

NATIONAL PLAN FOR INTEGRATED WATER RESOURCES MANAGEMENT AND WATER EFFICIENCY IN KAZAKHSTAN

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Dear colleagues,

For the past two decades, society has become more concerned of the condition of global water resources due to the growth in their consumption and pollution scale. The growth in the world population, development of irrigation and drainage worldwide, and intensive industrialization have led to use of more and more quantities of scarce fresh water resource. In most countries in the world, water supply and consumption reached critical level.

Large-scale and uncontrolled pollution of rivers and other water bodies in Central Asia and Kazakhstan is progressing. The approach to water resources is still consumer-based, their value as a vital universal resource, on which the well-being of all the living depends, has not been realized by everybody, and, as a result, rational use and conservation of water resources has not become an object of close attention at all levels of management hierarchy.

There are quite a lot of approaches to solving water problems in the world. Depending on natural-climatic conditions, adopted system of economic management, traditions and other factors, each country solves the issues of water resources use management and conservation in its own way. However, owing to joint global experience, methods or approaches to manage water resources have started to radically change and to come to a more or less universal platform, to common principles.

Recently, more and more scientists and specialists consider it necessary to universally improve the management of balance between resource and consumption, as well as the management of water quality through Integrated Water Resources Management (IWRM).

This idea found further promotion at the World Summit on Sustainable Development in Johannesburg in 2002, where water was the key point on the agenda. There it was demonstrated once againb that water of good quality is of an imperishable importance for sustainable development, and that the concept and principles of IWRM are one of the main prerequisites for sustainable development.

So, the principal directive of the Johannesburg Summit for each country was to prepare by 2005 a National Plan for Integrated Water Resources Management and Water Conservation. President N.A. Nazarbayev of Kazakhstan signed this directive, and thus Kazakhstan assumed responsibilities for improving water resources management through adopting IWRM principles and practices.

To implement this directive, Kazakhstan began developing a Plan for IWRM and Water Conservation. In this work, we are sponsored by the Norwegian Government and UNDP Kazakhstan. The project is to be followed by the period of consultations on a wide range of issues through various discussions and meetings. On this basis, a Final National Plan for IWRM and Water Conservation in Kazakhstan is being drawn up.

One of the main objectives of the Concept for IWRM is to represent fundamentals and tasks of the Plan, mainly for non-water sector professionals who are involved in water management through their own activities and responsibilities. Especially, this document argues introducing IWRM and improving water use efficiency in Kazakhstan for decision-makers, who will support the Plan.

The National Plan determines what steps and actions are necessary at the national level to support resource management at river basin level, where practical management is carried out. The implementation of the Plan should provide guaranteed quantity of fresh water for use and healthy environment for living.

The National Plan for IWRM and Water Conservation is the first stage in organizing IWRM and improving water use efficiency in Kazakhstan. It relies on other plans, strategies and programs being implemented or to be implemented in the near future.

The main objectives of the Plan for IWRM are brought in complete correspondence with the principal direction of water policy to reach a long-term objective declared by the Government in the "Strategy of Kazakhstan – 2030" – to conserve and rationally use water resources for health and welfare of citizens of the country.

In the strategy President N.A. Nazarbayev of Kazakhstan marked out the following top priorities to achieve the goal:

- rational and careful use and conservation of water resources;
- providing population with drinking water of guaranteed quality;
- meeting requirements for further development of economic sectors, regions and systems.

While developing a short-term strategy, the Kazakh Government approved a "Concept for developing the water sector and water policy of Kazakhstan by 2010". The concept was drawn up with due account for the recent requirements of the Environmental Law. It sets provisions reflecting a set

of present views on achieving and retaining economically optimal and secure level of water use, evaluates development trends, determines priority directions.

With a view to sustainable provision of population with drinking water in a required quantity and guaranteed quality, the Kazakh Government confirmed a Sectoral Program for Drinking Water. The Program covers 3,700 rural settlements with about 4 million inhabitants, and more than 3 million of urban population. Positive changes in providing population with drinking water will ensure satisfactory social and sanitary conditions that would positively influence public health in the country.

Taking into account the mentioned strategies and governmental programs, the main tasks of the national water policy implementation are to develop and implement programs aimed at:

- rational use and conservation of water resources in the context of large river basins;
- water supply;
- managing level and salt regimes of inland and marginal water bodies (Lake Balkhash, Aral, Caspian Seas);
- introducing water-conservation technologies, circulation and loop water supply systems, state-of-the-art water measurement and regulation facilities.

When there is an acute water shortage in the country, the only way to solve the problems of providing population and economic system with water is to rationally use and conserve water resources. In this context, water resources management should be improved and developed more quickly than economy so that it would not be an obstacle to economic growth. This is the key principle in developing and implementing the Plan for IWRM.

