



«Approved»

Al-Farabi Kazakh National University

Member of the Board – Vice Rector for the
Scientific and innovative activities

Zh. Aitzhanova

_____ 2024 y.



**UNIVERSITY POLICY TO ENSURE THE AVAILABILITY AND
RATIONAL USE OF WATER RESOURCES AND SANITATION**

АЛМАТЫ, 2024



НЕКОММЕРЧЕСКОЕ АКЦИОНЕРНОЕ ОБЩЕСТВО
КАЗАХСКИЙ НАЦИОНАЛЬНЫЙ УНИВЕРСИТЕТ
ИМЕНИ АЛЬ-ФАРАБИ

UNIVERSITY POLICY TO ENSURE THE AVAILABILITY AND RATIONAL USE OF WATER RESOURCES AND SANITATION

6 CLEAN WATER
AND SANITATION





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CLEAN WATER AND SANITATION



POLICY OF FARABI UNIVERSITY ON ENSURING THE AVAILABILITY AND RATIONAL USE OF WATER RESOURCES AND SANITATION FOR ALL: INTEGRATED WATER RESOURCES MANAGEMENT AND PRINCIPLES OF SUSTAINABLE DEVELOPMENT

The policy of Farabi University on ensuring the availability and rational use of water resources and sanitation for all is based on the concept of integrated water resources management (IWRM), which aims at sustainable and effective use of water resources in the interests of society and the environment. IWRM implies a systematic approach to water resources management, including the participation of all stakeholders, assessing social, economic, and environmental aspects, as well as the use of innovative technologies. This approach allows achieving a balance between water needs and its conservation, which is especially important in the context of growing water resource scarcity and deteriorating quality.





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CLEAN WATER AND SANITATION

SUSTAINABLE DEVELOPMENT AS THE BASIS FOR WATER RESOURCES MANAGEMENT AT FARABI UNIVERSITY

Sustainable development as a principle lies at the heart of all the university's actions in the field of water resources management. This concept encompasses three key aspects: economic, social, and environmental. Farabi University aims to create a system that ensures not only the availability of water for current needs but also its preservation for future generations. Sustainable development requires the integration of environmental, economic, and social factors into the decision-making process, allowing for a more comprehensive understanding of the impact on the environment and quality of life.



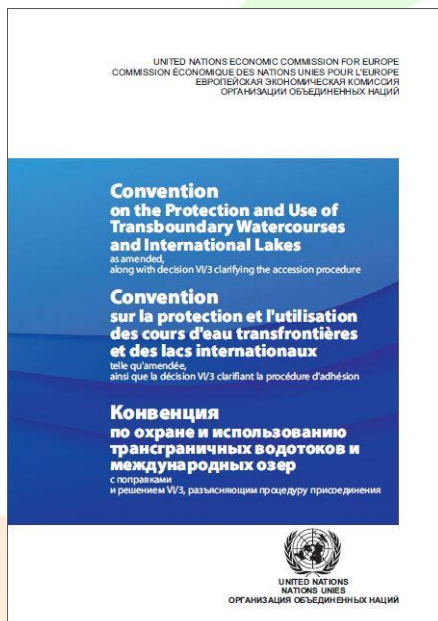


6 CLEAN WATER AND SANITATION

FARABI UNIVERSITY'S POLICY IN CONDITIONS OF WATER RESOURCE SCARCITY: STRIVING FOR SUSTAINABLE MANAGEMENT

Taking into account the above, Farabi university's policy is aimed at creating a sustainable and safe environment for students, staff, and the local population. It includes a set of measures in line with the legislation of Kazakhstan and international standards. In the context of growing water resource scarcity and declining quality, the university recognizes its responsibility for the rational use of water resources and the implementation of effective management methods.

