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EDITOR

Ibrahim Shah, PhD

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The Quest for Harappans in Northern Balochistan, Pakistan: Initial Results and Understandings of the First Systematic Transect Survey in Tehsil Bori, District Loralai

Muhammad Zahir and Muhammad Adris Khan

Abstract: District Loralai, located in the northeast of Balochistan Province of Pakistan, has received little attention of the historians and archaeologists. Most of the written or oral histories of the region do not go beyond 14th century CE. However, this region enjoys a pivotal position in Balochistan, as it connects South Asia with Central Asia. Previous archaeological research works by foreign and local archaeologists have led to the documentation of 25 archaeological sites in the district. Most of previous surveys in Balochistan province, and especially in District Loralai, have been carried out on village-to-village based methodologies and ease of access. The present systematic transect survey, the first of its kind in Balochistan, was carried out in Tehsil Bori of District Loralai, with the aim of documenting the settlement history of the region and landscape choices in the past, and to investigate the presence of Harappans in the study region, which researchers in the past, such as Fairservis (1959), have suggested as marginal and not representative.

The present systematic survey of 10 transects revealed 26 archaeological sites, doubling the archaeological knowledge of the region. These sites included 8 single period sites, 13 multi-period sites, 6 Kot Diji period sites and 5 Harappan/Indus Civilization sites. The discovery of relatively large number of Kot Dijian and Harappan period sites in a limited surveyed area suggests that Harappan presence in District Loralai was not marginal but rather robust.

Keywords: Tehsil Bori, Loralai District, Balochistan, Transect Survey, Systematic Survey, Settlement History, Landscape Choices, Kot Dijian culture, Harappans, Indus Civilization.

Introduction

Balochistan is the largest province, comprising of about forty-three percent of the landmass, of Pakistan. The province is a barren and thinly populated area with abundant natural and cultural resources. This province has been divided into thirty-three districts, including District Loralai, for ease of administrative control. District Loralai is located in the north-east of Balochistan province. The district is divided into Bori tehsil or administrative unit and Makhter sub-tehsil or sub-administrative unit; the current research was carried out in Tehsil Bori. Archaeological researches in Balochistan province has remained sporadic at best and have remained entrenched in research at and around spectacular archaeological sites, such as Mehrgarh.

Systematic transect survey in archaeology is a relatively new concept in Pakistan and it has

never been carried out in Balochistan, Punjab and Sindh provinces of Pakistan. However, it is crucial to explain the methodology of carrying out an archaeological survey systematically in a given area, such as Tehsil Bori, and why systematic survey could potentially be very crucial in increasing existing archaeological knowledge. The present transect survey in Tehsil Bori, District Loralai is the first such survey to be carried out in Balochistan.

One of the key features of conducting systematic transect survey for the present research was to investigate the presence of Harappan or Indus Civilization sites in Tehsil Bori, District Loralai, where previous investigations have suggested to their absence in the region or those researches have failed to document Indus Civilization sites in the study region. Fairservis (1959:292) suggested that there is ample evidence of Harappans at the site

of Dabar Kot in the former tehsil Duki (a separate district since August 1, 2017) of District Loralai. However, he suggested that there were no other Harappan sites in the region and that Harappans were not even present at the site of Rana Ghundai (Fairservis 1956:292). The presence of Harappans or Indus Civilization site is a key issue in the archaeology of the District Loralai and a focus of our research (Fig. 1).

Geographical Settings

District Loralai is situated between 29°37'N and 31°27'N latitudes and 67°43'E and 70°18'E longitude (Baloch 2011:3; Imp. Gaz. 1991:109). It shares its boundaries with Districts Qila Saifullah, Zhob, Musakhel, Barkhan, Kohlu, Sibi, Harnai and Ziarat. The status of a separate administrative district to Loralai was granted in October, 1903 (Baloch 2011:3). The name Loralai probably stems from a stream of the same name that flows to the south of Loralai Town. The regions that now comprise District Loralai were known collectively as Bori in historical literature.

Bori is now the name of one of the four tehsils (administrative units) of District Loralai; in fact, Tehsil Bori primarily incorporates Bori Vally area, which is formed by the Damanghar and Kru Ranges. District Loralai is located on the main trade and communication routes, which connected Western and Central Asia to South Asia through Sakhi Sarwar and Pishin routes (Fig. 2).

