

Academic adviser's report
on the PhD thesis
Assessment of Safe Drinking Water Provision in Rural Areas of Karaganda Region: A Case Study from Bukhar-Zhyrau District
by Alua Omarova

A. Omarova entered a PhD program in specialty 6D110200 Public Health (scientific and pedagogical direction) in 2016. The thesis research *Assessment of Safe Drinking Water Provision in Rural Areas of Karaganda Region: A Case Study from Bukhar-Zhyrau District* corresponds to the specialty code, is of scientific interest and has a practical focus.

The author's research topic is very relevant, since the problem of supplying the population with quality drinking water has not been solved in many regions of the world, especially in countries with low economic potential. This problem is exacerbated by the unfavorable global reduction of water resources associated with their intense pollution, as well as an increase in water consumption for industrial, agricultural and domestic purposes.

In Kazakhstan, this problem is especially topical due to limited resources of fresh water and a decrease in the volume of water inflow from transboundary rivers. Solving the problems of public water supply is associated with the social and economic challenges of the Republic. Today, centralized water supply, the water of which is subject to regular quality control, covers about 90% of the urban and less than 50% of the rural population. The rest of people use water of dubious quality, which may adversely affect their health. Therefore, public health authorities should play one of the key roles in a comprehensive solution to this problem.

During the research, the author has studied the provision and satisfaction of the rural population with drinking water, as well as the health consequences of existing water supply problems. The thesis examines the access of rural households to safe drinking water, spatial and temporal reliability of water supply sources, unmet needs and demand for tap water in villages through the lens of public health.

The thesis defender attempted to propose possible environmentally sustainable and cost-effective ways to improve access to safe drinking water in rural areas and public health indicators.

The entire amount of work on the collection of primary material, questionnaires, processing, statistical analysis and systematization of the data, formulation of scholarlike apparatus and design of the thesis was carried out personally by A. Omarova.

This work possesses an internal logical relationship. The conclusions correspond to the aim, objectives and findings to be defended. The results, conclusions and main findings of the thesis are reflected in 13 scientific papers written by the author: some of them in four publications recommended by the Committee for Control in Education and Science along with two articles (IF = 2.145) and one thesis (IF = 2.782) in journals with non-zero impact factor according to Clarivate Analytics Journal Citation Reports. The author obtained two

certificates on entering information into the state register of rights for copyright items (No. 2151 of March 6, 2019 and No. 6038 of October 24, 2019).

During the training in doctoral studies, A. Omarova proved herself to be an excellent specialist, as well as proactive, creative and responsible person. The academic and research work envisaged by the doctoral programme is performed by A. Omarova in full.

In general, we can conclude that the thesis paper *Assessment of Safe Drinking Water Provision in Rural Areas of Karaganda Region: A Case Study from Bukhar-Zhyrau District* by A. Omarova is a completed research, which presents the results of problem solving. This thesis is recommended for public defence.

The report is for submission to the Dissertation Defence Board.

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