In its activities, the university is guided by a number of legislative acts and standards:



Әділет

Об утверждении положений бассейновых инспекций по регулированию использования и охране водных ресурсов Комитета по водным ресурсам Министерства окружающей среды и водных ресурсов Республики Казахстан

Утвештильді сүлу

Приказ Министерства окружающей среды и водных ресурсов Республики Казахстан от 27 января 2014 года № 18-О. Зарегистрирован в Министерстве юстиции Республики Казахстан 6 февраля 2014 года № 9134. Утратил силу приказом Министра сельского хозяйства Республики Казахстан от 15 октября 2014 года № 19-С/30

Сноска. Приказ Министра сельского хозяйства РК от 15.10.2014 № 19-С/30 (вводится в действие по истечении десяти календарных дней после дня его первого официального опубликования).

В соответствии с подпунктом 2) пункта 3 статьи 3 и подпунктом 6) пункта 1 статьи 29 Закона Республики Казахстан «О нормативных правовых актах», а также с подпунктом 5) пункта 1 постановления Правительства Республики Казахстан от 27 декабря 2013 года № 1413 «О некоторых вопросах Министерства окружающей среды и водных ресурсов Республики Казахстан» **ПРИКАЗЫВАЮ:**

1. Утвердить прилагаемые: Алау-Сырдарынская бассейновая инспекция по регулированию использования и охране водных ресурсов Комитета по водным ресурсам Министерства окружающей среды и водных ресурсов Республики Казахстан;
- 2) Положение республиканского государственного учреждения «Балхаш-Алаульская бассейновая инспекция по регулированию использования и охране водных ресурсов Комитета по водным ресурсам Министерства окружающей среды и водных ресурсов Республики Казахстан»;
- 3) Положение республиканского государственного учреждения «Ертісқия бассейновая инспекция по регулированию использования и охране водных ресурсов Комитета по водным ресурсам Министерства окружающей среды и водных ресурсов Республики Казахстан»;
- 4) Положение республиканского государственного учреждения «Белгісіз бассейновая инспекция по регулированию использования и охране водных ресурсов Комитета по водным ресурсам Министерства окружающей среды и водных ресурсов Республики Казахстан»;
- 5) Положение республиканского государственного учреждения «



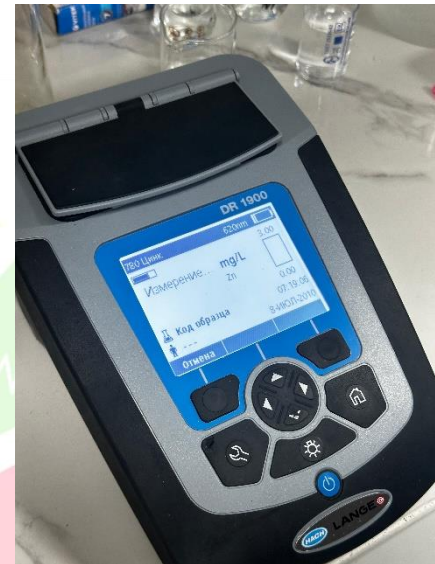
6 CLEAN WATER AND SANITATION

MEASURES WITHIN THE IMPLEMENTATION OF THE POLICY ON ENSURING THE AVAILABILITY AND RATIONAL USE OF WATER RESOURCES AND SANITATION

Regular water quality monitoring includes systematic checks of microbiological, chemical, and physical parameters of the water used at the university. Water from various sources undergoes thorough testing for the presence of pathogenic microorganisms and toxic chemicals



To enhance the effectiveness of water quality control, the latest technologies and modern devices are employed to monitor changes in water quality. This makes the monitoring process more accurate and timely, allowing for the prompt identification of potential contaminants and the implementation of necessary measures



To advance scientific research, the university also conducts monitoring of rivers and lakes in various regions, allowing for the assessment of water resource conditions and the identification of potential environmental issues





6 CLEAN WATER AND SANITATION

CAREFUL ATTITUDE TOWARD WATER AND REDUCTION OF CONSUMPTION: MEASURES AND INITIATIVES OF FARABI UNIVERSITY

The university has implemented water-saving systems, including aeration attachments on faucets, which significantly reduce the volume of water used without compromising functionality