District Loralai consists of mountain ranges and small mountain valleys, with the lands forming through accumulation of soils from the mountains, and these valleys run parallel to different mountain ranges. Koh-i-Suleman, the southern extension of the Hindukush mountain ranges, is the most important mountain range of District Loralai. This stretches through the district in the east in the form of continuous chain of mountain peaks. District Loralai also contains muddy accumulations (Baloch 2011:5). Sehan Rud (or Sehan stream) joins Loralai River within the limits of district and forms the Anambar River, which, along with its small tributaries, acts as the drainage system of the western and central parts

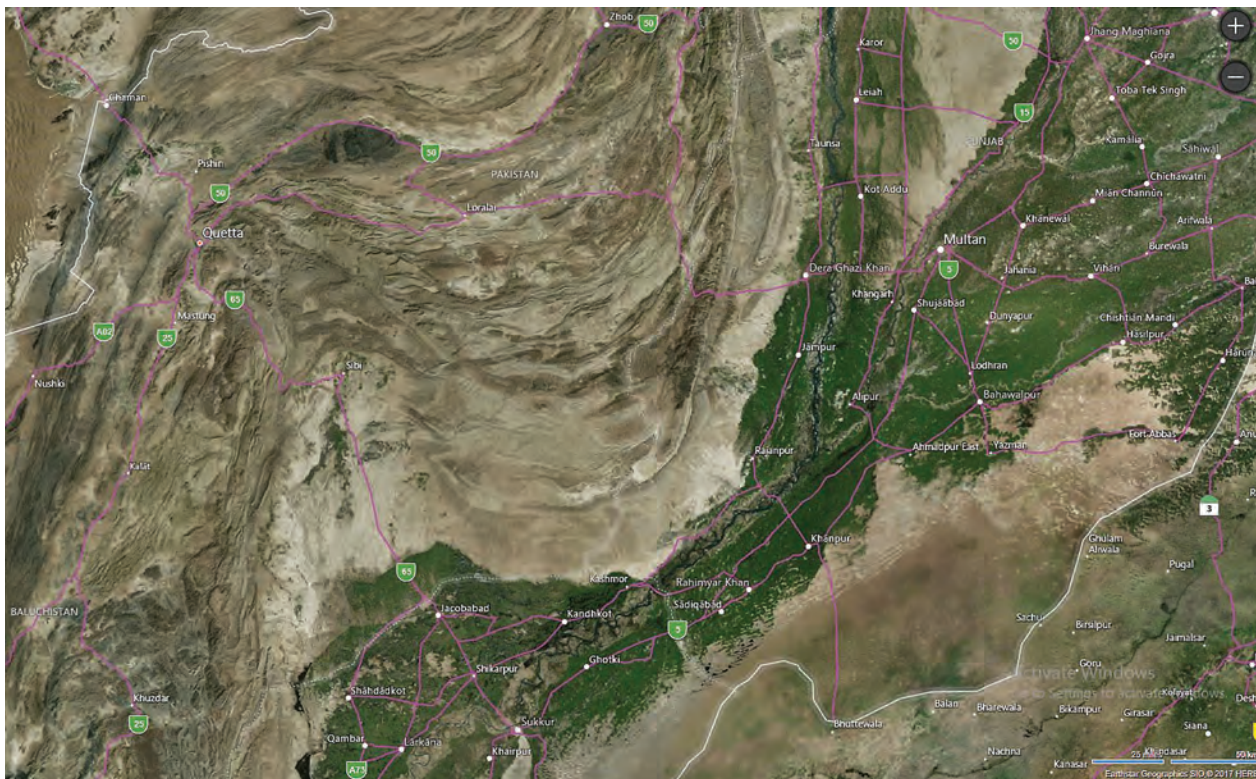


Figure 1. General Map of the District Loralai and parts of the Indus Valley, Pakistan (Source: www.bing.com/maps)

of District Loralai. The Anambar River enters into the Kachhi under the name of Nari (Baloch 2011:5; Imp. Gaz. 1991:109). The Kerasar Range is located in the west of district, Murdar Ghar in the north of Sinjavi and Sialu forms the south-western boundary of Thal Plain, while *Dubai Ghar* is located on the north-west of Thal Plain. Kru range is located in the centre of district, while Gadabar range forms the boundary of Bori Valley (Baloch 2011:5). The Damanghar and Kru ranges lie in the north of the district and run from east to west. The next important valley located in District Loralai is Thal Chotiali Valley. Thal Chotiali is low and flat land valley, and it looks analogous to an inland sea when viewed from the neighbouring hills (Baloch 2011:4).

