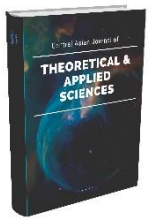

CENTRAL ASIAN JOURNAL OF THEORETICAL AND APPLIED SCIENCES

Volume: 03 Issue: 06 | Jun 2022 ISSN: 2660-5317

Natural Research in the Fergana Valley of the XX Century

Hamidov Abdusamad Abdumalikovich
Fergana State University, Fergana Polytechnic Institute, Associate Professor of Geodesy, Cartography and Cadastre, Candidate of Geographical Sciences

Received 19th Apr 2022, Accepted 20th May 2022, Online 18th Jun 2022

Annotation: *The article describes the study of the components of nature in the Fergana Valley in the second half of the twentieth century, based on its stage of development in space and time, in the fourth quarter of the twentieth century, the geoecological significance of the study in the Fergana Valley. The dynamics and scientific results of complex natural geographical researches carried out during the 2000s are described.*

Keywords: *Fergana Valley, Department of Resettlement, Department of Land Reclamation, Council for the Study of Productive Forces (SOPS), lyoss genesis, hydrometric division, geochemistry.*

Introduction: The research conducted in Central Asia, including the Fergana Valley, is mainly complex in nature, with emphasis on natural geography and ecology.

Research organizations: Department of Resettlement, Department of Land Reclamation, Geology Committee, Turkestan Department of Military Topography, Russian Geographical Society and its Turkestan branch, Hydrometeorological Department, later organized Pamir, Tajik-Pamir, Kyrgyz complex expeditions, Central Asian State University Expeditions organized by the institutes and departments of the Academy of Sciences of Uzbekistan, the Academy of Sciences of Uzbekistan and its research institutes, as well as others, also tried to solve individual problems of the components of nature. [1-10]

Main part: Resettlement staff Soils, plants and their natural-historical maps of the study area, for practical purposes to determine the boundaries of deserts, semi-deserts and dry steppes, changes in soil and vegetation in the mountains by altitude, study of rocks, lysis genesis, river valleys and paleogeography of the lakes as well as other geographical and ecological issues.

The establishment of the Expeditionary Research Commission (ERC) by the Soviet FA in 1928 led to the organization of complex geographical-geological expeditions in all regions of Central Asia. Founded in 1928, the Pamir Complex Expedition is one of the largest scientific expeditions of the 1920s in terms of composition, regional scale, breadth of topics and remarkable scientific results. Together with the Pamir complex expedition and the expeditions of the Institute of Soil Science and Geobotany of the Central Asian State University, a completely new era in the study of the nature of the republic began.

In 1930, a complex expedition of Tajikistan led by N.P. Gorbunov and D.I. Shcherbakov was engaged in the search for natural resources in the Fergana Valley. The main scientific group and detachments are

headed by N.L. Korzhenevsky, A.E. Fersman, D.V. Nalivkin, D.V. Nikitin, V.I. Popov, M.G. Popov and other famous scientists. The main task of the expedition was to provide a complex natural geographical description of the whole area on a clear trangulation and cartographic basis. In 1932-1936, the Tajik-Pamir complex expedition began its work. The complex expositions of this expedition to the northern expositions of the Turkestan-Alay ridges in the Northern Tajikistan region, ie in the Fergana Valley, solved great scientific and practical problems in the study of the natural conditions, geology and minerals of the region. [11-19]

As the Tajik-Pamir complex expedition mobilized great scientific forces to study the territory of the Fergana Valley, thanks to their tireless 5 years of selfless work, a very large area of the complex was naturally explored geographically. Many articles and monographs were published based on the scientific results of the expedition. The Central Asian branch of the Geological Committee, in the 1930s, and later the Central Asian Geological Survey, also organized large expeditions to study the nature and natural resources of our country, including the Fergana Valley.

The detachments of the Kyrgyz complex expedition, organized in 1928-1935, thoroughly studied the mountain ranges and valleys of Tianshan. The data collected by the expeditions of Kyrgyzstan on the natural geography, geomorphology, hydrology and hydrogeology, geology, geophysics, geochemistry, soil geography and geobotany and zoogeography of the Fergana Valley are particularly large.

