

DEVELOPMENT OF A CRAFT COMPLEX IN THE MEDIEVAL QUARTERS OF THE CITY OF MIZDAKHKAN

M. Turebekov¹, J. Khakimniyazov², O-Sh. Kdyrniyazov³, S. Saypov⁴, A. Alimbetov⁵,
F. Utepbergenov⁶, M. Tolibaev⁷

Karakalpak State University, Nukus, Uzbekistan

¹Associate Professor, Department of Archeology, Karakalpak State University, Nukus, Uzbekistan. turebekov.mirzali@mail.ru

²Professor, Department of Archeology, Karakalpak State University, Nukus, Uzbekistan. khakimniyazovj1963@mail.ru

³Associate Professor, Department of Archeology, Karakalpak State University, Nukus, Uzbekistan. o_sh@inbox.ru

⁴Senior Lecturer, Department of Archeology, Karakalpak State University, Nukus, Uzbekistan. sadullasaypov@mail.ru

⁵Senior Lecturer, Department of Archeology, Karakalpak State University, Nukus, Uzbekistan. Alimbetov.1975@mail.ru

⁶Assistant teacher, Department of Archeology, Karakalpak State University, Nukus, Uzbekistan. Farxat_73@mail.ru

⁷ - PhD student, Department of Archeology, Karakalpak State University, Nukus, Uzbekistan. tolybaev7575@mail.ru

Abstract

The article examines the issue of the formation and development of handicraft production in one of the large ancient settlements of the medieval South Aral region Mizdakhkan. The settlement during this period was the center of the agro-industrial complex, since, first of all, handicraft production developed here. Stationary archaeological excavations in the medieval quarters of the settlement have shown the high development of industries of the handicraft complex, such as pottery, glass and bone carving, weaving, stone-cutting art, metalworking, leatherworking and other industries that produced the necessary goods in the everyday life of the feudal society and provided high-quality tools to the adjacent foreign cities in the medieval period.

Key words: *Mizdakhkan settlement, production centers, trade and craft quarters, archaeological excavations, pottery, metalworking, glass making, bone carving, weaving, agriculture, import and export.*

Introduction. One of the largest trade and craft, craft and production centers and agro-industrial complex of the Southern Priralie in the medieval period was the Mizdakhkan settlement.

The medieval Mizdakhkan is located in the famous settlement of Gyaurkala in the Khodjeyli region of the Republic of Karakalpakstan [18]. The appearance of the

monument dates back to the 4th-3rd centuries. BC, and it existed until the XIII-XIV centuries. The oldest part of Mizdakhkan is located in the west, at the base of the Gyaur-Kala fortress and is surrounded by farmland on the southern, western, northern sides. Currently, in the eastern part, on the Mazlumkhan-sulu hill, there is a grandiose necropolis with ancient, medieval architectural structures and burial monuments (Yagodin, Khodzhayov, 1970, pp. 3-8). On the plain of these hills in the era of the Golden Horde, an unfortified settlement of the XIII-XIV centuries appeared. Stationary work at the Mizdakhkan settlement was started by V.N. Yagodin (Yagodin, 1968: 189-192) and was continued by other researchers. During this time, excavations were carried out on the territory of the necropolis of the trade and craft quarters of the Golden Horde city and in the Gyaur-Kala fortress. The materials obtained from Mizdakhkan, along with other artifacts, were used to describe ceramic production, the semi-agricultural nature of the industrial activity of the population, architectural monuments and funeral rites, the religious beliefs of the ancient inhabitants of the city and other types of handicraft production. The complex of archaeological materials accumulated and systematized by researchers was directed to develop the following tasks - to study the development of urban culture and its features on the example of the medieval Mizdakhkan (Kdyrniyazov. 2007, pp. 88-102).

The economic prerequisites for the formation of handicraft production in the Southern Aral Sea region go back to ancient times. Even in the depths of the Bronze Age culture, in the monuments of the Tazabagyab culture (Kokcha, middle of the 2nd millennium BC), traces of bronze casting were discovered. And in the era of antiquity, traces of ceramic craft - pottery kilns - were discovered and investigated on many monuments of ancient Khorezm.

Archaeological research carried out for a long time makes it possible to raise the question of the territorial development of this unique city, its appearance, development, as well as issues of civil and religious architecture in the early periods of the city's existence, issues of handicraft production and other occupations, material culture, economic, cultural ties and paleodemography of the city (Yagodin, Khodzhayov, 1978, pp. 88-91; Khodzhayov et al. 2009, pp. 100-105).

