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# GEOGRAPHICAL ROOTS OF CUSTOMS AND TRADITIONS RELATED TO THE RATIONAL USE OF WATER RESOURCES (THE EXAMPLE OF THE FERGANA VALLEY)

**Annotation**. This article analyzes the influence of geomorphological, soil-climatic, hydrological and socio-geographical factors on the formation of irrigation and water use culture in the Fergana Valley through historical and geographical comparison, based on historical sources. Conclusions are drawn through historical and geographical comparison of traditional water use cultures formed in the Khorezm oasis and the Fergana Valley.

As a rule, in the process of formation, each ethnic group adapts to the landscape of a certain area, to a certain extent changing this natural environment with its economic activities, creating cultural landscapes and methods of their production, depending on the natural and geographical characteristics of the country in which it lives. As a result, they use nature for their own needs, without disturbing its balance, using the most convenient methods. This process occurs spontaneously in a certain geographical environment where the ethnos (several generations) has lived for a long time. Over time, the "ethnos-landscape" ratio becomes optimal for both the ethnos and the landscape. [1; 2; 3]. This means that a sustainable landscape stabilizes the ethnos. Thus, if an ethnos lives in one area for a long time, it adapts to it and, as a rule, does not disturb the natural balance, but forms natural traditions and customs inherent only in this people. Traditions and customs reflect the culture of a people fully adapted to the "native landscape," which change as a result of the development of society, over time some of them disappear, new ones appear. Traditions and customs that have a strong geographical basis have been preserved for centuries and passed down from generation to generation [4].

In scientific literature, tradition is defined as “a means of transmitting the historically accumulated experience of ancestors to generations” [6; p. 32], “a cultural phenomenon that arises in the process of historical development based on natural and social needs and is inherited from ancestors to generations”, “a set of accepted procedures and rules that have been ingrained in the minds of people” [7; p. 124]. Customs, on the other hand, are a broad concept and are noted as “procedures and patterns accepted by the whole nation as traditions” [5; p. 416], “behavior that has been embedded in people’s lives and is repeated for a certain period of time, rules of behavior accepted by the majority” [5; p. 125]. The formation of the traditions and customs of peoples occurs as a result of the widespread influence of various geographical factors. Thus, the geographical factor affects not only the formation of the material, but also the spiritual culture of the

ethnic group, its psyche, which is manifested in its unique national characteristics, traditions, traditions and values. In ancient Eastern culture, including the Uzbek way of life, traditions and customs are valued as a means of educating young people and teaching the experience of the older generation, traditions and experience of ancestors are assessed as absolute truth and are highly valued at the level of the law. "The West is ruled by laws and the East by customs."

Historical experience shows that the violation of the environmental conditions of the ethnic group formed in a certain territory has a significant impact on the deterioration of environmental stability, ultimately on the survival or migration of one or another ethnic group to the Mother landscape. And migration, that is, resettlement from the historical homeland, can put an end to the language, territorial unity, culture and traditions of the ethnic group and, finally, lead to its degradation. " [8]. Suvdan foydalanish bo‘yicha «ma’lum muddatda takrorlanib turuvchi», «ajdodlardan avlodlarga meros bo‘lib o‘tadigan», «umumxalq tomonidan qabul qilingan» xulq-atvor qoidalari, ta’qiq va normalarning vujudga kelishi esa muayyan hududning iqlimi, relyefi, gidrogeologik sharoitlari, suv bilan ta’minlanganlik darajasi, va umuman, tabiatdagi ritmiylik va davriylik qonuniyatlari bilan uzviy bog‘liqdir. In the context of global climate change in Central Asia, studying the traditions and customs of local populations, including the Uzbek people, aimed at rational use and protection of water based on an ecological-geographic approach, and their creative use, without denying innovative development, can also yield important practical results. [4]. As S.A. Arutyunov wrote, “...traditions can exist without innovations, but not vice versa” [9; 221-b]. However, great caution is required in the implementation of traditions and innovations in practice, because “paying more attention to tradition can lead to fanaticism and stagnation, and giving in to innovations can lead to instability, unpredictability and weakening of management.” [9; 2].