From the point of view of complex natural geographical studies, regional-landscape studies in the Fergana Valley, the issues of their zoning began to be studied rapidly only in the 50s. Separate complex geographical comparison of the internal features of the nature of the valley and the surrounding areas by scientists of Central Asian nature R.I. Abolin (1929), E.P. Korovin, A.N. Rozanov (1938), N.A. Korzhenevsky (1941, 1956, 1960), V.M.Chetirkin (1960), E.M.Murzaev (1947, 1957,1961), L.N.Babushkin (1954, 1964), N.A.Kogay (1964) and others. which was the basis for the beginning of his scientific work. [20-30]

R.I. Abolin in his classic work "Fundamentals of natural-historical zoning of Soviet Central Asia" (1929) identifies the main landscape views and identifies 13 natural regions in Turkestan district. Two of these natural districts, Kokand and East Fergana districts, are located in the Fergana Valley. The author distinguishes between natural and cultural landscapes based on plant associations [2].

L.S.Berg (1952) studies the complex regional landscape features of the Fergana Valley from a geomorphological, hydrological, climatic, soil and agricultural perspective.

N.L. Korzhenevsky (1925, 1941, 1956, 1960) shows the landscapes of the Fergana Valley as separate views for each part of the territory.

In 1938, E.P. Korovin and A.N. Rozanov in their complex work on the natural historical zoning of Central Asia identified 3 natural and economic regions in the Fergana Valley: West Fergana, North Fergana, East Fergana. The authors have made a very in-depth analysis of the nature of these regions from an economic point of view. In the following stages, the great geographer V.M. Chetirki's contribution to the successful solution of complex natural geographical problems of Central Asia was great. In 1943 he published The Geography of Turan (a work in rotoprint in 1958 and a typographic work in 1960), devoted to the complex description and zoning of Central Asia.

The period of 1920-1940 can be considered as the period of complex natural geographical research. Because at that time many complex expeditions were organized, which were distinguished by their scientific potential and the size of the region [31-40].

The study of the nature of Central Asia, including the Fergana Valley, in the 40s and 60s was carried out not only in some natural complexes, that is, in differential directions, but also in regional complex or

integral directions. In the 1950s, the Republican Council for the Study of Productive Forces (SOPS) of the Academy of Sciences of Uzbekistan, like other regions of the republic, conducted regular comprehensive geographical studies of the Fergana Valley. Higher education institutions, especially universities, have become centers of research. For example: geographers of the Central Asian State University L.N. Babushkin, L.N. Korzhenevsky, V.L. Schultz, O.Yu. Poslavskaya, N.D. Dolimov and others came up with the initiative of complex natural geographical study of Uzbekistan. Examples of large regional complex geographical works created as a result of research over the years are the work "Uzbekistan SSR" (1956, 1963) and "Central Asia. Natural Geographical Definition ".

By 1961, E.M. Murzaev's work "Central Asia" was published for the third time, which paid great attention to the complex study of the Fergana Valley and the differentiation of regional landscapes. Published by the Institute of Geography of the above-mentioned FA "Central Asia. The author of some chapters of the monograph "Natural geographical definition" (1968) is E.M. Murzaev (natural geography), E.P. Korovin, L.E. Rodin, N.I. Rubtsov (geobotany), A.N. Formozov (zoogeography), A.N. Rozanov (soil geography), R.D. Zabirov (glaciology), L.A. Chubukov (climatology), V.N. Kunin (hydrogeology), S.Yu. Geller (geomorphology). This work, which has a wide encyclopedic content, served as a solid foundation for further geographical research. However, the main shortcoming of this work is that Central Asia as a country is defined and regionalized not on the traditional natural border, but on the administrative border of the four neighboring republics [41-43].

In 1958, the soil cover of Central Asia was completely zoned by A.N. Rozanov. This system of A.N. Rozanov served as a solid basis for further zoning experiments. By the 1960s, the work on natural geographical zoning of the Fergana Valley began. In the natural geographical zoning of the Fergana valley V.M. Chetirkin (1960), L.N. Babushkin (1954), L.N. Babushkin, N.A. Kogay (1964), especially for the plains and hills of the Fergana valley A.A. Abdulkasimov (1964), the work of Yu.Sultanov et al. (1965) for the southern mountainous part of the valley.

The monograph "Central Asia", prepared by the Institute of Geography of the Academy of Sciences in 1968, completed a comprehensive study of the nature of the region, including the Fergana Valley, until 1968 and identified the next current areas of research. In addition, the period 1961-1980 was a period of generalization of complex geographical knowledge about all components of the nature of Uzbekistan, including the Fergana Valley. According to the final results, the direction of research that can now be carried out has shifted to the solution of natural geographical and geo-ecological issues in a constructive direction. Research in this area began to be conducted mainly by local geographers and landscape scientists. [1-15].

