

History of Development of Natural Sciences in Karakalpakstan (1990-1993)

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Abstract: This article shows the attention to science and the state of development of science in the Republic of Uzbekistan from the early days of independence. The Karakalpak branch of the Academy of Sciences of the Republic of Uzbekistan, the Aralboyi Institute of Social and Economic Problems, the United Institute of Natural Sciences, the Institute of Bioecology, research scientists who created a school in natural sciences with their research, will talk about the scientific research works and results of the development of natural sciences.

Keywords: Academy of Sciences, Natural Sciences, Oral, Research Scientists, Botany, Biology, Ichthyology, Parasitology.

One of the factors that determine the cultural level of society is the state of scientific development. Therefore, the development of science and technology is important in the innovative development of the state and society. Science and culture are so interconnected that society's demand for science determines the level of culture in that society. Because there will be progress where science is developed, culture will be at a high level in a developed country. In the "Strategy of Actions for further development of the Republic of Uzbekistan", special attention is paid to the development of science. Special importance is attached to the fact that "in today's world, no industry can develop without innovative ideas and scientific achievements."

Decree No. PF-438 of the President of the Republic of Uzbekistan dated July 8, 1992 "On state support of science and development of innovative activities", Cabinet of Ministers' Decree dated September 7, 2004 "Measures to strengthen the scientific and material-technical base of the Academy of Sciences of the Republic of Uzbekistan" 420 of February 17, 2017 of the President of the Republic of Uzbekistan "On measures to further improve the activities of the Academy of Sciences, organization, management and financing of scientific and research activities" PQ-2789 took a leading place in the development of the network. This, in turn, once again showed the relevance of the topic.

Since the early days of independence, attention to science has increased in the country. In 1992, the Karakalpakstan branch of the Academy of Sciences of the Republic of Uzbekistan was transformed into its separate department. It includes 5 scientific research institutes: N. Davqoraev Institute of Language and Literature, Institute of History, Archeology and Ethnography, Institute of Island Socio-Economic Problems, United Institute of Natural Sciences, Institute of Bioecology as well as Botanical Garden, Ustyurt Desert Station, International Moynok Biostation, Karakalpakstan of "Fanum" Scientific Study Center branch, the fundamental library, the editorial office of "Khabarshysy" magazine of the UzR FA QQB and the "Ilim" printing house operated. More than 140 scientific employees conducted scientific research in the department.

In 1992, a branch of the Academy of Agriculture of Uzbekistan was established on the basis of the institutions of agricultural sciences in the republic. In 1994, the United Institute of Natural Sciences was divided into two: 1. "Institute of Bioecology" based on the laboratory of botany, biology, ichthyology, parasitology. 2. "United Institute of Natural Sciences" was established on the basis of laboratories of physics, technology, chemistry and geology.

After the independence of the Republic of Uzbekistan, the Karakalpakstan branch of the Academy of Sciences of the Republic of Uzbekistan achieved certain achievements. With the acquisition of the status of sovereign states, the Academy of Sciences of the Republic of Uzbekistan became an independent, self-governing organization operating on the basis of the laws of the Republic of Uzbekistan and its Charter. It is gratifying that the Karakalpakstan branch of the Academy of Agricultural Sciences of the Republic of Uzbekistan was established. In August 1992 (August 27-28) in the city of Nukus, the holding of the international scientific-practical conference on the topic of "Island and Archipelago Problems" was a big event in the life of science of the republic.

In the years of the first steps of independence, i.e. in 1989-1991, Reymov R, Bakhiev A, Zoldasova M, Konstantinova G, Aristanov E, Sherbaev B of the Academy of Sciences of the USSR on the topic "Biosphere and ecological research", in the framework of the All-Union "Regional and ecological problems" (MEM)- and conducted scientific projects in our region on the topic of "Anthropogenic changes in the natural ecosystems of the Southern Oral River".

A. Bakhiev, T. Otenov, B. Sagitov, who created a school in natural sciences with their research, in the article "Rare and endangered plant species (in the Karakalpak region)" show that the oral problem is one of the most pressing problems at the moment and that it needs to attract the attention of the world community of scientists.

In 1992, some organizational changes took place. In connection with the dissolution of the USSR and the reorganization of the Academy of Sciences of the USSR, by the decision of the Cabinet of Ministers under the President of the Republic of Uzbekistan No. 494 dated October 26, the Center for Coordination of Scientific Research "Island" was established, 1992 was transferred to the Karakalpakstan branch of the Academy of Sciences of the Republic of Uzbekistan as an independent department and named "Department of Insular Environmental Problems". Computing center. It consists of the Botanical Garden, the Department of Environmental Problems of the Archipelago and the Foundation Library.

In the reporting year 1990-1992, 12 meetings of the Presidium were held, where more than 50 issues were heard and discussed; on scientific, scientific and organizational activities, improvement of the organization of labor remuneration, measures to expand the training of state and scientific personnel. Orders and decisions of the Presidium of the Academy of Sciences of the Republic of Uzbekistan regarding the department's financial and economic activities were heard and discussed. Appropriate decisions were made on the discussed issues.

In the first years of independence, 14 budgets and 11 topics of economic contracts were developed for the Institute of Natural Sciences. Of these, 3 budgets and 5 economic contracts were checked.

Among the topics based on the agreement, the topic headed by researcher A. Bakhiev has been completed. It was determined that the area occupied by plant communities decreased from 35% (1970) to 8% (1990), the area of pastures and deltas decreased from 348 thousand hectares to 125 thousand hectares.

K. Myrzabetov developed a method of selecting drought-resistant forms of cotton. He received a copyright for the invention.