Materials and methods. In 1985, the archaeological team of the Karakalpak State University named after Berdakh joined the archaeological work of the IHAE KCO AS RUz at the Mizdakhkan settlement. Students who underwent practical training took an active part in the annual archaeological expeditions organized by the University. Over the years, excavations have been carried out on the territory of the central, eastern, southern and northern parts of the unfortified settlement. M.T.Turebekov laid several test trenches and pits on the territory of the fortress of the pre-Mongol Gyaur-kala, in the citadel (in the first palace), established a new stratigraphy and dating. These studies, together with the data of V.N. Yagodin, reflect the change in cultural strata in the historical epochs of the existence of the Mizdakhkan (IV-III BC - X century) (Turebekov, 2002: 153). The wide scope of the work of the Mizdakhkan detachment made it possible to conduct research in a significant part of the Golden Horde city, thousands of square meters were

uncovered. The materials obtained are a rich source on the historical and social topography of the city. They reveal the processes and stages of historical development in the pre-Mongol period and the era of the Golden Horde.

As a result of the opening of a large area in the southern part ("South settlement") in 2000-2008, it was established that this area of the settlement was inhabited in the pre-Mongol period as a craft quarter outside the city wall. Here, in some places, there are cultural layers of the Afrigid and Khorezmshah times, richly saturated with cultural remains and craft workshops. Intensive development of the site took place in the early Golden Horde period (Kdyrniyazov et al. 2006, pp. 135-139). In the central and eastern parts of the unfortified settlement of the settlement, a main street was opened, along which the remains of trade and craft quarters of the XIV century. A lot of various residential buildings with an underfloor heating system such as kans have been identified. Numerous craft, household and utilitarian objects have been excavated (Turebekov, Bizhanov, 1993: 14-30; Kdyrniyazov, 2002, p. 84). In general, archaeologists carried out a comprehensive study of Mizdakhkan as a large craft and production center of the medieval era. The scientific literature covered certain types of crafts (Kdyrniyazov, 1999, pp. 82-86; 2014, pp. 40-44; 2015, pp. 146-150), types of dwellings (Kdyrniyazov, 2015, pp. 91-100), numismatic material (Fedorov-Davydov, 1998: 224). The archaeological data of Mizdakhkan, along with materials from other medieval settlements, were used to solve a number of problems: the development of ceramic and iron production (Kdyrniyazov et al. 2001, pp. 52-56; Kdyrniyazov et al. 2004, p. 103), architectural decor (Kdyrniyazov, 2015, p. 70 77). Mambetullaev confirmed the data on the multi-layered ness of the monument by the method of digging and laying a wide trench on the territory of the Gyaur Kala fortress and outside its eastern defensive wall (Fig. 1).

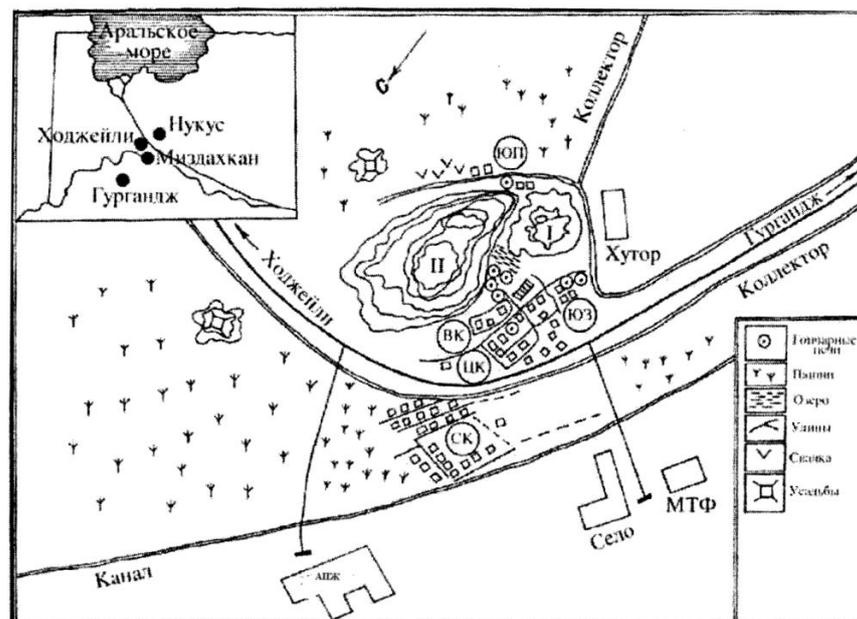


Fig. 1. Map of the Mizdakhkan settlement. Location of production areas.

At first, the study of the Mizdakhkan settlement was of a wide scientific and informative nature, which was repeatedly the object of analysis of scientific conferences, round tables and special programs on television. On May 25, 1995, a scientific-theoretical conference "Khodjeyli is the oldest city of the Republic of Karakalpakstan" was held, dedicated to the anniversary of the city of Khojeyli (Mizdakhkan). At the conference, most of the reports were devoted to the results of the study of the cultural history of the Mizdakhkan settlement. In addition, individual reports in republican and international conferences were devoted to the results of field research in Mizdakhkan. The report of M. Turebekov "Crafts and trading quarters of the XIII-XIV centuries of the Mizdakhkan settlement" at the UNESCO international seminar in Samarkand in 1990 was devoted to the preliminary results of the excavation of quarters in the central part of the unfortified settlement of the city. In the theses of the joint report by G. Khodzhaniyazov, Zh.Khakimniyazov "Medieval complex" White Khanako "in Mizdakhkan", an attempt was made to determine the time of construction of individual elements of the architectural complex of the Juma-mosque (Turebekov, 1990: 183; Khozhaniyazov, Khakimniyazov, 1997, p. 114). Summing up our review of the results of the study of this unique monument of ancient and medieval Khorezm, it should be noted that archaeological materials are essentially the main source for the study of the medieval era of Mizdakhkan. For about a hundred years, the research of the historical and cultural complex was carried out through archaeological research.