By geographical comparison of historical data, it is possible to see the magnitude of the influence of geomorphological, soil-climatic, hydrological and socio-geographical factors in the formation of Customs and traditions associated with the rational use of Water Resources. In this research work, the following conclusions were drawn by historical-geographical comparison of traditional water use cultures formed in the Khorezm Oasis and the Fergana Valley:

The Khorezm oasis occupies the lower left part of the Amu Darya, where a wavy alluvial plain has formed due to the accumulation of sediments from the old riverbeds over the years. The absolute height of the relief decreases from east to west from 240 m to 30 m. [10; 284-bAccording to S.P. Tolstov and Ya. Gulyamov, in ancient Khorezm, "flood canals" were initially dug, which flowed only when the Amu Darya was flooded. Later, a system of channels “arna” was formed, elongated along the river and having several small initial parts. The head of small initial parts is usually built where water flows even during the period when the water level in the river is lowest, the distance between them is about 6 miles. Great attention has

been paid to the slope of the route to allow more water to pass through the canal, to ensure that the water flows naturally in the "cover" that distributes it below, that is, large ditches, and to deliver the cerumen in the water to the fields. To release excess water from the canal into the river, "badrov" canals were dug with special dams at the beginning and end. The Yops were divided into smaller canals – "badoq"s, and they were divided into "solma" s and "tortma"s. They used "doldarga" (sluice gates) to prevent the head of the canal from being washed away, and "to'kurtqa" (distributors) to collect water from the surface when the water was too muddy. The water was lifted up from the tortuous ditches by means of a ladder. At the end of the falls, small pools were dug to dispose of excess water.

While the people of Khorezm developed a pattern of using the waters of the Amudarya, the largest river in the region, in the Ferghana Valley, a unique traditional culture of using the conical extensions of many smaller rivers adapted to the natural conditions of the valley was formed. Irrigation systems are formed in the valley, starting from the ground where rivers flow from mountain gorges to the foothill plains, forming wide conical expanses. Depending on the absolute height and geomorphological structure of the Highland Plains, arcs were formed at different altitudes. For example, if the absolute height of the head of the isfarasoy spreading is 520 m, the Sukhsoy is 660 m, this figure is 920 m in Shahimardonsoy, 950 m in Guvasoy, 1000 m in Kohortsoy, 1100 m in Akburasoy [13]. The upper reaches of riverbeds and the beginnings of conical plateaus were not used for farming, but were used as sacred shrines and pilgrimage sites.

Artificial irrigation systems in the valley are called "ariq" by the common name, and large trunk canals are called "soy". Normally, the "ariq" and "soy"s are released from the riverbed, which is located high above the irrigated land. Water from the "soy"s first flows into the – “ena ariq” ("mother canals") and then into the "shoh ariq" (“big canals”). The “Ena ariq”s supplied water to several villages, and the "shoh ariq"s to some villages. Aryks reserved for mahallas are called "ears," and aryks divided into houses are called "dahana." [14; 50-b.]. When distributing water into ditches, "labgardon" was used, and partitions were used to protect hydraulic structures and land from floods, “osiyobon” (water mills) and structures characteristic of mountain rivers (objuvoz) were built in the ditches. While in ancient Khorezm, excess water from irrigation was drained into small lakes at the ends of the embankments, in the Fergana Valley almost all the water is ultimately used for irrigation. In some years when there was enough water, the excess water reached the Syrdarya River.

In conclusion, the natural geographical, in particular above-ground structure, climate, hydrography, soil and other features of the ancient lower Amudarya, Murghab, middle and lower Zarafshan, Surkhandarya and Fergana valleys in Central Asia led to the creation of irrigation and water use cultures characteristic of this place. Taking into account the type of saturation of the rivers and the amount of water, the length, width, and slope of the ditches and canals starting from them were calculated using simple leveling methods. Their length and width were controlled to prevent unnecessary evaporation and absorption of water from irrigation structures. In areas where coryces are used, water is released into the ground bet only on irrigated flat land. Depending on the maturation of the soil, an alternating watering procedure was developed. The creative use of such measures, developed in proportion to the natural geographical conditions of each area, makes it possible to avoid environmental problems that are now inextricably linked with each other, such as rapidly developing water shortages, soil erosion, rising water levels and secondary salinity.

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