Archaeology at the Western Margins of Thar Desert: Recent Explorations in Khairpur's Tehsil Faiz Ganj, Sindh

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Abstract

This work attempts to identify and locate forty sites of different periods, explored as a result of recent field activities in the Tehsil Faiz Ganj, Khairpur District, Sindh. Further, an analysis of this data mainly contributes to understand the eastern limits of inhabitation towards the western margins of Thar desert in Sindh. In this connection, the study demonstrates a cultural chain of events dating back from the middle palaeolithic to the late historic periods, marking the highest concentration of Harappan site. There are thirteen sites of significant Harappan occupation, with diagnostic groups of the Hakra and Kot Diji periods, five large Mature Harappan settlements, and traces of their survival into the localisation (Jhukar) phase. More importantly, the discovery of Hakra-phase material at Taloor ji Bhit and other sites, such as Ronri with its kiln characteristics, indicates an uncharted early occupation and cultural direction between the regionalisation and cultural integration periods. One of them is the discovery of Painted Grey Ware at six sites, which provide a critical chronological interval between the decline of Indus urbanism and the emergence of the second urbanization in South Asia. Further, a spatial analysis reveals that the ancient population strategically exploited the ecotone between the Indus alluvial plains and the Thar Desert to utilize seasonal water sources and facilitate long-distance trade, as attested by the coastal materials. This paper finally conclusively confirms that the Thar Desert fringe was not a periphery but a vibrant cultural flow that reflects Faiz Ganj's contribution to the continuing habitation, cultural exchange, and adaptation in Prehistoric and Protohistoric Sindh.

Keywords: Harappa, Indus Valley Civilization, Sindh, Khairpur, Bronze Age.

1. Introduction

Scientific studies on the history and archaeology of Sindh formally begin during British rule in India. However, the medieval accounts of the

* This paper is based on recent explorations in Sindh, conducted for the requirement of MPhil Degree of the first Author (Ali 2022), under the supervision of the second, and further studies are in progress. The presence of the second Author here intends only to express his supervisory role in the explorations in Sindh province of Pakistan.

geography, history and culture include the sources of Arab, Persian and Chinese geographers and travellers. These are after the classical and vernacular Vedic and other sources of religious thought and culture. In this connection, the etymology of word 'Sindh' is appearing to be rooted in Proto-Indo-European stems of 'sent-' and 'déh₂nu'. Stem 'sent-', expressing a meaning of 'path', whereas 'déh₂nu' is relating 'water'. Probably their composition is giving a noun for any 'river' in Indo-Aryan languages. Ultimately, helping in developing as a proper noun 'Sindhu', visible in Vedic Sanskrit, more specific to the river mentioned in the Rig Veda (RV 10.75). The travellers, historians, and geographers have long recognized its geographical importance, and particularly the Arabs have specified it only for the region at bottom of this River.

The excavation of Buddhist Stupa at Jhruk (Thatta) in 1852 by W. Cole, and the excavation at Brahminabad or Al-Mansurah (Bellasis 1855) are the initial attempts to understand the forgotten history of this region. The work of Alexander Cunningham on the geography of India (Cunningham 1963), the geological survey of India (Blanford 1880), before the discovery of Indus Valley Civilization in Sindh are the baseline studies for the development of this subject. These investigations gave a strong plateform for furthering the archaeological excavations (Ali 2022) in the present Sindh Province of Pakistan.

Following the discovery of the great Indus Valley Civilization, Majumdar (1934) conducted explorations in Sindh, and uncovered several sites of archaeological importance. Furthermore, he conducted excavations at many sites and opened new insights into the Indus Valley Civilization. On the basis of excavations, Mujumdar was able to understand the continuity of cultural sequence from Mature to Jhukar, Jhangar on the cultural material and the design of painted pottery, moving forward another late culture assemblage, Trihni, which was also related on the designs of painted pottery with Jhukar and Jhangar, which hardly dated back to 7th century BC, as later also observed by Mackay (1943) at Chanhu-Daro and on several sites of desert by Shar (1995). Ghurye's discoveries of Naru Waro Dhoro and Kot Diji (Ghurye 1936), De Terra and Patterson's investigations in Rohri hills—who described two groups of the sites, one on the limestone hill west-northeast of Sukkur and the other on the opposite Indus bank, one and a half miles southeast of Rohri —pushed back the history of the region and fostered many further studies in Rohri hills for the Stone Age (De Terra and Patterson 1939). The excavations at Naru Waro Dhoro (Khan 1964) and Kot Diji (Khan 1965) by the Department of

