

Issues of agricultural specialization in the Aral sea region

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Abstract. The content of the article is aimed at reducing the economic losses caused by the Aral Sea problem by further improving the specialization of agriculture, based on the potential of the Aral Sea region. At the same time, based on the share of agriculture in GDP, it is aimed at increasing the share of agriculture in economic growth, using the existing conditions wisely. Through the specialization of agriculture, we will be able to overcome the current problems by creating an integrated system that effectively uses the available resources in the country. These insights are based on scientific evidence and statistical observations. The priority of the practical work on the Aral Sea in our country will be to improve the living standards of the population through the efficient use of inefficient land. By building agricultural specialization with modern technologies, we will be able to effectively address important issues in the Aral Sea region. The measures taken in recent years also mean that the Aral Sea issue is one of our priorities at the national level. Keywords: Aral Sea potential, agricultural specialization, Aral problem, economic losses, gross domestic product, economic growth, available resources, a structural complex, current issues, opinions, scientific basis, statistics observations, priorities, living standards of the population, modern technologies, important issues, priority tasks.

1 Introduction

There are four factors that determine a country's economic potential: one of them is land resources. One of our priorities today is to find a systematic solution to the problems along the Aral Sea, using the opportunities available to us. The issue of the Aral Sea region will bring about a wide-ranging change in the life of our country, which will lead to a systematic program of work to find solutions to the problems of agriculture caused by desertification. Based on modern experience, we can increase the share of agriculture in GDP by specializing in agriculture. We can improve the living standards of the population by increasing GDP.

Our country has great potential to fully meet domestic demand and increase exports. In the last three years, all the issues have been resolved to increase the interest in the industry, to put it simply, to enrich the farmer. In order to increase production, it is necessary to fully develop 124,000 hectares of arable land this year. Sh.M.Mirziyoyev adopted the law "On the State Program of Development of the Aral Sea Region for 2017-2021". In accordance with this decision, the aim is to implement a set of measures aimed at improving the environmental and socio-economic situation in the Aral Sea region, living conditions, timely and effective implementation of investment projects to mitigate the effects of the Aral Sea environmental disaster. marked as. Priorities for this State Program have been identified: Through the implementation of complex development programs of the regions of the Republic of Karakalpakstan, 14.6 thousand

new jobs were created, including: in industry - 8.2 thousand, in services - 3.8 thousand, in agriculture - 2.6 thousand. Create. Employ more than 35,000 people in private farms and handicrafts and family businesses. It is planned to provide micro-credits to the population of Moynak, Shumanay, Kanlikul, Takhtakor, Karaozak and Chimbay districts at a rate of no more than 6% per annum. Allocation of subsidies to the initiators of projects in the following areas included in the regional development programs to cover more than the refinancing rate of the Central Bank of the Republic of Uzbekistan:

- production of agricultural products, medicinal plants and plants, industrial products based on the processing of local natural mineral resources, as well as consumer goods;

- Introduction of new technologies of agricultural cultivation, construction of intensive gardens and modern greenhouses on the basis of modern water-saving irrigation technologies, refrigeration facilities, modern livestock, poultry and fisheries, etc. Establishment of dairy, leather and leather processing enterprises.

Establishment of afforestations on an area of 20 thousand hectares in the arid zone of the Aral Sea.

Establishment of seed-breeding base of desert tree species in Kungrad district of the Republic of Karakalpakstan and Yangibazar district of Khorezm region on the basis of the State Committee on Forestry.

By providing loans for livestock, intensive horticulture and viticulture, processing of agricultural and livestock products, the establishment of energy-efficient greenhouses and refrigeration chambers, the purchase of

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modern agricultural machinery and equipment based on renewable energy sources.

Implement a program to adapt to climate change and mitigate its effects on the Aral Sea Basin, funded by the International Development Association.

According to the State Program for the Development of the Aral Sea Region for 2017-2021, we can increase the regional value of the country's GDP through more efficient organization of agriculture with the help of modern technologies. Under the program, we will be able to increase agricultural profits.

The main part: The Aral Sea is the largest solid salt lake in Central Asia. Administratively, more than half of the Aral Sea is located in the southwestern part of Uzbekistan and the northeastern part of Kazakhstan.

Until the 1960s, the Aral Sea area averaged 68.0 thousand km².



Fig. 1.

It was the fourth largest in the world (after the Caspian Sea, the Upper Lake in America, and Lake Victoria in Africa), and the second largest in the Eurasian continent (after the Caspian Sea). The sea stretches from northeast to southwest, is 428 km long and 235 km wide (45° east).

The basin has an area of 690,000 km², a water volume of 1,000 km³ and an average depth of 16.5 m.

From time immemorial, the water level in the Aral Sea has risen and fallen. In the following geological period, the Aral Sea was periodically drained into the Caspian Sea via Sariqamish and Uzboy, the water level was much higher, and several thousand km² of coastline in the south and southeast were flooded.

The morphological structure of the shores of the Aral Sea is very complex. They differ from each other in some features. The northern coast is high, in some places low, with deep bays. The east coast is low; sandy, with many small bays and islands. The southern coast is formed by the Amudarya delta.