For dozens of years, stationary archaeological work was carried out at the Mizdakhkan settlement, in which handicraft workshops, flour mills, bakeries, wine-making workshops, glass-making workshops, traces of weaving production, stone cutting, woodworking and hundreds of dwellings of the era of the Khorezmshahs-Anushteginids and the Golden Horde were opened. Among them is the East Quarter II ("VK II"). The quarter is located in the eastern part of the Central Quarter ("CC"), fully opened during the 1989-1993 construction. and consists of dozens of households (Fig. 2.).

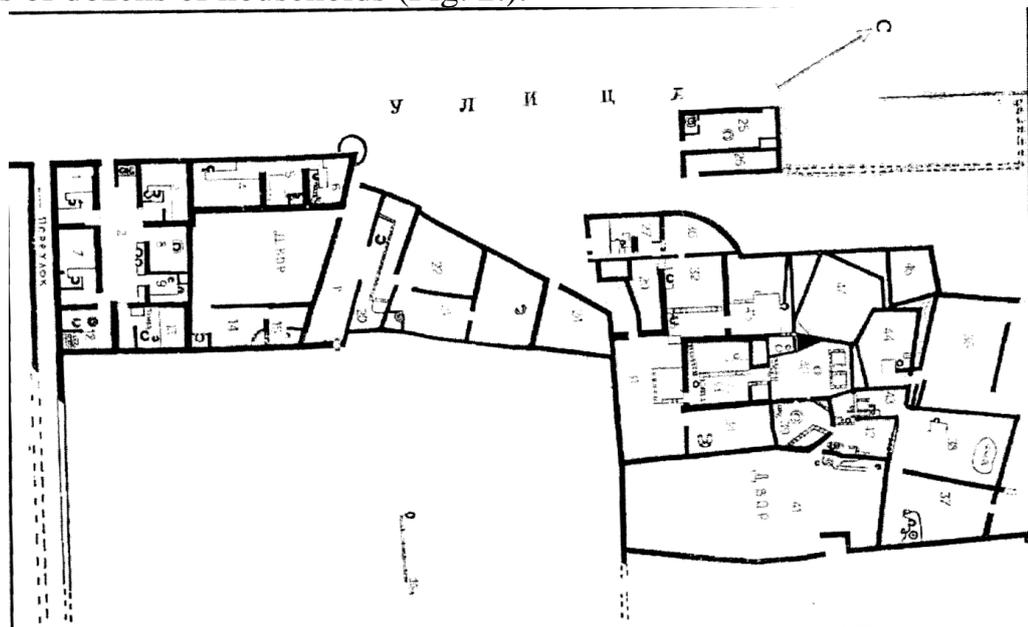


Fig. 2. "Eastern quarter" of the Mizdakhkan settlement.

It should be noted that during the construction of the dwellings of the medieval Mizdakhkan, baked bricks, improvised material, shapeless stones and raw small-format bricks were mainly used. Therefore, the lower structure of the walls and the details of the interior have been well preserved, the number of dwellings identified is much greater than in other studied settlements of medieval Khorezm. This allows us to judge a number of aspects of the life of the townspeople of the medieval Mizdakhkan: about the economy, construction equipment, cultural traditions. In general, the dwelling is one of the most important elements of the material culture of ancient society. Therefore, there is a great interest of archaeologists in the remains of residential buildings. At other monuments of Khorezm, a large number of residential buildings have been revealed. Most of them belong to rural buildings or individual structures. Some of them were examined fragmentarily. However, according to the found premises of the medieval Mizdakhkan, it is possible to distinguish different types of dwellings, the nature of the labor activity of the urban population and the level of development of handicraft production, including ceramic, metalworking, leatherworking, glass making and other industries.