According to 1998 Census Report, District Loralai comprised of 9830 square kilometres area and a population of 2,97,555 individuals, consisting of heterogeneous tribes, with Kakar tribe as the main tribe of the district (District Loralai Census Report 1998, Islamabad. 2000:9, 116). The climate of District Loralai is dry and cold and it varies with elevation of the landmass. The summer season remains cold and pleasant

in some parts of the districts, especially in high altitude areas. The winter season is extremely cold with strong Siberian winds and snowing (District Loralai Census Report 1998, Islamabad. 2000:2; Baloch 2011:4). The annual average rainfall recorded in District Loralai is more than 398 millimetres. The people of District Loralai grow their crops in two seasons, that is Rabi and Kharif (District Loralai Census Report 1998, Islamabad. 2000:4). The district has a vibrant agricultural produce, including both Rabi and Kharif crops and the district is known for the large orchards of apples, apricots, grapes, peaches, pomegranate and pistachios (Baloch 2011:viii). Wheat, Barley, Millet, along with different varieties of lentils and vegetables, are some of the major agricultural products of this region (Baloch 2011:viii). Besides the domesticated animals, the district is home to some of the most exquisite wild animals, including but not limited to wolves, striped hyena, hill foxes and Asiatic jackals (Baloch 2011:ix).

Summary of Previous Research

District Loralai has received little attention of the



Figure 2. Landscape features of the District Loralai, Balochistan (Source: www.bing.com/maps)

historians and archaeologists and hence the history of region is not very well documented. Most of the written or oral histories of the region do not go beyond 14th century CE. In its recent history, the capital of Loralai was Duki (a separate district since August 1, 2017) and it was part of Kandahar Province or an eastern dependency of Kandahar in Afghanistan. Duki is understood to have been part of the major local and foreign empires, such as the Iranian Safavid, The Afghans, the Mughal and the British (Imp. Gaz. 1991:110). The historical literature on or about the early history of District Loralai is not very clear (Baloch 2011:3).

Preliminary archaeological surveys in Balochistan started in the late 19th and early 20th century CE. The importance of archaeological sites of Balochistan came to prominence, when notable British officers or adventurers travelled through Las Bela to Jhalawan on routes connecting Karachi to Quetta, Kandahar and Kabul, as well Makran to Iran. They had written detailed diaries of their journeys and activities. The sites that are important today were primarily discovered by the British officers or adventurers (Frank and Cortesi 2015:33).

Archaeological activities in District Loralai started around the end of the 19th century CE. Fritz Noetling was the first to discover the sites of Dabar Kot in 1893, Periano Ghundai in 1897 and Rana Ghundai in 1898; in fact, these were the first early village sites to have been discovered in South Asia (Noetling 1898:461-471 cf. Fairservis 1959).

Sir Aurel Stein, the celebrated British – Hungarian archaeologist, visited northern Balochistan in 1904 to record archaeological sites in the region. Stein again conducted a survey of Waziristan, Zhob and Loralai areas in 1927 (Stein 1929:52-55). During this survey, Stein excavated the sites of Periano Ghundai and Moghal Ghundai in District Zhob and the sites of Sur Jangal and Dabar Kot. He conducted extensive explorations at the site of Rana Ghundai in District Loralai (Stein 1927:51-77; Fairservis 1959:292-330).