The west coast is sparsely cut and consists of the Ustyurt Chink. There were more than 300 islands in the

Aral Sea. 80% of them are in the south-eastern part of the sea.

Due to its location in the desert zone, the sea evaporates 1 m of water from its surface every year. This is more than the water, precipitation and groundwater that rivers brought to the sea in recent times. Therefore, as a result of climate change, the water level of the Aral Sea has changed over the years.

The sea level began to rise in 1785, then fell in 1825, rose again in 1835-50, and fell in 1862. Kokorol became a peninsula in 1880. In 1881 the water level dropped. In 1885, the water level in the Aral Sea began to rise again. By 1899, Kokorol had become a peninsula. In 1919, the sea area was 67,300 km² and the water volume was 1,087 km³. By 1935, the area had increased to 69,670 km² and the water volume had increased to 1,153 km³. The sea level has changed significantly over the last century and a half.



Fig. 2.

The navigation season at sea lasted 7 months. Large ports such as Aralsk and Moynak operated. The Aral Sea area was sparsely populated. The population is mainly engaged in fishing and, in part, livestock, muskrat breeding and vegetable growing. Until the 1990s, fish was fished from the sea. The cities of Aralsk and Moynak and their environs were home to a large number of fishing farms.

Since the water level of the Aral Sea depends on the regime of the Amudarya and Syrdarya rivers, the more water is used for irrigation, the less water there is in the sea. Especially since the 1960s, as a result of the expansion of irrigated areas, the amount of water flowing into the sea from the Amudarya and Syrdarya has decreased from year to year. As a result, the sea level began to fall sharply.

Impact of water level decline in the Aral Sea on its water surface and water capacity. Decreased water level in the Aral Sea also had a significant impact on the values of water balance elements.



Fig. 3.

Between 1911 and 1960, the average sea level was 53.04 km³ (in the Baltic system), with 56 km³ of rivers flowing into the sea and 9.1 km³ of atmospheric precipitation. Consumption, or consumption, was mainly evaporation, averaging 66.1 km³. During this period, there was a negative difference in the water balance: the sea lost 1 km³ per year, and in 1911-60 it lost 50 km³.

Currently, the Aral Sea is divided into 3 parts: the first is a small and shallow northern part (salinity - 8-13 g/l); the second is a relatively large and shallow eastern part (salinity-69-72 g/l); the third is the deepest western part (salinity - 68-69 g / l).

2 Material and method

Ensuring the implementation of the Resolution of the President of the Republic of Uzbekistan "On approval of the Concept of development of forestry in the Republic of Uzbekistan until 2030" dated October 6, 2020 No PP-4850, as well as environmental protection in the country In order to improve the situation, to establish "green cover" in the desert and foothills, on the dried bottom of the Aral Sea and in the Aral Sea region:

- of the planned 560,000 hectares of forest, 375,000 hectares are in the forest fund lands of the Republic of Karakalpakstan and the Aral Sea, 172,000 hectares are in the Aral Sea region in Khorezm, Bukhara and Navoi regions, and 13,000 hectares are in the Aral Sea region. - Establishment of forest resources in other regions in the mountains, valleys and groves.

- one of the most important tasks is to identify and develop a map of the relevant areas for forests to be established in the regions of the country in 2021 within a month.

In the Aral Sea region of the Republic of Karakalpakstan, comprehensive measures are being taken to stabilize the environment and introduce new approaches to solving problems in the field of environmental protection. The Aral Sea Development Fund has been established to develop and sustain programs of measures aimed at improving the ecological and socio-economic situation, living conditions and quality of life of the population in the Aral Sea region. The fund is intended for the specialization of agriculture in the Aral Sea region and is necessary for the further

improvement of the environment in the region. Based on the experience of European countries, localization of agriculture will increase the income from this sector by 3-4 times. At the same time, the cooperation of state and local executive bodies with international organizations in the socio-economic development of the Aral Sea region is not sufficiently ensured in the implementation of environmental reforms in the Aral Sea region.

- The main tasks in improving the ecological situation in the Republic of Karakalpakstan, the development of the Aral Sea region, improving the living standards and creating favorable conditions for them, as well as the organization of the implementation of approved measures and programs are:

- Implement measures to improve the ecological situation in the Aral Sea region, protect the environment, restore biodiversity, preserve flora and fauna, including the development of protected areas;

- - Restoration of ecosystems on the basis of innovative technologies and approaches in the saline lands of the arid part of the Aral Sea, the organization of work to ensure decent life, the establishment of protective forests;

- Development of proposals for the restoration of the gene pool and health of the population living in the Aral Sea region, the formation of the necessary measures and programs for their implementation, and ensuring their timely and quality implementation;

- Improvement of reclamation of agricultural lands in the Aral Sea region, rehabilitation of irrigation systems, introduction of modern technologies for economical and efficient use of water resources;

- Implementation of measures for socio-economic development of the Aral Sea region, improving the living conditions of the population, creating new jobs;

- Organizing effective cooperation with international organizations and foreign countries for the development of the Aral Sea region and active participation in attracting financial resources;

- Committee of Ecology and Environmental Protection of the Republic of Karakalpakstan, district (city) inspections on control in the field of ecology and environmental protection and the Forestry of the Republic of Karakalpakstan. coordination of the activities of the myth.