In the course of archaeological work, M.T. Turebekov opened pottery workshops in the "central quarter" of the unfortified part of the Mizdakhkan. During the three archaeological seasons 1988-1990. The residential area of potters with an area of 1222 sq.m. was completely opened. In the structure of the quarter, 8 households and a large ceramic workshop were identified (Kdyrniyazov, Turebekov, 1998, pp. 13-18; Turebekov, 2003, pp. 67-79). The workshop occupies the eastern part of the block. It is located as part of a large household, consisting, in addition to economic and industrial, of residential premises and a semi-open courtyard. The total area of the farm is 574 sq.m. The large ceramic workshop consists of 7 pottery kilns, 7 wells, pits and a place for pottery machines. In three rooms and a courtyard, the process of clay processing, storage, drying and sale of products took place. The rest of the premises were occupied by the family and servants. The opened pottery furnaces of the workshop are of the same type, they are two-chamber. In the course of archaeological work, stove supplies (a pin, a tripod-tripod), molds for making vessel parts, ornamented spouts and walls, stamps with deep relief, pebble and marble polishes for ornamentation were found in the work sites. In addition, burnt and stone floats are often found to smooth out the shapes of not yet dried pottery. In general, according to the preliminary calculations of M.T. Turebekov, a team of manufacturers consisting of at least 25 people worked here. Among them were 7 master potters and at least 7 apprentices (Turebekov, 2003: 79).

These pottery workshops were located in the industrial part of the Golden Horde town of Mizdakhkan. In this and in other neighboring quarters, many industrial structures are recorded. They are located on the outskirts of residential areas (Kdyrniyazov, 1999, pp. 101-102; 2002, pp. 249-255). This is one of the features of the localization of the craft quarters of medieval Khorezm. In the Middle

Ages, as in antiquity, the artisan quarters of the city were moved outside the residential urban area.

In the field seasons 1985-2014 in the unfortified part of the Mizdakhkan settlement, large stationary excavations were carried out in various quarters. Among other trade and handicraft objects, archaeological excavations have uncovered pottery workshops consisting of single, paired (of two) or more furnaces for burning non-irrigated red clay, gray clay and black-polished ceramics.

Such individual pottery kilns were discovered by M.-Sh. Kdyrniyazov in the "south-western", "southern" quarter of the Golden Horde part of the Mizdakhkan settlement (Kdyrniyazov, Saypov, Iskenderova, 2004, pp. 103-105). An industrial complex has been excavated in the "south-western quarter", which consists of a vast courtyard with workshops, wineries, oil mills and two pottery kilns. The furnaces have similar designs, they are two-tier, located on the same horizon, and functioned simultaneously. The vaulted ceiling of the lower firing chamber is composed of raw bricks, through which heat-conducting holes of an oval-round shape have been made. The walls of the firing chamber were preserved to a height of 1.40 m (kiln No. 1) to 2.10 m (kiln No. 2), their diameter, respectively, from 2.30 to 2.55 m. The ceiling of the upper chamber was also vaulted-domed, and rose above the level of the day surface (Fig. 3.). Workshops in the complex of handicraft industries in the "southwestern" and "central" quarters of the Mizdakhkan settlement had the status of a special organized form of production. Such workshops in scientific literature are considered to be specialized workshops or "karkhana". In the era of the developed Middle Ages, large industrial workshops belonging to the social elite of the feudal society, ranging from local wealthy artisans, religious leaders to members of the khan's family, were called karkhana. Rashid ad-din (1247-1318) and the author of *Tarikh-i Vassaf* mention these types of production. In "*Tarikh-i Vassaf*" it is written: "It was decided that each of the princes should be content with the numbered thousands (of people) and their own workshops (karkhanekha-i-khass) in Bukhara and Samarkand" (Petrushevsky, 1970: 125).

Judging by the archaeological materials of the Mizdakhkan pottery, various forms of organizing handicraft production are determined. A large mass of local ceramics and their defective dumps, filling forges, the presence of several furnaces in one farm (a workshop in the "central quarter") indicate the existence of a special organizational form such as "karkhana" ("divane-masas") in the cities of the Southern Aral Sea region, including in Mizdakhkan.

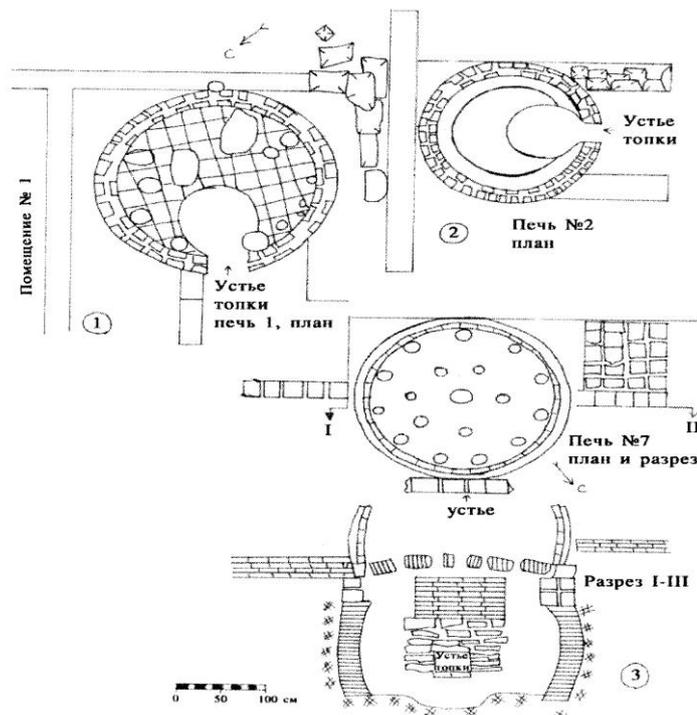


Fig. 3. Pottery kilns of the Mizdakhkan settlement. "Southwest" and "South" quarters.