Archaeology and Museums revealed a new and early phase of the Indus Valley civilisation at Kot Diji. After the announcements and excavation results, a new topic was opened for the researchers on the Indus Valley civilization and its distribution.

Faiz Ganj, an administrative unit of District Khairpur Mirs, is the second largest tehsil located on the south and the western most limits of the district. On the geographical front, the region is a patchwork of the Thar desert, which occupies some 70 percent of the tehsil on the one hand, and the fertile Indus alluvial plains on the other hand, on the western side (Pithawala 1935). This terrain, with lakes (Dhunds), rain-fed valleys, and alluvial plains in the desert, offered diverse subsistence resources, including chert sources in the local Rohri Hills, good grazing areas, and possible agriculture, which attracted human activity over millennia (Biagi 2008; Veesar 2009). There had been prior archaeological studies in the area by Shar (1995) and Mallah (2000) that distinguished isolated Harappan sites, but due to their limited area of research they could not provide a clear picture of the settlement pattern in Faiz Ganj. The documentation by Hami (1994) was valuable but did not include sufficient identification of the culture or exact coordinates thus making relocating and reassessing the sites difficult. The present study addresses these gaps by undertaking a systematic study, drawing on the frameworks put forward by these previous scholars, while employing more rigorous methodological means (Ali 2022).

The recent exploration in the proposed area was conducted in the months of October, November, and December 2022. The purpose of this exploration was to attract further attention by surveying previously and newly discovered archaeological settlements for detailed study. The previous explorations in Faiz Ganj lacked site coordinates and identified only a few archaeological sites in the vast area of its portion of the Thar desert; even earlier documented sites with short descriptions were never observed in later explorations. The selected area is of fundamental importance for its geography; however, it is necessary to examine the settlement patterns and cultural continuity in ancient times. The varied nature of the area, along with several microecological units, provided favourable conditions for living beings and attracted ancient people to settle and exploit resources, such as water and grazing, for the domestication of animals.

The recent exploration work was conducted with the help of local people; they provided every facility to reach the sites and sometimes arranged transport and tents for camping overnight in the Thar desert region

of Faiz Ganj. In the results of the recent exploration, a total of forty sites were surveyed in the plains and in the desert, where different researchers earlier documented only 12 sites, including the work of Kazi (1982), Atta Muhammad Hami (1994), and Ghulam Mustafa Shar (Shar 1995). The remaining sites are recently explored during current exploration. Therefore, recently explored sites pushed back the history of Tehsil Faiz Ganj from the Kot Diji Phase to the Middle Palaeolithic; however, the chronological sequence, based on the relative dates of cultural material, continued till the late Historic period of Sindh (Ali 2022).

2. Geographical Settings

The Tehsil Faiz Ganj covers approximately 992 square kilometers in Khairpur District and is characterized by two dominant ecological regions. Its eastern region is covered by the Thar Desert, which occupies about 70 percent of the territory, whereas the western part is the Indus alluvial plain (Ali 2022). This intermediate status creates a microenvironment especially appealing to the Harappan settlers. The archaeological value of the area is based on its hydrology, especially its location along the old Khairpur course as Flam (1981) discovered. This paleochannel, along with several perennial, seasonable lakes (synonymously called dhunds) and rain-fed valleys, provided a network of available habitats and communication pathways (Mallah, 2000). Derah Wari Dhund, Bibi Maryam Wari Dhund, Taari Wari Dhund, and other water bodies provided vital resources in a dry environment (Ali 2022).