The important site of Dabar Kot was first discovered and recorded by Fritz Noetling in 1893 and he revisited the site again in 1898 (Noetling 1899:77, 102 cf. Fairservis 1959). Dabar

Kot was also investigated by Stein in 1927 (Stein 1929:52-55). The site is situated in District Duki, formerly a tehsil or administrative unit of District Loralai within the Thal Plains and it is located about 113-feet above the Thal River bed. The cultural material of the site was scattered in many directions for hundreds of yards within the Thal Plain (Stein 1929:59). Stein excavations revealed mud brick architecture and fired bricks made drain in the middle of the exposed structures. Stein also recorded Zhob mother goddess, compartmented seal and clay bangles of Harappan type from the site (Stein 1929:52-55).

Walter A. Fairservis (1959) also visited the site of Dabar Kot and he tried to recover stratigraphic data and collect cultural materials from the site. But the site by then had badly eroded and he was unable to collect extensive datasets. He suggested that all cultural material from the site were mixed up and that Stein was unable to recognize the importance of the discovery of a drain in the middle of structures, which Fairservis compared with the Great Bath of Mohenjodaro (Fairservis 1959:293-308). The same type of drain within structures was also discovered at the site of Damb Sadaat period III. Fairservis also discovered Zhob mother goddess from the same strata of drain, which was similar to figurines discovered from the sites of Sur Jangal, Moghal Ghundai, Periano Ghundai, Kaudani and Damb Sadaat period-III in the Quetta Valley. He also suggested to the existence of potsherds and storage jar of the 'Buddhist type' at the site (Fairservis 1959:308-311). Fairservis, in his review of the works of Aurel Stein and E. J. Ross suggested that all the cultural phases or chronological cultural assemblage represented by the pottery found at Sur Jangal and Rana Ghundai is represented within the pottery assemblage of the Dabar Kot site. However, a number of assemblages at Dabar Kot, based on the ceramic evidence, do not appear at Sur Jangal or Rana Ghundai, including the Harappan (Fairservis 1959:292). He compared the potsherds, collected from the site of Dabar Kot with those from the sites of Rana Ghundai in District Loralai and Sur Jangal in District Ziarat. He suggested that the site of Dabar Kot is contemporary with both Rana Ghundai and Sur

Jangal sites' chronological and cultural periods I and III (Fairservis 1959:308-321).

Brigadier E.J. Ross made a comprehensive study of the prehistoric sites in District Loralai and Zhob in northern Balochistan (Ross 1946). He conducted the first relatively systematic excavations at the site of Rana Ghundai. Ross suggested that the chronological sequences at Periano Ghundai and Rana Ghundai are similar to each other as well as with Mughal Ghundai, Sur Jangal and Dabar Kot. Fairservis later on suggested that Ross work did not provide complete typological studies of Rana Ghundai (Fairservis 1956:302). He argued that

A review of the collections published by Stein and by Ross is revealing: every cultural assemblage represented by the pottery found at Sur Jangal and Rana Ghundai is found at Dabar-Kot. However, a number of assemblages at Dabar Kot, based on the ceramic evidence, do not appear at Sur Jangal or Rana Ghundai, including the Harappan (Fairservis 1959:292).

In 1972, Rafiq Mughal conducted archaeological surveys at Zhob, Loralai, Quetta-Pishin and northern parts of Sarawan in Balochistan. He re-examined the site of Rana Ghundai and collected pottery and other culture material from already exposed stratigraphic contexts. However, the report of cultural material collected from the site of Rana Ghundai has not been fully published (Mughal 1972:142). During the survey, Mughal discovered a new multi-period site of Kaonari, located near the village Duki Killi. He collected pottery and suggested that the site of Kaonari was contemporary with Sur Jangal period-II and period-III and Rana Ghundai period-II and period-III. At the site, mature Harappan types of pottery was also discovered, including perforated wares, terracotta cakes and bangles. Mughal was of the view that Harappan pottery was not extensively spread on the site and was confined to certain parts of the site (Mughal 1972:143). Mughal further suggested that the site of Dabar Kot established from at least the middle of fourth millennium BCE and continued to exist until the medieval period (Mughal

1972:143).