Automatic water shut-off devices have also been installed, which activate in the absence of activity, further helping to prevent excessive water loss



Regular leak testing is an important part of the university's water management strategy. These tests help identify problems early, which helps to correct them early and prevent water loss

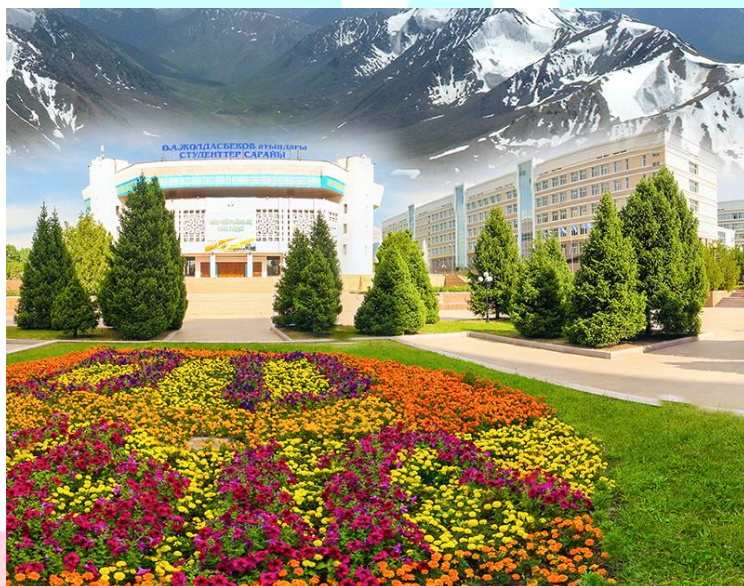




6 CLEAN WATER AND SANITATION

БЕРЕЖНОЕ ОТНОШЕНИЕ К ВОДЕ И СНИЖЕНИЕ ПОТРЕБЛЕНИЯ: МЕРЫ И ИНИЦИАТИВЫ КАЗНУ ИМЕНИ АЛЬ-ФАРАБИ

Дополнительно университет поддерживает инициативы по повторному использованию воды, например, для полива растений и других нужд. КазНУ придерживается принципов зеленой экономики, активно внедряя аэрозольные дождевальные системы, которые позволяют эффективно распределять воду и минимизировать её расход. Это способствует эффективному использованию ресурсов и снижению общей нагрузки на систему водоснабжения, что, в свою очередь, помогает университету выполнить свои экологические обязательства и продвигать принципы устойчивого развития.





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ЧИСТАЯ ВОДА И САНИТАРИЯ

FORMING A CULTURE OF CAREFUL ATTITUDE TOWARDS WATER AND SUPPORTING INITIATIVES FOR REUSE OF RESOURCES AT THE FARABI UNIVERSITY

An important task of Farabi university is to form a culture of careful attitude to water among students and staff. For this purpose, leadership lectures are held, which cover not only existing problems related to water consumption, but also ways of saving, rational use and protection of water resources. These lectures are held with the participation of experts from international organizations on water resources protection and are aimed at raising awareness and involvement of all members of the university community in the processes of saving water resources.





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CLEAN WATER AND SANITATION

The policy of Farabi University in the field of ensuring the availability and rational use of water resources and sanitation for all is closely related to the main areas of hydrology. The specialty of hydrology provides the necessary knowledge and methodologies for the successful implementation of this policy. The university actively trains hydrologists who play a significant role in ensuring the sustainable use and protection of water resources both at the national and international levels. The training of students in this area is aimed at forming deep knowledge of natural and anthropogenic processes affecting water resources and developing practical solutions for their rational use. Farabi university, as part of its policy to ensure sustainable water resources management, actively integrates the results of research in the field of hydrology into the practical activities of the university. These studies not only contribute to improving the quality of water supply and water resources management at the university level, but also help to form the foundations of state policy in the field of water resources. Graduates of the Hydrology program further make a significant contribution to the development and implementation of projects for the protection of aquatic ecosystems, rational use of water resources and adaptation to climate change.