The area is situated in the Thar Desert, which comprises a few alluvial plains along old and active watercourses, valleys, and lakes (Ali 2022). These are two types of desert alluvial plains, which are cultivated and rain-fed. The alluvial plains have been cultivated using canal systems, mainly during the winter months, as there is no adequate water supply over long distances. These plains and valleys have mostly silty/wariasi soil, which is made up of loose grey sand or other light soil that disintegrates into powder when dry (Ali 2022). Examples of crops growing in these desert alluvial plains include cotton, mung, sorghum, millet, mustard, and wheat, whereas rain-fed valleys transform into green grasses during rainy seasons, and local trees such as kandi, babur, khabar, krir, and jujube grow (Ali 2022). The vegetation of the region comprises unique desert species that have been used since prehistoric times, as witnessed by Veesar (2009). These were among *aerva javanica* (Booh), *calligonum polygonoides*

(Phog), *capparis decidua* (Kirar), *prosopis cineraria* (Kandi), and *salvadora oleoides* (Khabar), and they were all sources of the essentials for people and their cattle (Ali 2022).

Also, the area's proximity to chert in Rohri Hills and Veesar Valley, about 26 kilometers northeast of prominent locations, such as Bibi Maryam Waro Thikratho, ensured the availability of the raw materials required for toolmaking (Biagi 2008; Ali 2022). The Rohri Hills are especially endowed with natural resources, such as lime and chert embedded in the limestone layers, which contain amazing tertiary fossils, mainly nummulites of the same group as those of the Khirthar range (Pithawala 1935). Early humans inhabited these hills since the Lower Palaeolithic, and some of the materials included fuller earth, gypsum, and different stones, which are still used locally (Ali 2022). This, coupled with water bodies, the presence of raw materials, a variety of flora, and a strategic location between the active Indus flow and the Hakra/Nara system, made this a very attractive landscape for long-term human habitation despite its hostile environment. The diverse ecological basins facilitated several subsistence strategies, such as agriculture, pastoralism, and hunting and gathering, as part of the long-term settlement of the area.

3. An Archaeological Sequence from the Settlements

The current paper reports the findings of a detailed survey that reveal a hitherto unanticipated density and temporal scope of habitation in this so-called marginal habitat. Out of the 40 explored sites, 29 are newly discovered. The results deepen the chronological context of human presence in Faiz Ganj and the evidence of this can be traced back to the Middle Palaeolithic, such as a flint hand-pick discovered by Bibi Maryam Waro Thikratho (Ali 2022), the Mesolithic, and Neolithic period, as the presence of chaff-tempered pottery at such sites as Bibi Maryam Waro Thikratho and Qasim Wari Bhit confirms (Chandio *et al.* 2012).

The survey led to the discovery of the Hakra cultural phase, which in this region is present in only seven locations. The diagnostic material consists of thick-body, handmade and wheel-turned sherds of pottery with a thick mud-applied surface, frequently incised with bits of pottery and cloth impressions on the interior surfaces. These discoveries were recorded at locations including Qasim Wari Bhit, Ali Ashabi, Changan Waro Wero-1, and Ronri, being highly similar to the Hakra ware recorded at Mangrian-Jo-Pat in the Thar desert, and in the Cholistan region (Mughal, 1997, Shaikh *et*

al., 2002-03, Mallah *et al*., 2002). This proves that the initial Indus people were taking advantage of the desert fringes of the margins of the Hakra-Nara system.

The survey is important in that it greatly increases the known range of Kot Diji culture, giving twelve sites on top of the previously known ones, such as Taloor-Ji-Bhit. These settlements comprised the mounded sites of Ronri, Changan Waro Wero-2 and Bhiro Akro Pul, which produced a classic Kot Dijian ceramic assemblage. The material is defined by short-necked, lightweight rims with low body texture and frequently embellished with red slip and cut lines. Pottery with incised triangular dots and floral designs was discovered at the Soomar Tali site, exceptionally similar to Kot Dijian pottery at the excavated Lewan site, indicates a level of cultural similarity across different regions (Khan 1965, Mughal 1997). Finds of such mounded settlements suggest a pattern of permanent settlement and refute the idea that the Thar desert was just a marginal area in the early Indus period (Mallah *et al.* 2014).