Some high-quality pottery products of the medieval South Aral Sea region were exported along the caravan route to the Volga cities (Saypov, 2016: 504) and vice versa, other types were brought here, which allowed the development of ceramic production. However, the high cost of ceramic imports, the difficulties of their transportation, led to the establishment of new types of ceramics in the field. Under the influence of foreign products, local potters established the production of goods that imitated the exquisite products of various ceramic centers. This led to the development of the ceramic industry in the medieval South Aral Sea region (Saypov, 2020: 236-238).

Other types of handicraft production in the Mizdakhkan settlement are associated with agricultural farms, since the settlement in the Middle Ages was the center of the agro-industrial complex. The flour-grinding business was especially developed, although it was an individual production of an independent commodity producer and required grain reserves at the mill. For this purpose, in urban dwellings next to houses or in their complex, utility rooms such as storerooms-barns were built. In the surveyed dwellings of the Mizdakhkan storehouses-granaries with cages occupied 41% (VKI), 19% (VK II), 35.29% (SWC) and 36.8% (SK) of the area of houses (Kdyrniyazov, 2015: 142) ... In addition, one and the same courtyard or corridor could serve as a storage facility or had an economic purpose in antiquity and the Middle Ages. The most appropriate form of grain storage were pits. However, this method of storage, due to the density of the layout, boggy streets, courtyards was not widespread in cities. One thing is clear that significant grain reserves required the creation of conditions for long-term storage. For this purpose, in the houses of wealthy citizens there were special storerooms, barns, divided into cells - bins with brick partitions (height 0.60-1.15 m). Home mills or kharaz were

noted by the researcher of the rural settlements of Khorezm. E.E. Nerazik indicates their belonging to the flour-grinding business (Nerazik, 1976, p. 128). Large kharazes in Khorezm were first recorded in the ancient era. This was due to the rise in yields as a result of the development of land for a commodity economy using slave labor. The power of the Khorezmshah empire and the relatively peaceful situation in the Southern Aral Sea region during the era of the Golden Horde contributed to an increase in the productivity of land use. Khorezm in the XIII-XIV centuries was one of the centers of grain production.

In 1985-1999. in the Golden Horde part of the Mizdakhkan, trade and craft quarters were discovered. In the quarters "Vostochny I-II", "Yugo-zapadny", "Severny", more than 200 rooms are compactly combined into 35 houses - sections, of which in 24 are found workshops-wine press, oil mills, flour mills, bakeries, bins (Kdyrniyazov, 1999a S. 82-86; 1999b. S. 101-102). Among them is the "Southwest" handicraft complex with workshops, wine presses and oil mills (Fig. 4.). In connection with the establishment of the purpose of the workshops, of undoubted interest is the discovery of a vessel associated with wine production in workshop No. 2. A vessel of a peculiar subcylindrical shape, with a wide neck. A peculiar element of the vessel is the presence of a mesh ceramic "filter". There is a place in the neck of the vessel for inserting a "filter". With the help of a vessel, the master winemaker scooped the mash from the tank and, placing a filter at the neck, filtered the juice. Such a vessel, rare for Khorezm, was made specifically for the needs of the wine industry.

Special stone pressure presses, vessels for draining wine mash, as well as the discovery of grape seeds, indisputably testify to the well-established process of processing grapes in the field of organizing the production of agricultural crops. The existence of vineyards on the territory of Khorezm in the Middle Ages and the presence of a well-equipped winery on Mizdakhkan testifies to the commercial nature of this production in the 13th-15th centuries.

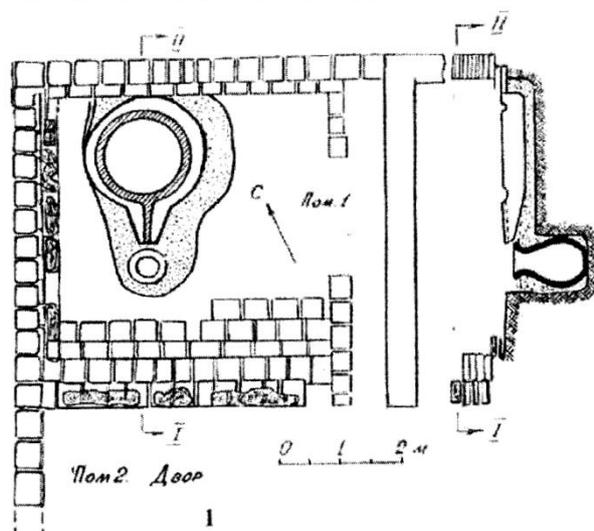


Fig. 4. "Southwest" craft complex with wine-making workshops.