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CLEAN WATER AND SANITATION

EDUCATIONAL PROGRAM "WATER DIPLOMACY"

In 2023, the specialty "Water Diplomacy" was opened at the Al-Farabi Kazakh National University. This educational program is the first and only one in the Republic of Kazakhstan, including Central Asia. The program will train competitive personnel in the field of water diplomacy. Their work will be aimed at maintaining cooperation and peaceful relations between countries regarding the management and use of water resources, in the event of disputes, conflicts or potential causes of tension between states. The program will allow for a deeper understanding of water resources and environmental issues, mastering the methods and techniques of negotiations in the field of water use, improving the experience of developing international cooperation and participation in specific projects. Students can attend lectures by leading world experts and qualified specialists, take a semester of study and internship at the University of Oregon, USA. The purpose of the educational program: Training international civil servants, employees of international organizations and diplomatic representatives in the field of water diplomacy to maintain cooperation and peaceful relations between states on issues of management and use of water resources, as well as to carry out scientific research and implement teaching activities.





6 CLEAN WATER AND SANITATION

EDUCATIONAL PROGRAM "WATER DIPLOMACY"

The program will train competitive specialists in the field of water diplomacy. Their work will be aimed at supporting cooperation in peaceful relations between countries regarding the management and use of water resources in the event of disputes, conflicts or possible causes of tension between states. Water is a strategic resource of the 21st century. In Central Asia, where water resources often become the subject of conflicts, the development of water diplomacy is of particular importance.

This program will help specialists become a key player in preventing water conflicts and promoting sustainable development in the region.

CODE - M085 (Hydrology) Water Diplomacy

Direction - scientific and pedagogical master's degree

Duration - 2 years

The new program is suitable for:

-future diplomats and civil servants

-lawyers and experts in the field of international relations

-to all who want to contribute to global stability and sustainability

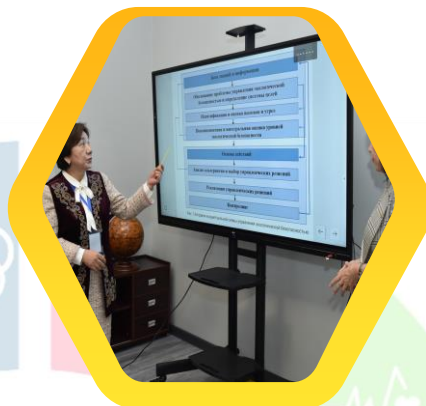


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ENVIRONMENTAL SAFETY LABORATORY

For the rational use of water resources and maintain environmental standards, the Laboratory of Environmental Safety was established at Al-Farabi Kazakh National University. It aims to prevent pollution, protect ecosystems, and raise environmental awareness among staff and students, fostering a responsible attitude toward water resources and supporting sustainable development initiatives.

Objective: to develop scientific and applied aspects of environmental safety management based on a comprehensive study of the ecological state of natural and economic systems in Kazakhstan in the context of sustainable development.



Tasks:

1. To develop the concept of environmental safety management of natural and economic systems of the Republic of Kazakhstan.
2. To conduct research on the identification and identification of existing environmental challenges and threats in Kazakhstan as an information basis for ensuring environmental safety.
3. To develop a classification of all types of challenges and threats of a natural and anthropogenic nature in the Republic of Kazakhstan.
4. To investigate and assess the levels of environmental safety in the natural and economic systems of the Republic of Kazakhstan.
5. To develop a scientifically based comprehensive system of measures to manage the environmental safety of natural and economic systems of Kazakhstan.