The presence of the Mature Harappan era was proved at the major sites that had been recognized by other scholars, such as Shar (1995) and Kazi (1992). Taloor-Ji-Bhit, at the specific site, was found to be a rich source of classic Mature Harappan pottery, including jar rims with flaring profiles and pottery painted with a black geometric and floral design, including fish-scale and pipal leaf designs, on a red slip (Kenoyer 1998). The agate and marine shell were used as raw materials for producing bangles, meaning that the settlement was connected with the overall Indus trade and craft networks.

The shift from the Mature to the Late Indus period (Localisation Era) is attested in a number of sites. According to Shar (1995), Taloor-Ji-Bhit and Abu Bakar Mullo have produced pottery dated to the Jhukar culture, with deterioration in the style of painting, using thick, poorly applied black paint over a dull red slip (Mughal 1997). Moreover, the present survey identified Trihni ware at four locations, including Lakeryo-1 and Bhiro Akro Pul. This ware, initially proposed by Majumdar (1934), is characterized by pinkish fabric with black decoration on a cream slip, representing a definite post-urban ceramic tradition dating back to approximately the 7th century BCE (Mackay 1943).

Moreover, the study bridges a significant chronological era by documenting the Painted Grey Ware (PGW) at 6 sites, such as Sonai, Sanhri Bhit, as well as Tarai Waro Thikratho, giving a crucial chronological gap between the fall of the first urbanization (Localisation Era) and the rise of

the second urbanization (Lal 1992). The occupation's persistence is once again demonstrated by early Historic period artefacts and late Historic period artefacts, and the sequence of culture is closely related to previously known stratigraphic studies such as that at Sehwan Sharif (Kervran 2001) and Kaath Banbhan (Shaikh 2018).

These discoveries challenge traditional views of settlement patterns and demonstrate that desert fringe regions should be reassessed within the broader economic and cultural contexts of the Indus Valley and the cultures that succeeded it. They unveil a landscape, not fringe, but a continually inhabited and exploited area, whose prosperity depended on the shifting paths of the Indus and its overflow routes, which provided the alluvial plains in the desert and supported life from the Stone Age to the present day.

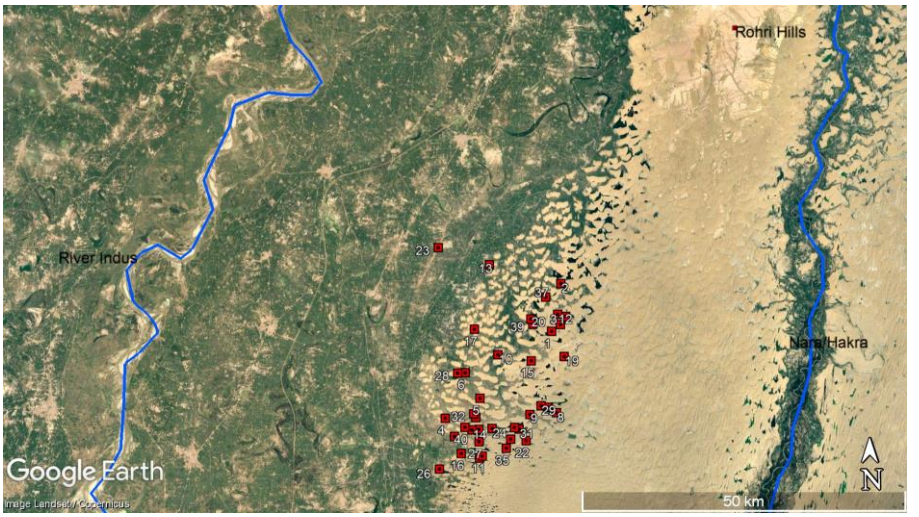

Fig. 1 - Distribution of sites in the studied area (Elaborated by the Authors).

4. The Settlements and Economy

In total, 40 archaeological settlements have been explored in Faiz Ganj, distributed across the two geographical zones mentioned above: the Thar Desert and the Indus alluvial plain. There is only a single site reported from the Indus alluvial plain, and the remaining all are in the desert, beside the lakes, and in the Indus alluvial plains, which are present in the desert. The chronological sequence of sites date from the middle Palaeolithic to the late historic period (Ali 2022; see also Tab. 1).