In April 1984, the Department of Archaeology and Museums, Government of Pakistan, sent a team headed by Mian Said Qamar to survey the districts of Kalat, Khuzdar and Loralai. They documented the existence of historic inscriptions and rock carvings at the site of Tor-Derai in former Tehsil Duki of District Loralai. These rock carvings had human and animal images carved out in stones in groups and as individuals. The inscriptions were mainly in Kharoshthi script and human images were of horse riders, probably of the historic period. The survey team suggested that the carvings show that the society was a horse breeder and may be warlike people (Qamar 1986:168-178). However, these findings may be suggestive of the fact the Loralai was the main hub of communication and trade between South Asia and Central Asia in the first half of the first millennium CE.

In 1986, Dr. Fazal Dad Kakar investigated a number of previously unidentified mounds in the Zhob and District Loralai, including the sites of Chinjane and Mehar (Kakar 1990:112). Kakar suggested that the site of Chinjane with Mehrgarh period-III, first half of 4th millennium BCE, period-IV, middle of 4th millennium BCE and period-VI, beginning of 3rd millennium BCE i.e. 4300 to 3000 BCE (Kakar 1990:112; Shaffar 1985:71-75). He related the site of Mehar with Rana Ghundai periods II, III and III (Kakar 1990:112).

The above discussion shows that archaeological research in District Loralai was mostly sporadic and without any specific research question and that most of the work was focused on the site of Dabar Kot. All the archaeological surveys were primarily based upon village-to-village survey methodologies and most of the sites were discovered near road sides or easy to access regions of the district. In fact, in all the archaeological surveys in the district, approximately 25 archaeological sites were documented. Most of the discovered sites, and undocumented sites by archaeologists, are being rapidly destroyed by illegal excavators. Thus, the authors felt that it was important to carry out archaeological investigation in the district for recording the archaeological sites before their

eventual destruction or disappearance.

Though, local and foreign archaeologists have surveyed and trial trenches have been laid at different sites of District Loralai, primarily to establish the chronological sequence with the help of cultural material, but there still exist gaps in knowledge of the region due to the existence of large number of undocumented and unexcavated sites or unsystematic research. Furthermore, the presence and extent of Harappans in District Loralai is an interesting phenomenon, which needs to be properly investigated through relatively robust research methodologies. The present study is the first small scale application of the systematic survey project (i.e. transect survey) in Balochistan province.

Survey and Research Methodologies

Survey is an integral part of any archaeological investigations in a given geographical area and the conduct and results of archaeological survey depend on many factors such as topographical features, weather, visibility, time allotted, finance, team members and selected survey methodologies, and the geo-politics of the survey areas. Most of the surveys carried out in Balochistan province, and especially in District Loralai, have been designed on village-to-village based survey methodologies. In village-to-village survey, the historically favourite survey methodology of the Pakistani archaeologists, most of the sites are documented located near modern or historical villages and along the road sides that have a large visual impact. These types of surveys create biasness because of easy access to sites and may leave important sites, located in difficult regions on ancient trade routes or far from modern roads or villages or not known to the inhabitants of the concerned villages. The results of such survey fail to inform archaeologists about the history of the region and construction of past societies and their cultures.

Systematic transect survey is carried out at a pre-selected area for quick results in short period of time. The systematic transect survey provide quick information to archaeologists about large area that is it rich or poor with archaeological sites (Burke and Smith 2004:65). Transects are plotted

on map in the form of straight lines or grids. The area selected for transect survey represent a sample of a region. The process of documenting archaeological sites in a survey in lines or grids is called transect survey (Yatoo 2012:110). It is the most useful archaeological survey and it is carried out on foot. This type of survey is performed by walking at a specified path between two points. The length and gap between transects depend on time and budget availability. The systematic transect survey cannot be performed individually and it requires a team of archaeologists, archaeology students or volunteers to carry out this survey. Transects are plotted on a piece of land. Transects may be distinct in length and width for each survey, depending on the aim and purpose of archaeologists (Burke and Smith 2004:65). The long and wide transect have advantages than short and narrow transects. It is because, sometimes large archaeological sites create problems in short and narrow transects (Yatoo 2012:110).

Transect survey can be extensive and intensive in nature as it depend on the nature of research question(s). Both extensive and intensive or one of them can be utilized in a transect survey in any given geographical area. Random systematic transect surveys are applied to those regions where no prior knowledge exist about the existence of archaeological sites, while non-random systematic transect survey methodology is utilized where previous archaeological knowledge is available and the choice of random and non-random systematic survey methodology depend on the choices and preferences of researchers involved.

