WATER MANAGEMENT PROBLEMS IN THE REGIONS OF THE REPUBLIC OF UZBEKISTAN AND THEIR SOLUTIONS

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There are currently not fully resolved water management problems in the world:

1. Scarcity of fresh drinking water resources;

2. General water shortage.

In the Republic of Uzbekistan, there are also world-scale water management problems, in addition to which there is also a decrease in the water level of the Aral Sea.

The main causes of these problems are:

- The fact that fresh water reserves are very limited in the Aral Sea basin, including the territory of the Republic of Uzbekistan;

- extremely uneven regional distribution and spread of limited fresh water resources:

- The establishment of a single cotton administration in the Aral Sea basin in general, including in Uzbekistan during the former union system;

- the extensive development of agriculture, the fact that the volume of cotton cultivation was carried out at the expense of the development of new lands, that not enough importance was given to increasing the productivity of each occupied hectare of land, that the waters of the Syrdarya and Amudarya were mainly used for irrigation, and as a result, not a single drop of water was poured into the Aral Sea since the end of the 80s. .

Immediate resolution of these water management problems is of great importance in improving the ecological situation in the Aral Sea basin, improving sanitation and ensuring the future of our society.

- The available limited fresh water resources are polluted by various (municipal, industrial, agricultural, animal husbandry and irrigated farming, transport, etc.) wastewater.

There are several ways to solve problems:

1. To ensure the rational use of existing water resources, to prevent wasteful consumption and pollution of water, if it is not possible to permanently solve water management problems in this way;

2. To redistribute existing inter-basin water resources to basins (territories) with low water supply by transferring water resources to neighboring basins with a large amount of water resources and excess water resources;

3. Solving existing water shortages by desalinizing the naturally abundant (sea, lake and underground) brackish and brackish waters.

4. Termination of cotton monopolies in the Aral Sea basin as a whole and including in the territory of Uzbekistan;

5. Accelerating the development of agriculture, that is, increasing the productivity of each cultivated hectare, widely introducing water-saving technologies and irrigation techniques.

6. Organization of nature protection in general, including protection of water resources, at the level of daily demand.

Currently, existing water management problems are being solved in the Aral Sea basin as a whole, including in the territory of Uzbekistan, with the implementation of the above measures to a certain extent.

Before the natural ecological situation was disturbed (1911-1962 years) - the water level in the sea was 53+0.4 m absolute height, the volume of water in it was 1064 cubic km, the area was 66 thousand square km, the amount of dissolved salts in sea water was 10/11 g l . The sea was a waterway and a place of fishing. Ships connected the city of Termiz with Amudarya and Arol railway station. Up to 44,000 tons of rare (whiskered and spotted) fish were caught per year.

5.1 million out of 32.6 million ha of irrigable land in the Arol Basin has been irrigated. For this purpose, 51.5 cubic km of the available water resources (119 cubic km) were spent. In the same situation, the ecological system of the Arol bay was created. Therefore, it is impossible to imagine life on the Aral Sea without this system, and based on the changes in the geological and hydrogeological history of the Aral Sea, it is impossible to conclude that it is possible to live without it.

By 1995, the water level in the Aral Sea was 37 m high, and its volume was 285 cubic meters. km, and the area is 30 thousand square meters. km, and the amount of dissolved salts in the water exceeded 30 g/l. During this period, the level of water supply to the existing irrigated lands in the basin increased sharply, an additional 2.5 mln. , and almost all the water resources of Syrdarya and Amudarya were used, and almost no water came to the sea. As a result, the sea began to dry up, it lost its position as a fishery and a waterway, the ecological balance was disturbed, the climate began to change, the temperature cooled down to 1.5-2.5 degrees in winter, and warmed up to 1.5-2.5 degrees in summer, the period of plant growth (vegetation) was shortened by 10-15 days. etc.

The dry bottom of the Aral Sea has become a place full of salt and dust particles that poison the population, animal and plant life, and the air. It was determined that they spread over a distance of 500 km through the wind. According to various estimates, the Aral Sea contains 10 billion. There is more than 100-130 million tons of such salts in stock every year. up to a ton part of it is blown into the air by the wind.

In general, there is no clear idea about the role of the Aral Sea and other inland water bodies in the natural ecological balance system.

Therefore, the policy of using natural resources, which is not based on the laws of nature and the results of carefully conducted scientific research, of some countries is, to put it mildly, ill-considered.

For example, in order to confirm the extreme complexity of the problem, Professor A.A. Based on Tursunov's research, we present the following points. 2,500 cubic meters per year from the west to the Turan lowland until the ecological balance

in the island basin is disturbed. km humidity, 15 million. tons of dust and other industrial waste came with the air (the air of the Turan region surrounded by the Caucasus, Ural, Pamir, Tianshan and Himalayan mountain ranges was considered relatively clean). 370 cubic meters per year in internal reservoirs. km of water evaporated. It makes up 14 percent of the moisture that comes to the region and is considered an important climate-generating factor. He slightly cooled the air of Kyzylkum and Karakum in summer and warmed it in winter.

Today, the situation has changed radically.

Up to 310,000 tons of solid (salt and dust) aerosols are rising into the air from the dry part of the Aral Sea and the Karabugoz basin. According to many researchers, the reason for this is the ecological changes that have been taking place in Europe and Asia near the Aral Basin in recent years.

These changes affect the interests of many sectors of the national economy and, as a result, create negative consequences along with positive efficiency. If the whole water management system is considered as a single complex and taking into account the possible changes in the existing natural conditions, it is possible to ensure that the negative consequences will be imperceptible if it is designed on the basis of long-term forecasting of the requirements of various sectors of the national economy for the quantity and quality of water. Therefore, it is necessary to organize the management of the water management system based on the establishment of the water management complex (WSM). At the same time, WSW can be considered as a set of activities and facilities that implements the rational use of water and natural resources related to it, which provides an opportunity to optimally satisfy the water demand of all public economic networks with the available water resources.

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