As already discussed, the selected area lies between the two major river courses. The presently flowing course of the Indus River which is approximately 36 kilometres in the west of the selected area, and the Nara canal (Ancient Hakra) is also flowing at the same distance in the east. The settlements of Faiz Ganj are suggesting their main source of water from Khairpur course in ancient times and rain, which mostly falls during the monsoon season. The people of the desert use small-scale agriculture and pastoralism. Mostly, nomadic populations benefited from the rainwater, especially during the monsoon, as they travelled towards the Thar desert with their cattle (Ali 2022).

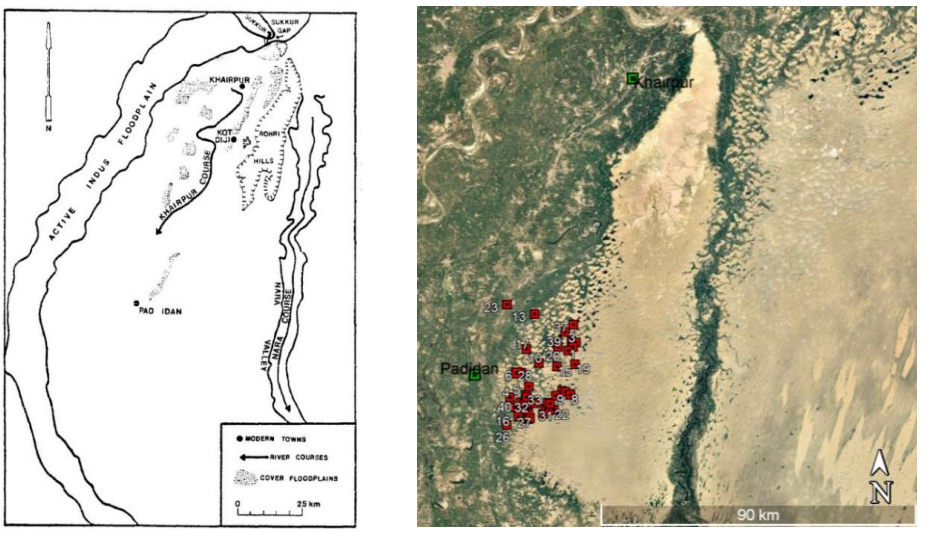

Fig. 2 - Map showing Khairpur course (left, source: Louis Flam).
Distribution of settlements (right, source Google Earth modified by Authors).

The settlements in Faiz Ganj are economically dependent on the Indus alluvial plains to its west and valleys in the deep desert. In total, just a single site is located in the plain, and the remaining 39 sites are in desert. Here a question may arise in the mind of the reader: why is the number of settlements in the plain lower than the number of settlements within the sand dunes of the Thar desert? The answer could be that in the plains, settlements are not preserved due to cultivation, population growth, and the continued expansion of villages and towns. However, the desert portion is an arid zone where growth and new settlements are much lower as compared to plains (Ali 2022).

The ancient course as described by Flam as the Khairpur course, passed near the western margin of the Thar Desert (Flam 1981). The traces of this post-Pleistocene course are visible and lead to the sand dunes. According to Panhwar, this same course is described as the prehistoric course of the river Indus (Panhwar 1969). This course furnished the desert margin, and that's why the settlements of Taloor ji Bhit and Garho Bhiro flourished on this major course of the Indus. However, settlements within sand dunes are present on the lake shores and on the plain areas, which are connected. Water access through spill channels reaches these lakes and the plain area. The Indus River plains stretch in a chain from the western side and continue into the dunes, forming a fringe. The Indus River's spill channels might have formed these fringes during the middle Holocene (Flam 1981).

Fig. 4 - Locals in the desert with their herds (Photo: Chang).