The systematic transect survey is used worldwide by archaeologists and they have got successful results in several regional surveys. At any region, when transect survey is carried out, its primary purpose is to search out archaeological sites (Yatoo 2012:110). The archaeological sites are recorded using handheld GPS to take coordinates and height above sea level (Ali *et al.* 2010:138). Before going to conducting transect survey, it is very important to define site, which will define approaches towards survey project such as documentation of historical or pre-historical sites or Mughal forts or documentation of Buddhist or Indus sites or documentation of

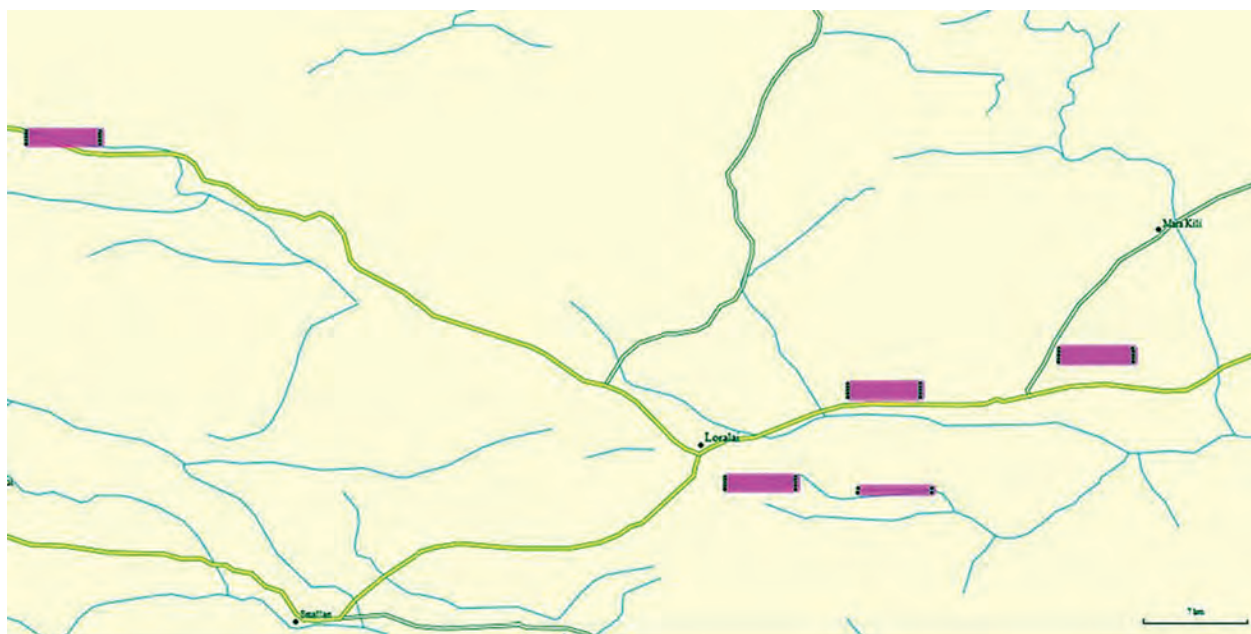


Figure 3. Map of 22 transects plotted at 5 various regions in Tehsil Bori District Loralai

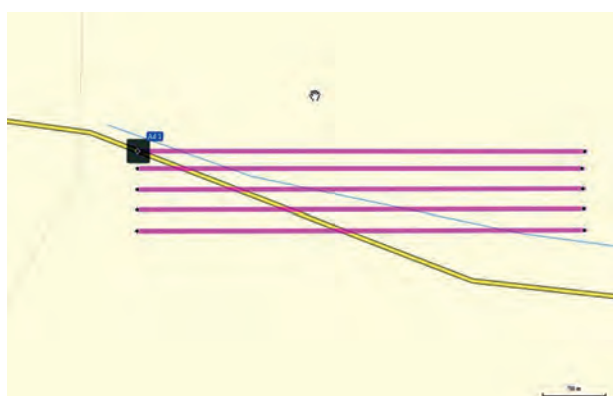


Figure 4. Map of 5 transect points AD1 to AD10 plotted at Village Dargai Sargarh in Tehsil Bori, District Loralai