Conclusions and Discussions: As a scientific result of research on the components of nature in the Fergana Valley, we have developed a map of the location and routes of some studies. Through this map, it is possible to find out how large the scope of research conducted in the valley area is.

In order to unify the research conducted in the Fergana Valley, we divided them into stages and periods. In the division into stages and periods, we took into account the scale of the results of research conducted in the region, as well as the economic, social, political situation specific to that period, period. The stages of development of natural geographical research are given in the table.

Conclusions: The results of the study of the components of nature in the Fergana Valley can be divided into several major stages, including the first major stage of research: - Determining the geographical location of components in the directions, comprehensive with recognition issues engaged. These studies contain specific laws, views and directions on geological-geomorphological, hydroclimatic, soil, flora and fauna. The second large-scale research: -Defined laws, views and directions have been scientifically proven in the study of natural components. The third large-scale research: - The use of natural complexes,

their components, has led to specific geo-ecological problems. Occurrence of geo-ecological processes in geo-ecosystems led to an unmanageable level in some parts. Under such conditions, the complex nature of geographical research necessitates an increase in the geoecological significance.

For example, The irrational, extensive use of these components for the development of farms for many years has led to an increase in the geoecological significance of geological-geomorphological, hydroclimatic, soil, flora, fauna, complex natural geographical research. This situation, as mentioned above, has radically changed the direction of all research conducted in the region.

References:

1. Arabboevna A. M., Shavkat o‘g‘li Y. S. The Use of Geoinformation Systems in the Study of the Land Fund of Household and Dekhkan Farms //Texas Journal of Multidisciplinary Studies. – 2022. – Т. 8. – С. 163-164.
2. Хакимова К. Р., Абдукадирова М. А., Абдухалилов Б. К. РАЗРАБОТКА ТЕМАТИЧЕСКИХ СЛОЕВ НА ОСНОВЕ СОВРЕМЕННЫХ ГИС-ПРОГРАММ КАРТ ЭКОЛОГИЧЕСКОГО АТЛАСА //Актуальная наука. – 2019. – №. 11. – С. 39-43.
3. Makhmud K., Khasan M. Horizontal Survey of Crane Paths //Middle European Scientific Bulletin. – 2021. – Т. 18. – С. 410-417.
4. Madaminovich A. B. The use of gis technology to create electronic environmental maps //ACADEMICIA: An International Multidisciplinary Research Journal. – 2020. – Т. 10. – №. 5. – С. 438-440.
5. Kh T. K. et al. Strength Evaluation of the Charvak Earth Dam in a Plane Formulation //Middle European Scientific Bulletin. – 2021. – Т. 18. – С. 424-434.
6. Сорокин А. Г., Каюмов О. А. Динамическая модель трансформации стока р. Амударьи в среднем течении //Водные ресурсы Центральной Азии (Материалы научно-практической конференции, посвященной 10-летию МКВК). Алматы. – 2002. – С. 154-158.
7. Khakimova K. R., Ahmedov B. M., Qosimov M. Structure and content of the fergana valley ecological atlas //ACADEMICIA: An International Multidisciplinary Research Journal. – 2020. – Т. 10. – №. 5. – С. 456-459.
8. Abduvaxobovich A. A. Methods of Improving Physical and Mechanical Properties of Light Concrete on the Basis of Chemical Additives //Texas Journal of Multidisciplinary Studies. – 2022. – Т. 8. – С. 165-167.
9. Marupov A. A., Ahmedov B. M. General Characteristics of Zones with Special Conditions of use of the Territory //Middle European Scientific Bulletin. – 2021. – Т. 18. – С. 446-451.
10. Hamidov A. A., Shermatova Z. Changes in the cities of the fergana valley and its surroundings under the influence of anthropogenic factors //ACADEMICIA: An International Multidisciplinary Research Journal. – 2021. – Т. 11. – №. 6. – С. 736-739.
11. Shavkat o‘g‘li Y. S., Zuxriddinovna M. S., Shuxratbek qiziOlimova D. RAQAMLI TASVIRLARNI QAYTA ISHLASH VA QAYTA ISHLASHNI TOIFALASHTIRISH //INNOVATION IN THE MODERN EDUCATION SYSTEM. – 2022. – Т. 2. – №. 18. – С. 425-429.
12. Хакимова К. Р., Абдукадирова М. А., Абдухалилов Б. К. РАЗРАБОТКА ИННОВАЦИОННЫХ МЕТОДОВ В КАРТОГРАФИЧЕСКОМ ОПИСАНИИ ЭКОЛОГИЧЕСКОГО СОСТОЯНИЯ //Актуальная наука. – 2019. – №. 11. – С. 34-38.