The chronological sequence of the sites and the associated cultural material suggests that these settlements were reoccupied and revised by the occupants over time. During the Harapan period or later, when catastrophic conditions and severe flooding occurred in the plains, people moved to the uplands of the Thar Desert and exploited subsistence resources (Mallah, 2008). Furthermore, the availability of the settlements suggests that the

course 5 of the river Indus continued its flow till the installation of the Sukkur Barrage. The Stone Age communities must have exploited the subsistence resources of the research area; the Fauna and Flora were used extensively. The wild plants provide fruit sources and different herbs. The region's lakes are rich in fish and waterfowl, as well as wild animals such as foxes, rabbits, jackals, pigs, lizards, and others common in the desert environment (Ali 2022).

Fig. 5 - A view of the cultivated Indus alluvial plain in the desert (Photo: Chang).

The Neolithic economy was based on domestication and early farming, which later developed in the Indus Valley civilization. The evidence of the Neolithic chaff-tempered pottery suggests that during the Neolithic phase, early farming communities also exploited this region, and it was the time of the first Urbanisation of South Asia. When farming communities produced surplus food, a sedentary form of life appeared. In the Harappan times, people established their cities on the banks of rivers; the Indus River was a major source of agriculture and a major trade route out of the territory. Furthermore, the Harappan economy was based on the distribution of raw materials; for instance, the Khairpur region is rich in chert sources that were exploited during the Harappan period. The shell, carnelian, agate and lapis lazuli were the fundamental trade goods of the Harappan economy. However, the Thar desert becomes very green after annual rainfall, which provides additional subsistence resources, such as mushrooms for human

consumption and grazing for herds. After the Harappan period, there is cultural continuity, suggesting the region has been repeatedly used for its resources. An ecosystem itself is a subsistence source of survival that connects the consumers to its resource niches (Mallah 2000a, Veesar 2009).

5. A Discussion

The importance of the Khairpur region in Indus archaeology is undeniable. Earlier explorers, such as Alexander Cunningham, Blandford, and Lambrick, mention Khairpur and its archaeological remains. Ghurye (1936) visited the sites of Kot Diji and Naru Waro Dhoro, and he first recognized the Kot Diji site as a prehistoric site. Moreover, after the partition, extensive archaeological exploration has been conducted, and many studies have focused on the Rohri Hills area, where Italian archaeologists and the Department of Archaeology, Shah Abdul Latif University, Khairpur, have discovered hundreds of stone-age-period settlements. Specifically, in the Faiz Ganj region, only sixteen sites were known; the present author added twenty nine, many of which are structural sites (Ali 2022).

The identification of cultural material on the newly discovered sites in the research area indicates that the region was rich in subsistence resources and was extensively exploited from the Mesolithic to the historic periods. The availability of stone tools from a Mesolithic workshop and from the same sites, the continuity of Neolithic chaff-tempered pottery, and the presence of early Indus cultural material (Hakra and Kot Diji) show that this region played a key role in the development of the Indus Valley Civilization. Furthermore, the Kot Diji sites in the Cholistan desert, recognised by the Mughal (43 sites) along the dried Hakra river, were viewed as indicating that the Cholistan desert was the centre of Kot Diji culture and its southwestern accumulation was the Kot Diji site located in the plains of Sindh in Khairpur district (Flam 1981). However, the sites of Dubbi, Ganero (Mallah 2008) in Thari Mirwah, Taloor ji Bhit, and Garho Bhiro yield Kot Diji culture, further to the south, indicating the extension of Kot culture in the region. During the survey we have discovered 12 additional sites, of which five are mounded settlements that clearly indicate the extension of Kot Diji culture throughout the Thar Desert of Sindh and the number of Kot Diji settlements is expected to increase in this region in the future (Ali 2022).