6 CLEAN WATER AND SANITATION

ENVIRONMENTAL SAFETY LABORATORY

Focus on Applied Solutions for Environmental Safety

The developed concept of environmental safety includes two components: informational and applied. The informational component creates databases and contains information about the study area, identifying and systematizing environmental challenges and threats, including global (the impact of climate change), regional (the environmental condition of the transboundary Ural River, biodiversity), and local threats (atmospheric pollution, soil degradation). Special attention is given to the hydrosphere, including the assessment of water quality in rivers and reservoirs, which allows monitoring pollution levels, analyzing sources of threats, and proposing measures to improve the state of water bodies. A component-based assessment of the environmental condition (atmospheric, hydrospheric, and lithospheric) is also conducted, along with the creation of an ecological health risk map for the region's population. The applied component ensures the use of collected data to develop management decisions on environmental safety under various environmental scenarios: background, precautionary, extreme, and post-extreme situations. This component includes controlling — a system for managing and monitoring the effectiveness of actions aimed at reducing anthropogenic pressure and protecting water resources. The concept aims to achieve economic, environmental, and social benefits through the rational use of resources and sustainable development, helping preserve and restore water quality in the region.





6 CLEAN WATER AND SANITATION

IMPLEMENTATION PLAN FOR WATER QUALITY AND WATER RESOURCES MANAGEMENT POLICY AT THE FARABI UNIVERSITY



Regular monitoring of water quality

Systematic monitoring of water quality is carried out at the university and in the regions of scientific activity, which allows for the timely detection of deviations and monitoring of the ecological state of water resources.



Education and Awareness Programs

Leadership lectures and courses on sustainable water use are organized, as well as information campaigns aimed at developing a caring attitude towards water among students and staff.



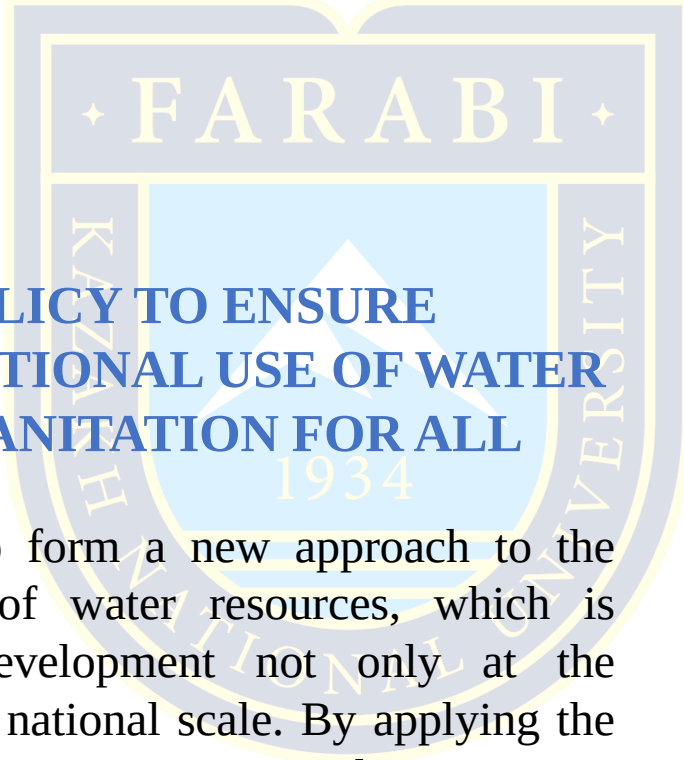
Research and Innovation

The University supports water resources research and student projects on water conservation, including water recycling for plant irrigation.



International cooperation

Farabi University develops partnerships with international organizations to integrate advanced technologies and experience that contribute to more efficient water resources management.



UNIVERSITY POLICY TO ENSURE AVAILABILITY AND RATIONAL USE OF WATER RESOURCES AND SANITATION FOR ALL

The University strives to form a new approach to the protection and rational use of water resources, which is important for sustainable development not only at the University level, but also on a national scale. By applying the latest methods of water management and promoting environmentally responsible practices, Farabi University makes a significant contribution to the protection of aquatic ecosystems and their preservation for future generations.



**SUSTAINABLE
DEVELOPMENT**

GOALS

