villagers' access to drinking water and sanitation services and willingness to pay for the piped water services. The survey is based on the interviews with the local water users adopting Contingent Valuation method. The results show that there is a big discrepancy between official statistics on access to drinking water and sanitation services and actual obtained from the interviews leading to misdirect the efforts made by various agencies in terms of water supply programs. People use different water sources and sanitation services, which are not monitored and regulated. The most common water source, used by more than half of the investigated households, is groundwater through private boreholes for drinking water supply, and more than 80% of people use private pit latrines outside the house for sanitation purposes. The results also show that local villagers use water from different sources and at least three quarters of the respondents are willing to get connected and use water from the piped water supply. The general defined determinants for Willingness to pay (WTP) should be carefully considered among the different water users. Perceived water quality is a variable that is relevant for all water users. Other variables such as perceived reliability and the time-spent to collect water from the source, in-household treatment of water, and income perception are also significant but differently correlated with the WTP among different water users. Although, piped water is considered to be a safe system if properly managed, still some water users are reluctant to pay for the system and are satisfied with their current water supply and sanitation services. In this case, a proper management for the drinking water and wastewater and safe management of the excreta disposal should be supplied. The integration of local water users is crucially important, since they are the beneficiaries of any water intervention program. This will show the actual need for any drinking water intervention and create a better understanding of their willingness to use and pay for the water supply systems. The integration of people in this process will enhance the participatory approach in general and should also increase the responsibility from their side and increase the hygiene behavior, which are both sustainability components. The findings are of particular importance for policy-makers, water managers, engineers, and public health specialists.