13. Kasimov M., Habibullaev E., Kosimov L., (2020). Determination of the chimney roll, An International Multidisciplinary Research Journal, 10(6), Pp 1313-1318.
14. Каюмов О., Кенда Д. Я., Манопов Х. В. ВІДНОВЛЕННЯ ТА ЗБІЛЬШЕННЯ ПРОДУКТИВНОСТІ ВОДОЗАБІРНИХ СВЕРДЛОВИН //ΛΌГОΣ. МИСТЕЦТВО НАУКОВОЇ ДУМКИ. – 2019. – №. 8. – С. 47-50.
15. Marupov A., Axmedov B. General characteristics of zones with special conditions for using the territory of the city of Fergana //Збірник наукових праць ΛΌГОΣ. – 2020. – С. 7-10.
16. Salyamova K. D., Turdiqulov X. X. Analysis of stability of ground dams under seismic loads //Scientific-technical journal. – 2020. – Т. 3. – №. 1. – С. 37-41.
17. Хакимов К. Ж. и др. ТЕХНОГЕННЫЕ ОТХОДЫ-ПЕРСПЕКТИВНОЕ СЫРЬЕ ДЛЯ МЕТАЛЛУРГИИ УЗБЕКИСТАНА В ОЦЕНКЕ ОТВАЛЬНЫХ ХВОСТОВ ФИЛЬТРАЦИИ МЕДНО-МОЛИБДЕНОВЫХ РУД //Universum: технические науки. – 2020. – №. 12-1 (81). – С. 54-59.
18. Mamanazarovna E. M., Abbosxonovich M. A. Analysis of Agricultural Soils Designation of Different Linear Protected Zones using GIS Technology //CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES. – 2021. – Т. 2. – №. 11. – С. 188-192.
19. Hamidov A. A., Najmiddinova G. Geoecological fundamentals of nature protection and rational use of natural resources in the fergana valley //Asian Journal Of Multidimensional Research. – 2021. – Т. 10. – №. 6. – С. 260-263.
20. Shavkat o‘g‘li Y. S. et al. QISHLOQ XO ‘JALIK KARTALARINI YARATISHDAGI GEODEZIK ISHLAR //THEORY AND ANALYTICAL ASPECTS OF RECENT RESEARCH. – 2022. – Т. 1. – №. 5. – С. 460-466.
21. Abdukadirova M. A. The Role of Builder and Building in the Development of the Country is Invaluable //The American Journal of Interdisciplinary Innovations Research. – 2021. – Т. 3. – №. 05. – С. 81-84.
22. Musinovich S. M., Khaitmuratovich K. I., Raximovna K. K. Innovative Irrigation Technology //Middle European Scientific Bulletin. – 2021. – Т. 18. – С. 514-520.
23. Manopov X. V., Kasimov M. KARTALARNING RAQAMLI MODELINI YARATISH //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 8. – С. 252-258.
24. Marupov A. A., Ahmedov B. M. General Characteristics of Zones with Special Conditions of use of the Territory //Middle European Scientific Bulletin. – 2021. – Т. 18. – С. 446-451.
25. Salyamova K. D. et al. The Stress State of A Soil Dam Under Dynamic Action, Taking Into Account The Dissipative Properties Of The Soil //International Journal of Progressive Sciences and Technologies (IJPSAT), http://ijpsat. ijsht-journals. org. – 2021. – Т. 25. – №. 2. – С. 51-62.
26. Xayitmurodovich K. I., Abbosxonovich M. A., Qizi M. M. D. Estimation Of Irrigated Soils Of Fergana Region (On The Example Of Dangara District) //The American Journal of Agriculture and Biomedical Engineering. – 2021. – Т. 3. – №. 05. – С. 8-12.
27. Hamidov A., Khalilov K. LAND LEGISLATION AND SOIL PROTECTION IN THE FERGHANA VALLEY //Конференции. – 2021.
28. Berdaliyeva Y. X. et al. Gis Dasturlari Yordamida Geografik Asos Qatlamlarini Joylashtirish Va

Ularni Boshqarish //International Conferences On Learning And Teaching. – 2022. – Т. 1. – №. 6. – С. 312-314.