Results and discussions. During the study of the Mizdakhkan quarters, traces of a workshop for the processing of non-ferrous and other fused metals were found

(Kdyrniyazov, 2008: 211-227). In the "East Quarter I", in the utility room, remains of a cylindrical hearth were found. Its wall is made of raw and burnt bricks. A thick compressed layer of ash and charcoal lay on the floor of the blower. Near the forge lay semi-finished products and iron. Here, on the sufa, there were copper wires, iron knives, a hammer, stone weights, six cowrie shells, and a treasure of 32 coins (Fedorov-Davydov, 1998, pp. 225-227). In the "Yugo-Zapadny" (South-west) quarter, in house No. 3, a crucible was found, which testifies to the iron-making production of the settlement. "Ladle" - a crucible with a small handle and massive walls, according to naturalists, due to the good refractoriness of talcum stone, could be used as crucibles for iron processing and in other industries associated with high temperatures. There was a specialization of metalworking craft in the settlement. Perhaps there were special workshops for the manufacture of knives, sickles, edged weapons and armor (chain mail, helmets), "locks", tools (ketmen, adze, pick, hammer, etc.) and jewelry.

Proceeding from archaeological artifacts, it can be assumed that an important place in the activities of the population of the medieval Mizdakhkan belonged to the iron-making handicraft industry. However, metallurgy could not get high development in the settlement due to the lack of a local raw material base. The lack of iron ore could be replenished from neighboring mining areas. According to research, the traditional supplier of iron was Maverannahr and Eastern Europe (Volga region, Ural). The role of the latter especially increased in pre- and post-Mongol times. Neighboring Bukhara and Khorezm have had ethno cultural and trade contacts since ancient times (Adylov, 1998: 28). It must be assumed that the minerals of Central Asia in the medieval period in the form of processed semi-finished products through the Bukhara oasis were imported into the Southern Aral Sea region. However, it should be noted that this region was not always a consumer from the outside, there were deposits of ores in the very South Aral region. In the XII-XIV centuries. in the Sultanuzdag mountains, along with many points of development of talc carbonate rocks, the remains of medieval workings of copper and other metals have been revealed (Manylov, 1974: 16-17; Dudakov, 1990, pp. 48-50). Antonio Jenkinson, who visited Khorezm in 1558, mentions the old traditions of arms crafts (Jenkinson, 1938: 178). Based on written sources and archeological data, it can be stated that in the Southern Aral region in the XIII-XV centuries. there was a specialized metalworking craft. Judging by the archaeological data, in the medieval period, stone-cutting also reached a new rise. Numerous samples of stone products indicate that there were artisans in Mizdakhkan who specialized in stone processing. Archaeological research in the Sultanuzdag mountains made it possible to establish that semi-finished talc stone products were sent to nearby settlements, where stone cutters completed the work on their finishing.

Conclusion. In addition to the above-described handicraft industries, other industries were developed in the medieval quarters of Mizdakhkan, such as bone carving craft, weaving, glass making, leatherworking, woodworking and other industries that produced products necessary in the everyday life of medieval society. But, due to the limitation of the volume of the article, we will not describe all types

of handicraft production that developed in the economic quarters of the Mizdakhkan settlement. It should be stated that the study of the craft activities of the Mizdakhkan population in the medieval period allows us to draw the following conclusions. In Mizdakhkan, as well as in other settlements of the South Aral Sea region, Maverennahr, South Turkmenistan, handicraft production developed, their qualifications and specialization improved. A significant part of the population of the eastern quarter I-II, in addition to handicrafts, was engaged in the processing of agricultural products. In the "southwestern" quarter, you can clearly see a trade and craft complex, consisting of pottery furnaces, wineries and butter mills. There is no doubt that the inhabitants of Mizdakhkan combined craft, trade and agricultural pursuits. To the central part of the city XIII-XIV centuries. the territory of the "Northern Quarter" adjoins with the remains of separate scattered houses with traces of a quadrangular clay fence, which is, as a rule, the remains of an agricultural land. A prominent place among the crafts of the medieval settlement of Mizdakhkan was occupied by pottery, glass and bone carving. By releasing their products, artisans not only provided the domestic market with the necessary goods, but also carried out caravan trade in luxury goods, fabric, porcelain, jewelry, exotic goods with foreign cities of the Middle Ages.