Site No	Name of Site	Location	Site Period								
			P	**M**	**N**	**R**	**I**	**L**	**EH**	**MH**	**LH**
1	Bibi Maryam Waro Thikratho	26°50'06"N 68°33'26"E	×	×	×	×				×	×
2	Qasim Wari Bhit	26°54'30"N 68°34'20"E		×	×	×			×	×	×
3	Ali Ashabi	26°51'19"N 68°34'46"E		×		×			×		×
4	Taloor ji Bhit	26°42'58"N 68°23'30"E				×	×	×			
5	Ronri Waro Daro	26°44'36"N 68°26'44"E				×					
6	Lakeryo-1	26°46'44"N 68°25'23"E				×	×	×	×		
7	Changan Waro Wero-1	26°43'48"N 68°33'00"E				×				×	
8	Changan Waro Wero-2	26°43'21"N 68°33'49"E				×				×	×
9	Bhiro Akro Pul/Changan Waro Thikratho	26°43'13"N 68°31'21"E				×	×	×	×		
10	Garho Bhiro	26°48'12"N 68°28'26"E				×	×	×			
1 1	Soomar Tali	26°39'48"N 68°26'54"E				×					
12	Sunhanr-1	26°51'30"N 68°34'01"E				×			×	×	
13	Pir Chattan	26°55'40"N 68°27'43"E					×			×	×
14	Abu Bakar Mullo	26°41'59"N 68°25'58"E						×	×		
15	Sonai	26°47'40"N 68°31'31"E						×	×		
16	Sanhri Bhit	26°40'02"N 68°24'57"E						×	×		
17	Tarai Waro Thikratho	26°50'20"N 68°26'16"E						×	×		
18	Odan jo Muqam	26°42'01"N 68°26'36"E						×	×		
19	Santhah Waro Thikratho	26°48'00"N 68°34'35"E						×	×		
20	Taari waro thikratho-1	26°51'08"N 68°31'31"E							×		
21	Mundh waro	26°41'56"N 68°26'32"E							×		

22	Aabin	26°41'03"N 68°30'59"E	×	×	
23	Lailan ja Aatunr	26°57'07"N 68°22'59"E	×	×	
24	Daranr	26°42'05"N 68°27'50"E	×	×	
25	Sunhanr-2	26°50'39"N 68°34'16"E	×	×	
26	Derah wari Bhit	26°38'45"N 68°22'55"E	×	×	×
27	Koonjhat	26°41'00"N 68°26'37"E	×	×	
28	Lakeryo-2	26°46'42"N 68°24'41"E		×	×
29	Kalro	26°43'56"N 68°32'24"E		×	×
30	Anheri-1	26°42'09"N 68°29'55"E		×	×
31	Anheri-2	26°42'01"N 68°30'20"E		×	×
32	Barkat Shar	26°43'19"N 68°26'09"E		×	×
33	Bari	26°43'00"N 68°26'20"E		×	×
34	Gullar waro	26°41'11"N 68°29'33"E		×	×
35	Kuti waro	26°40'26"N 68°29'08"E		×	×
36	Sakhi Salim Shah waro thikratho	26°41'27"N 68°24'20"E		×	×
37	Sanghar waro	26°52'56"N 68°32'55"E		×	×
38	Shaheedan waro thikratho	26°39'38"N 68°26'39"E		×	×
39	Taari waro thikratho-2	26°50'42"N 68°31'42"E		×	×
40	Buo	26°42'12''N 68°25'19''E		×	×

Tab. 1 - List of sites. Key: **P**- Palaeolithic, **M**- Mesolithic, **N**- Neolithic, **R**- Regionalisation, **I**- Integration, **L**- Localisation, **EH**- Early Historic, **MH**- Middle Historic, **LH**- Late Historic.

The development of these cultures from the regionalization to the integration era should be observed very well here: the pot sherds of Hakra phase in different manufacturing technologies (handmade and wheel-turn), as well as the cloth mark impression which is very fine mark of cloth from the interior of body sherds showing the ability of local people to make cloth and use it since the Hakra phase.

The Kot Dijian pottery, which needs no introduction as a masterpiece of art, is also observed at many sites, even with mounds that show a permanent settlement. The availability of raw seashell pieces and delicate bangles among the Kot Dijian pot sherds, indicates craft activity and a long trade route to the coastal sites. Furthermore, the same pottery design from the site of Soomar Tali, which has already been reported from the excavated site of Lewan in the Kot Dijian occupational layers, provides evidence of cultural exchange at that time (Ali, 2022).