As the rates of economic and social development in Kazakhstan accelerate, allocation of water requirements as well as water resources management principles and approaches will change. Such changes will also require developing new approaches to water resources use and conservation.

The Plan for IWRM will describe possible ways to timely improve the condition of water resources and strengthen organizational capabilities for effective management of changing water use.

In future water requirements will not be met in full until steps are taken to reduce water losses through improving water conservation and developing effective mechanisms for interrelation in the field of joint water resources use and conservation with neighboring countries, with which we are connected by transboundary watercourses.

The demand for water resources in the country would apparently continue growing in the following directions:

- Industrial development seems to account for the most of economic growth in the near future and require increase in water resources that, in turn, would cause a necessity to improve water resources allocation efficiency and reduce overall water consumption. Water resources management should not be an obstacle to industrial development.
- During the next 10 years, water requirements in domestic subsector would increase due to achieving Millennium Development Goals (MDG) on water supply and sanitation by 2015. The MDGs cover only a half of the population without an adequate access to drinking water and sanitation. Moreover, according to initiatives set out in the President's Speech up to 2030, the construction and reconstruction of water supply systems would be continued during 10 or 15 years. It means that more and more people would be connected to centralized systems, and provided with improved services. Both per capita consumption and population would increase.
- Parallel with growth and development of irrigated farming, a necessity would emerge to reduce the rate of water consumption per unit area. Therefore, rational use and protection of water resources in agriculture should be followed by introducing water-conservation technologies and improving the productivity of irrigated lands.

The above-mentioned issues are an example of problems one might face in water resources management in the near or long-term future. Ways to solve the above-mentioned and other issues of water resources use and conservation should be clearly stipulated in the Plan for IWRM and reinforced in effective water and other environmental laws.

In developing the Plan for IWRM, gradual reduction of water resources in the country through decrease in inflow from the territory of neighboring countries is taken into consideration. That is why the Plan for IWRM should be implemented in two main directions: rational use and conservation of water resources inside the country and establishment of water relations with neighboring countries.

Future transboundary agreements on water resources allocation will not raise the water share of Kazakhstan. However, it is necessary to provide confidence of water users in Kazakhstan in that they could continue their seasonal and annual works.

Multilateral long-term transboundary agreements will be concluded only after a few years, may be, after 10-15 years. To implement the agreements, basin water organizations would need nearly the same time. Therefore, it is necessary to begin capacity building of these organizations from now and focus it on management of all water resources in order to be ready to transboundary agreements for their future implementation as well as to other key fields described above.

Transboundary river water management is very important for Kazakhstan, as nearly a half of total water resources come from neighboring countries, while a considerable part of water resources flow to neighboring countries from Kazakhstan. Water flowing to Kazakhstan is usually of bad quality, since it has already been polluted with industrial, agricultural and urban sewage. In the same way, Kazakhstan continues polluting rivers until they cross the boundaries of other countries. Kazakhstan should be rather worried due to its vulnerable position as downstream owner, as well as about its responsibility as upstream owner.

In the last decade, several attempts were made to develop multilateral agreements on sharing main transboundary rivers, the most of which were managed by international donor organizations.

The main challenge requiring developing a coherent policy in water resources management is to search for optimal balance between irrigation and hydropower, and provide equal conditions for water use over transboundary rivers for the countries in the region. That is why the achievement of the set objective will depend on consecutive approaching of the national legislation to the international legal regulations in water resources management. The creation of a legal framework in this field, which would rely on international experience, should certainly take regional conditions into account. It is necessary to strengthen regional cooperation based on international practices of transboundary river management. The guidelines and legal measures of international conventions and agreements should facilitate positive progress in addressing complex issues of joint water use.

International experience in water relations shows that only based on common legal positions and mutual observance of and respect to interests, it is possible to provide regional stability, solve problems related to joint management and protection of transboundary river water from pollution, and thereby successfully solve food security problems in the region.

From this point of view, interstate water resources use in Central Asia should be based, first of all, on conventions or framework agreements generally used in international practice. These agreements should develop main regional water actions aimed at improving the condition of water sources and related environment protection through implementation of low-cost organizational, institutional, administrative, technical and other preventive measures.

Institutional reforms in the water sector based on integrated water resources management at both national and regional levels should provide balanced solving of socio-economic tasks and problems related to restoring and conserving of water resource potential in river basins. The regulating role of the government in this respect is fundamental, and applying resource-conservation technologies in the industrial, agricultural and other enterprises should provide

effective water use with due account of environmental priorities.