References :

1. Adylov SH.T. Istoki i vozniknoveniye tsivilizatsiy i gosudarstvennosti v zapadnom Sogde // ONU, 1998, № 4-5.
2. Dzhenkinson A. Puteshestviye v Srednyuyu Aziyu 1558-1560 gg. Angliyskiye puteshestvenniki v Moskovskom gosudarstve v XVI v. L., 1938.
3. Dudakov S.A. Izucheniye rudnikov zhernovov na territorii Uzbekistana // ONU, Tashkent, 1990, № 11.
4. Kdyrniyazov M.-SH., Turebekov M. Mizdakhkan zolotoordynskogo vremeni // Khodzheyli - drevneyshiy gorod Respubliki Karakalpakstan. Khodzheyli, 1998.
5. Kdyrniyazov M.-SH. Ob agrarnom kharaktere proizvoditel'noy deyatel'nosti naseleniya Mizdakhkana // ONU, 1999, № 4-5.
6. Kdyrniyazov M.-SH. Masterskiye vinodel'ni zolotoordynskogo Mizdakhkana // Vestnik KKO AN RUz, 1999. S. 101-102.
7. Kdyrniyazov M.-SH., Iskenderova A., Saypov S. Goncharnyye pechi srednevekovogo Mizdakhkana // Vestnik KKO AN RUz, 2004, № 1-2.
8. Kdyrniyazov M.-SH., Saipov S.T., Kdyrniyazov O.-SH. Keramicheskoye remeslo Mizdakhkana // Arkheologiya Uzbekistana. 2014. № 2 (9).
9. Kdyrniyazov. M.-SH., Saipov. S.T., Kdyrniyazov. A. Raskopki na gorodishche Mizdakhkan// AIU- 2004-2005 gg. T. Fan. 2006.
10. Kdyrniyazov M-SH Mizdakhkan- pamyatnik zolotoordynskoy epokhi // Povolzh'ye i sopredel'nyye territorii v sredniye veka / Trudy GIM. vyp. 135 M. 2002.
11. Kdyrniyazov. M-SH. Gorodskoye zhilishche Khorezma v epokhu Zolotoy Ordyy// Materialy konferentsii «Genezis i puti razvitiya protsessov urbanizatsii Tsentral'noy Azii», posvyashchennoy 25-letiyu obrazovaniya IA AN RUz i 60 letiyu akademika A. Askarova. Samarkand. 1995.
12. Kdyrniyazov. M-SH.,Bauyetdinov. R. Novyye arkheologicheskiye dannyye o srednevekovom Mizdakhkane // ONUz 2001 №3 s 52-56

13. Kdymniyazov M-SH., Utaliyev. S. Arkhitekturnyy dekor zolotoordynskikh pamyatnikov Mizdakhkana // Vestnik KKO AN RUz- 1999. -№2. S. 44-47.
14. Kdymniyazov M-SH Kapiteli kolonny Mizdakhkana // Isskustvo (SAN'AT,ART). 2003. №2. s. 10-11
15. Kdymniyazov M-SH, Kdymniyazov O-SH Metallicheskiye izdeliya iz srednevekovogo Mizdakhkana // Drevnyaya i srednevekovaya urbanizatsiya Yevrazii i vozrast goroda Shymkent. Shymkent. 2008. s. 211.
16. Kdymniyazov M-SH Gorodskaya kul'tura srednevekovogo Khorezma (XII-XIV vv.) Samarkand 2007.
17. Kdymniyazov M.-SH. Kul'tura Khorezma v XIII-XIV vv. Samarkand., 2015. 320 s.
18. Kerimbergenovich, A. A., Kamilovich, S. S., Tursinbaevich, A. R., Jannazarovich, A. K., Kazievich, S. J., & Maksetovich, O. H. (2020). Ecotourism development in the republic of karakalpakstan: Historical places and protected areas. *Journal of Critical Reviews*, 7(12), 1258-1262. doi:10.31838/jcr.07.12.220
19. Manylov YU.P., Khodzhayov T.K. Mavzolei srednevekovogo Dzhampykkala // Vestnik KK FAN RUz. 1972. № 2.
20. Nerazik Ye.Ye. Sel'skoye zhilishche Khorezma (I-XIV vv.). M., 1976.
21. Petrushevskiy I.P. Pokhod mongol'skikh voysk v Srednyuyu Aziyu v 1219-1224 gg. i yego posledstviya//Tataro-mongoly v Azii i Yevrope.M.,1970.
22. Saypov S. Znachenie Velikogo Shelkovogo puti v razvitiye keramicheskogo proizvodstva srednevekovogo Khorezma // International symposium on "Culture dialogue of the Silk Road countries" 5-6 th May 2016 –Erzurum/Turkey.p, 502-506
23. Saypov S. Privoznyye keramiki v pamyatnikakh srednevekovogo Yuzhnogo Priaral'ya – odin iz pokazateley razvitiya torgovykh otnoshenii v Velikom Shelkovom puti // Materialy II- oy Mezhdunarodnoy konferentsii «Velikiy Shelkovyy put' – doroga mira, soglasiya i stabil'nosti» Mezhdunarodnyy Kazakhsko- Turetskiy universitet imeni KH.A.Yassavi., Turkistan. 2020. S. 231-238.
24. Turebekov. M, Bizhanov. Ye. B. Raskopki zolotoordynskogo kvartala Mizdakhkana v 1985 g. // Voprosy istorii, arkhologii i etnografii Karakalpakstana. Sb nauchi trudov. Vyp. 2 Nukus. 1993.
25. Turebekov M. Issledovaniye tsitadeli Gyaur kala gorodishcha Mizdakhkan // Arkheologicheskiye issledovaniya v Uzbekistane 2001. tashkent 2002.
26. Turebekov M raskopki zhilogo massiva goncharov srednevekovogo Mizdakhkana AP vyp VI. nukus., 2003.
27. Turebekov .M.T. Torgovo-remeslennyye kvartaly XIII-XIV vv gorodishcha Mizdakhkan // Formirovaniye i razvitiye trass velikogo shelkovogo puti v Tsentral'noy Azii v drevnosti i srednevekovaya.; Tez. Dok. Mezhdunarodnogo sem. YUNESKO. 1-6 oktyabrya. 1990. Samarkand . 1990. s. 183.
28. Turebekov M. Raskopki zhilogo massiva № 1 srednevekovogo Mizdakhkana // Istoriya i material'naya kul'tura Karakalpakstana. Nukus, 2006.
29. Fedorov-Davydov. G. A. Iz istorii denezhnogo obrashcheniya srednevekovogo Khorezma// Sb.; Priaral'ye v drevnosti i srednevekov'ye. M. Nauka. 1998.
30. Khodzhayov T.K, Turebekov M.T., Kosekeyev B. Kraniologicheskiy material XIII-XIVvv. Iz nekropolya Mizdakhkana (raskopki 2005 g) // Vestnik KGU im Berdakha.Nukus, 2009 №1.
31. Khodzhanliyazov G., Khakimniyazov. ZH. Srednevekovyy kompleks Beloye khanako v Mizdakhkane // Tariykh fani dolzarb muammolari Konferentsiya ma"ruzalari Camarkand. 18-20 noyabrya. 1997. g.
32. Yagodin V.N., Khodzhayov T.K. Nekropol' drevnego Mizdakhkana. Tashkent.Fan, 1970.