Moreover, the Jhukar phase pottery, which has already been noted by Shar (1995) at the sites of Taloor ji Bhit and Abu Bakar Mullo, also provides evidence of cultural continuity after the decline of the Indus Valley Civilisation. This sequence of cultures, later overlapped by the Trihni ware, was first identified by Majumdar at the sites of Lakhiyo and Trihni in lower Sindh. The Trihni ware has also been discovered by one of the author at four sites in the desert region of Faiz Ganj, which also provides an idea of the cultural continuity in the area. While earlier scholars thought that the Thar desert (including research) was exploited during the early and late Indus periods, the identification of Painted Grey Ware pottery at six sites is very important and indicates that there was cultural continuity after the Indus Valley Civilization, And this PGW was contemporary to the Jhukar phase of the Indus Valley. Finally, the several sites of later periods, such as the early historic and historic periods, provide strong evidence that the river channels were still furnishing this region and that people exploited it extensively (Ali 2022).

The excavations at Sehwan Sharif by Kervran (2001) provide a complete cultural sequence spanning from the 4th century BCE to 18th century CE. Besides this, the excavation at the site of Kaath Banbhan also provides a further sequence extending to the 18th century CE. The associated cultural material from both settlements has been well observed in the research area, suggesting that the area was permanently inhabited during contentious periods. The foregoing discussion of archaeology and history provides a comprehensive profile of cultural development and a continuity in the exploitation of resources (Ali 2022).

6. Conclusions

The current study was conducted in the area comprising two major zones—the Thar Desert and the Indus Alluvial Plains. The systematic exploration was launched from village to village and examined each site regarding its locational context and connectivity with the surrounding area. This systematic examination of the sites enable us to notice that the settlements in this region occurred near the lakes and the perennial water sources of the Indus River, known as the Khairpur course. The cultural accumulation shows that ancient settlers repeatedly occupied the region, beginning with hunter-gatherer societies. Further, the region must have played a role in connecting the populations of the Hakra-Nara plains and the Indus alluvial plains; in this regard, a few ancient routes are still visible, such as Pad Idan to Imam Garh and the Nara Valley.

In the results of the current exploration, cultural continuity was determined, and there were also some missing links between the Harappan periods and the Iron Age, such as PGW, which was not known before from the study area and is now observed at six sites. Further, the plain fine grey ware, which is very similar in body wall texture to the painted grey ware already identified from Sehwan Sharif, is also reported among the sherds of PGW, suggesting the continuity of the painted grey ware tradition. After that, a complete profile of the chronological sequence in the light of different settlements of Sindh, such as Sehwan (phases 1-6), Banbhore, AL-Mansura, and Kaath Banbhan, has been confirmed and correlated with the settlements of the current area.

In the recent exploration in Tehsil Faiz Ganj, the total number of documented sites is 40, of which only 11 have been reported in previous studies. Of the total number of previously documented sites, four were poorly described and lacked cultural identification. Moreover, sites such as Taloorji Bhit and Lakeryo were known only for their Kot Dijian and Harappan occupations; yet, during the current investigation, Hakra-phase pottery has also been observed at both settlements. Furthermore, the new discoveries include a single site with identification of a Middle Palaeolithic hand pick, three sites with Mesolithic cultural material, two sites containing Neolithic chaff-tempered pottery, and six sites with Hakra occupation, which are an addition to the prehistoric records of this region.

The remaining gap between the late Indus tradition and the early Historic periods was not addressed extensively before. But during the current investigation, PGW has been reported at six sites, providing a clue

to the missing link between the decline of the first urbanization and the onset of the second (Ali 2022). The number of permanent settlements in the area of study may not have been totally dependent on the Khairpur course and rainwater; however, in previous studies, it was in doubt whether the area was furnished by the Hakra or the river Indus. However, the distribution of the settlement suggests that annual rainfall filled the low-lying areas of the region, which must provide water for daily life in the desert environment, and the high floods in the Khairpur course must have reached the toes of the sand dunes. Further, the traces of Khairpur course of the Indus River are still visible near the western margin of the Thar Desert, entering the alluvial plains present in the desert.

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