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Status and use of water supply and sewerage systems in the Northern Development Region of the Republic of Moldova

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Abstract: Water is an important resource for evolution and development of the economy of the North Development Region of the Republic of Moldova. From its availability and facilities to supply depend over 909 thousands inhabitants or 25% of the country population. The most important water resources are surface water that are represented mainly by the Dniester and the Prut rivers situated at the borders of the pilot region as well as groundwater. Internal rivers are characterized by low flow and do not represent significant resources. Surface water resources lead to decrease for the last decades due to different factors including reservoirs impact as well as climate change. Development of water supply and especially water sewerage system is an important factor in order to assure people and industries with water and qualitative life. In this regard, plus to evaluation of water resources dynamics, the aim of the present research is to identify the regional and local assessment of the state and use of public water supply and sanitation systems in the mentioned region for the last decade (2010-2020). Thus, total volume of abstracted water for public water supply systems was, on average, 18.8 mil. m^3. For the study period, the total volume of water delivered to the population increased by 1.8 times (4.1 mil. m^3), including in rural areas by 4.5 times (by 2.6 mil. m^3), and in urban areas, by only 35 % (1.6 mil. m^3). As a result of the expansion of the aqueduct network, ≈½ (48%) of the population of region has access to public water supply systems, including 83% in urban areas and only 31% in rural areas. Despite the rapid expansion of public aqueducts, water consumption per capita is low and is only 71 l/day, including 84 l/day in urban areas and only 53 l/day in rural areas. Population access to the public sewerage systems is only 19%, including 55% in the urban areas and only 0.3% – in the rural areas. Slow expansion of the public sewerage systems is caused by higher costs compared to water supply systems, and most local public authorities do not consider them as a priority.

Key words: North Development Region of Moldova, water resources, water use, water supply and sewerage systems, regional and local analysis, climate changes.

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