The state program for the development of the Aral Sea region for 2017-2021, as well as the relevant decisions of the Cabinet of Ministers, systematic work is underway to create a "green belt" in the Aral Sea basin and the Aral Sea region, adjacent Khorezm, Bukhara and Navoi regions.

The Presidential Decree "On Approval of the Concept for the Development of the Forestry System in the Republic of Uzbekistan until 2030" of October 2, last year, once again confirms that these goals are strategic. It is now urgent to strengthen the Multilateral Trust Fund for Human Security in the Aral Sea Region. The trust fund management system itself is characterized by clarity and order in the decision-making, allocation and accounting processes. More than 50 such UN funds around the world have demonstrated their effectiveness in terms of transparency.

3 Results and discussion

Agriculture, which accounts for 32% of Uzbekistan's GDP and employs 27% of the working population, can be one of the key factors in the country's economic growth under effective public policy. As a result of effective implementation of this policy, the volume of agricultural exports and incomes of farmers and agricultural organizations will increase, and thousands of new jobs will be created in rural areas. Living standards will rise, a number of food products will become cheaper for the population, and the country will be able to ensure reliable food security.

The major changes in Moynak also began on the day when the President at the 72nd session of the UN drew the world's attention to the Aral Sea tragedy, showing the Aral Sea problem and its final map. In accordance with the decision on additional measures for socio-economic development and employment of the population of Muynak district in 2017-2018, the first historical work was carried out: textiles, pharmaceuticals, electrical products, drip irrigation equipment, the production of plastic pipes was launched. Opportunities for the development of fisheries and tourism have begun to be used.

500,000 saplings have been ordered to be planted in the arid areas of the Aral Sea. 1,560 people, 462 vehicles and two planes were involved in planting saxaul seeds, seedlings, fodder crops and digging artisan wells in the dry area of the Aral Sea.

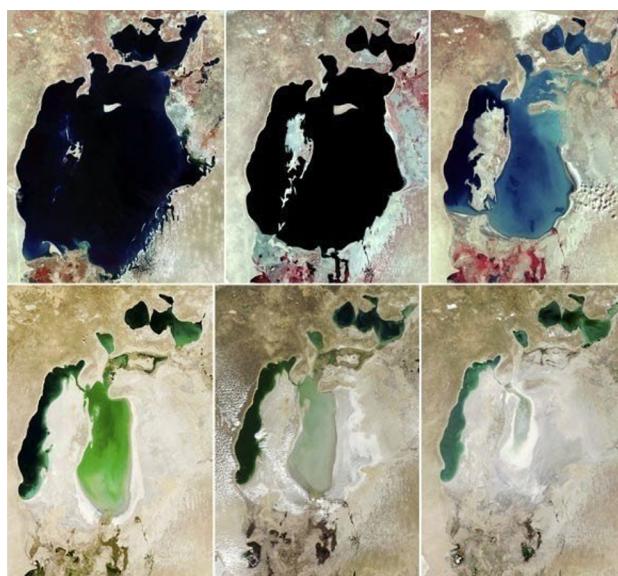


Fig. 4.

However, barriers to transforming agriculture into a competitive sector that serves the interests of the private sector, the population and the state must be removed. The World Bank's analysis shows that there are currently five major challenges to achieving this goal. In this article, I have tried to show these problems and the possible measures that the government can take to address them. In 2018, 30% of Uzbekistan's arable land was used for agricultural production. In recent years, some land has been excluded from cotton and wheat cultivation.

However, in order to increase productivity in agricultural development, the additional land currently used for planting these two crops should be used later for other more useful crops, especially fruits and vegetables.

4 Conclusion

The disappearance of the Aral Sea has resulted in the formation of the Aral Sea Salt Desert, replacing the nearly five million hectares of land in Uzbekistan, which is 2.5 million hectares. The area is an unstable ecosystem and poses a serious threat to both the environment and the health of the local population. Mitigation of the negative effects of the drying up of the Aral Sea, improvement of living conditions and quality of life of the population of the region is identified as one of the priorities of the state program for the development of the Aral Sea region for 2017-2021. At the same time, in order to lay the groundwork for the implementation of the program, it is necessary to have a full understanding of the current state of the ecological disaster zone and the changes taking place. For this purpose, in addition to the natural processes of destabilization, monitoring of the dried bottom, where there is a met of the Interstate Coordinating Commission for Water Resources in the autumn of 2019 and spring of 2020 were conducted in two stages with the participation of representatives of the Scientific Center for the Aral Sea under the President of the Republic of Uzbekistan, as well as experts in ecology, soil science, hydrogeology, dendrology, botany and geographic information. The total area covered was 1.2 million hectares, from the Chink to the Akpetka island system, and from the confluence of the waters to the historic landmark.

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