A. Elmuratov carried out the composition, distribution and functional importance of hydrobionts in the formation of water quality, as well as the law and dynamics of the development of

production and destruction processes in the lake in Kuksu, Shegakul, Domalak and Moynoq reservoirs.

In the topic led by A. Urazbaev, it was noted that the parasitic fauna of some fish in the lake has decreased. It is concluded that the increased infection rate in Shegakul is related to the reduced number of crustaceans and the onset of invasiveness.

In Karakalpakstan, sudden changes in nature, changes in animal species and the need for further development of scientific research objects in this regard were felt.

The researchers led by T. Nuratdinov found that the number of saigas in Karakalpakstan was 45-50 thousand and that there were changes in the wintering places and spring migration routes of saigas from the south to the north. The study found that the number, reproduction, nutrition, behavior and mortality of vertebrates are increasingly being negatively affected by environmental and other factors.

Under the leadership of E. Seitmuratov, issues of extracting high-quality extract from licorice root were studied. Monosaccharide content and glycyrrhizic acid content of licorice extract were determined.

An engineering-geological map-scheme for the assessment of soil salinity on the left bank of the Amudarya, maps of Miocene and Pliocene deposits of the Southern Aral Bay, and lithological sections were compiled on the topics led by researchers Q. Qurbaniozov and I. Aimbetov. Field-geophysical and petrographic descriptions were prepared for Urga, Karachalok, Kokchalok, Urgatepa regions. The Complex Institute of Natural Sciences implements 11 contracts in the scope of research in the amount of 422 thousand rubles. 190,885,000 rubles were received from the concluded contracts for 4 topics within the scope of research. Employees of the Karakalpakstan Scientific Research Institute presented one recommendation to the national economy with 1 socially impactful development, i.e., "Moynoq fishing industry" production association, with an annual economic efficiency of 500-800 thousand rubles. If in 1991 the economic benefit from the development was 63.5 thousand rubles, then in the following years the institute made 15 recommendations and suggestions to various organizations.

On the contribution of natural science in conducting scientific research in Karakalpakstan. In the botanical garden headed by researcher T. Utenov, phenological observations were conducted, the dynamics of growth and development of individual plants were studied, the species composition and ecological-biological characteristics of woody plants were studied, and contract works in the amount of 135.4 thousand rubles were carried out.

Based on the topic conducted by I. Sulaimanov, a program was created that allows determining biological compatibility in the family, neighborhood, district, region, workplace, department, institution, etc. Algorithms and programs for calculating compatibility of groups of people have been developed.

Yu. Kamolov developed the concept of integration of renewable energy sources into the existing energy system in the archipelago. From the point of view of wind energy, the geographical and economic conditions of the USA and Karakalpakstan were comparatively analyzed. In the final topic headed by A. Otarov, the forecast directions for the development of the main sectors of the republic's production infrastructure were developed, the estimated volumes of centralized capital investments until 2005 were determined, and the market relations of this project were considered.

The hydrochemical regime of lakes was studied according to the topics and projects carried out by scientists from Karakalpakstan. In Dautkol, Karaterang, Sudochy, Karakol, and Moynoq lakes, the range of pesticides used in the national economy was studied, and their effect on irrigated areas was determined. A list of pesticides for priority control in environmental facilities has been compiled.

The analysis of the socio-economic situation conducted by K. Abdambetov in the northern districts of the Republic of Kazakhstan (Moynoq) showed that the prospects of economic development in these areas depend on the condition of the coastal delta lake systems. Recommendations for regulation of water balance are given.

Alternative biomorphological characteristics of plants were found on the topic conducted by S. Sagitov, which allowed to identify species and populations under threat of extinction, as well as species whose populations have been preserved in agricultural landscapes. A landscape map of the Republic of Karakalpakstan and Khorezm region has been developed.

Under the leadership of S. Kabulov, information on the state of surface ecosystems of the island part of Ustyurt, the northwestern part of Kyzylkum, the island part of the Amudarya delta was processed. The species composition of the number and vitality of the dominant phytocenoses of all main regions was taken into account.

Under the leadership of R. Reimov, studies of the state of biotopes and inventory of terrestrial vertebrate fauna were carried out. More than 40 species and subspecies of fish, 2 species of amphibians, about 35 species of reptiles, 65 species of mammals and more than 280 species and subspecies of birds are recorded in the region.

In the topic led by J. Samanov, surface and underground flow of fresh water from Nukus, Kegeili, Tortkol mines was studied and information about their chemical composition was obtained.

The results of scientific research were handed over to various organizations, enterprises and institutions for implementation and use.

Employees of the Scientific Research Institute directly participated in the organization and holding of the international scientific-practical conference "Island and Archipelago Problems" in the city of Nukus (August 27-28, 1992). Reimov R. as UNEP's expert on the problems of the Aral Sea. Participated in the discussion of diagnostic materials and action plan for saving the Aral Sea (Geneva, Switzerland), as well as in the international conference "Environmental problems in the Islamic world". (Kuala-Lumpur, Malaysia), 23 of our scientific staff participated in the scientific projects organized by the Academy of Islamic Sciences and gave lectures at national, republican, regional scientific conferences and meetings.

It should be noted that in the field of science, young people studied for postgraduate studies mainly in such specialties as ecology, botany, chemistry, etc., but in the last decade they were not admitted to postgraduate studies in such specialties as philosophy, theoretical physics, law, biochemistry, etc.

The main goal of environmental promotion in New Uzbekistan is to educate a perfect human being who strengthens the philosophical closeness between man and nature, who has an all-round ecological culture, who will leave natural resources to the next generation, who will use natural resources wisely and protect them, and who will serve to ensure the ecological stability of our independent country. Because human culture depends on the level of awareness of the processes taking place in nature and society. Thanks to his knowledge, man can know the essence of the processes occurring in nature and develop the necessary skills.

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