33. Yagodin V.N. K izucheniyu topografii i khronologii drevnego Mizdakhkana// V kn: Istoriya, arkheologiya i etnografiya Sredney Azii. M.:Nauka, 1968.
34. Yagodin V.N, Khodzhayov T.K Opyt paleodemograficheskogo izucheniya naseleniya Mizdakhkana // IMKU.- Vyp.14- T; Fan, 1978.
35. Berdimuratova, A. K., & Mukhammadiyarova, A. J. (2020). Philosophical and methodological aspects of the interaction of natural environment and man. *International Journal of Pharmaceutical Research*. <https://doi.org/10.31838/ijpr/2020.12.03.235>
36. Pirnazarov, N. (2020). Philosophical analysis of the issue of spirituality. *International Journal of Advanced Science and Technology*, 29(5).
37. Nurnazar Pirnazarov, Madiyar Utebaev. "METHODS AND FORMS OF GREETINGS", "Scientific enquiry in the contemporary world: theoretical basics and innovative approach" 7th edition, Colifornia, USA, 2016, pp 59-64
38. Pirnazarov N Alimbetov Yu. [Culture: Tradition And Novation](#), East European Scientific Journal Volume 54 Issue 2, pp 38-41.
39. Alimov Atabek. (2016). Ecotourism development in Karakalpakstan: challenges, new trends and prospects. *Bulletin of science and practice*.
40. Zumrad, U., & Alimov, A. (2020). Problems of the Development of Tourism and Recreational Services in Uzbekistan in the Context of a Global Pandemic. *International Journal of Future Generation Communication and Networking*
41. Karlibaeva Gulmira Features of the use of synonyms in the works of the Karakalpak classical poet Ajiniyaz. *European Journal of Molecular & Clinical Medicine*, 2020; 7(6): 213-217
42. Alimov, A., Adilchaev, R., Oteev, U., Adilchaev, B., & Temirkhanov, A. (2020). Innovative approach to clustering in tourism (in example EU countries). *Journal of Critical Reviews*, 7(2), 781-786. doi:10.31838/jcr.07.02.143
43. Durmanov, A., Bayjanov, S., Khodjimukhamedova, S., Nurimbetov, T., Eshev, A., & Shanasirova, N. (2020). Issues of accounting for organizational and economic mechanisms in greenhouse activities. *Journal of Advanced Research in Dynamical and Control Systems*, 12(7 Special Issue), 114-126. doi:10.5373/JARDCS/V12SP7/20202089
44. Pirnazarov, N. R. uli. (2020). INFLUENCE OF VIRTUAL REALITY ON THE SPIRITUALITY OF INFORMATION SOCIETY. *EurasianUnionScientists*. <https://doi.org/10.31618/esu.2413-9335.2020.2.71.587>