29. Abduqodirova M. A., qizi Mirzakarimova G. M. GIS TEXNOLOGIYASI YORDAMIDA KARTANING GEOGRAFIK ASOSINI TUZISH, UNI TAHRIR QILISH //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 6. – С. 309-311.
30. Musinovich S. M., Khaitmuratovich K. I., Raximovna K. K. Methods of Irrigation of Gardens and Vineyards in Salty Land //Middle European Scientific Bulletin. – 2021. – Т. 18. – С. 521-525.
31. Maksudovich M. I., Bakhromalievich E. D., Valiyevich M. K. Order And Methodology For Determining Administrative-Territorial Borders Based On Digital Technologies //The American Journal of Engineering and Technology. – 2021. – Т. 3. – №. 03. – С. 49-57.
32. Abduraufovich Q. O., Valiyevich M. X., Dilshodbeko'g'li H. E. Some issues of re-utilization of casing strings, unused water intake wells (for example, some countries in the south-western sahel) //ACADEMICIA: An International Multidisciplinary Research Journal. – 2020. – Т. 10. – №. 6. – С. 1568-1574.
33. Salyamova K. D., Turdikulov K. K. Stress state of an earth dam under main loads considering data from field observations //Journal of Physics: Conference Series. – IOP Publishing, 2021. – Т. 1926. – №. 1. – С. 012004.
34. Numanovich A. I., Abbosxonovich M. A. The analysis of lands in security zones of high-voltage power lines (power line) on the example of the Fergana region //EPRA International Journal of Multidisciplinary Research (IJMR). – 2020. – Т. 2. – С. 25-30.
35. Ogli Y. S. S., O‘G‘Li A. P. A. KOSMIK MA'LUMOTLAR YORDAMIDA YER TUZISH LOYIHA ISHLARINI OLIB BORISH //Ta’lim fidoyilari. – 2022. – Т. 25. – №. 5. – С. 23-25.
36. Abdukadirova M. A., qizi Mirzakarimova G. M. The use of Geo Information System in the Establishment of Land Balance //Middle European Scientific Bulletin. – 2021. – Т. 18. – С. 441-445.
37. Khakimova K. R., Holmatova D. B., Abdusalomov A. A. Basics of atlas mapping optimization in the ferghana region //ACADEMICIA: An International Multidisciplinary Research Journal. – 2020. – Т. 10. – №. 5. – С. 613-617.
38. Yangiev A. et al. Dynamics of an earth dam with account for rheological properties of soil under dynamic effect //IOP Conference Series: Materials Science and Engineering. – IOP Publishing, 2020. – Т. 869. – №. 7. – С. 072005.
39. Xakimova K. R., Marupov A. A., Mirzakarimova G. M. Maintaining Cadastral Valuation for the Effective Use of Agricultural Lands of the Fergana Region. ijarset. com “International Journal Of Advanced Research In Science, Engineering And Technology” //ORCID: 0000-0002-5120-4359. – 2019. – С. 6-10.
40. Arabboyevna A. M. et al. In orthophotoplane technology photomod mosaic module //International Journal of Discourse on Innovation, Integration And Education. – 2020. – Т. 1. – №. 4. – С. 93-97.
41. Абдукадирова М. А., ўғли Ёкубов Ш. Ш. ЭЛЕКТРОН РАҚАМЛИ ХАРИТАЛАРДАГИ КОНТУРЛАР ЧЕГАРАСИ УЛАРНИ МАЙДОН (ПОЛИГОН) КЎРИНИШДА ЧИЗИШНИНГ ARCGIS ДАСТУРИЙ ТАЬМИНОТИ ОРҚАЛИ АВТОМАТЛАШГАН УСУЛИНИ ТАКОМИЛЛАШТИРИШ //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 8. – С. 133-136.

42. Ахмедов Б. М., ўғли Ёкубов Ш. Ш. КАДАСТР СЁМКАСИНИ БАЖАРИШ УЧУН ТОПОГРАФИК АСОСЛАР //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 8. – С. 287-291.
43. Abduraxmonov A. A. et al. DAVLAT YER KADASTRIDA GIS TEXNALOGIYALARIDAN FOYDALANISH //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. - 2022. - Т. 1. - №. 8. - С. 228-233.