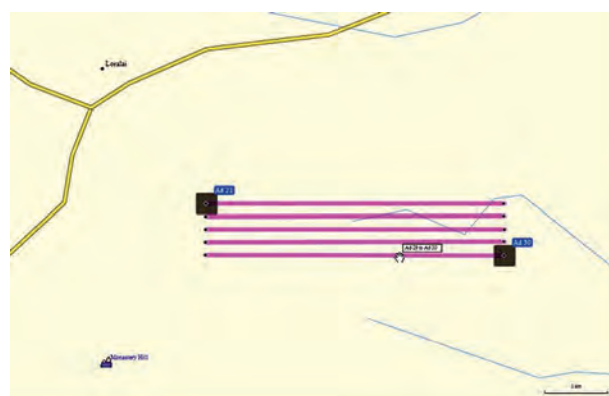


Figure 5. Map of 5 transect points AD21 to AD30 plotted at Village Mahool Shaikhan in Tehsil Bori, District Loralai

historic to prehistoric sites. Following Coningham *et al.* 2004, we define site as a structure, feature, lithic find spot or ceramic scatter with 5 or more potsherds per square metre area (Coningham *et al.* 2004:3). Similar site definitions have successfully been utilized in transect and landscape surveys in northern and north-western South Asia (e.g. Ali *et al.* 2010:138; Khan 2017; Yattoo 2012).

This research in Tehsil Bori District Loralai utilized both random and non-random systematic transect survey methodologies. We have laid out a total 22 transects (Fig. 3) at 5 various regions in Tehsil Bori, District Loralai. These transects

were plotted across different geographical regions involving mountains, plains, river valleys and around previously known archaeological sites. The 5 regions, where these transects were plotted are primarily located near village Dargai Sargarh from transect points AD1 to AD10 (Fig. 4), at village Dargai Kudazai from transect points AD11 to AD20, at village Mahool Shaikhan from transect points AD21 to AD30 (Fig. 5), at village Barnima from transect points AD31 to AD40 and at village Shabozai from transect points AD41 to AD44.

At least 10 transects plotted in Tehsil Bori

through the random laying of transect across different geographical regions involving mountains, plains and river valleys. We also laid out 12-transects along rivers, mountain passes and previously known archaeological sites through the application of non-random systematic transect survey methodology. Each transect is 5 kilometres in length and are 200 metres at a distance from each other and our survey was optimized to cover 20 metres wide area for each of the transect.

We planned to walk all the 22 transects; however, the current geo-political situation (i.e. critical level of violence due to terrorism and militancy) of Balochistan in general and Loralai in particular, had a tremendous bearing upon our work. Thus, we had to re-adjust our survey methodologies as threat to our lives was real. This has a bearing on our site documentation strategy as well; we could only focus on recording major sites and did not have the freedom to record all the pottery scatters in our transects. Furthermore, we could only carry out systematic transect survey on 10-transects and could manage to record some well-known sites without transects in the Tehsil Bori District Loralai. These 10 transects were primarily located near the modern villages of Dargai Sargarh from transect points AD1 to AD10 (Fig. 4) and Mahool Shaikhan from transect points AD21 to AD30 (Fig. 5). We plan to go back to the rest of the 12 transects when the security situation in the area improve.

The first 5 transects area from transect points AD1 to AD10 are located about 36 miles from the Loralai town in the Union Council of Kach Amaqzai, lying in between Mouza Chinjan and Mouza Dargai Sargarah. These transects are located within the middle of small stream on their northern and southern sides. These transects were situated in plain, unpopulated and barren lands with very few cultivated fields. The agricultural and horticultural activities within these transects' area seem to be low and the fields were in disuse due to winter season with high visibility.

The second 5-transects from transect points AD21 to AD30 were plotted near the village Mahool Shaikhan. This transect area is located near the eastern bypass (Cantonment Board) of Loralai Town in the Union Council of Ponga,

between ward no.1 (Killi by pass, Killi Majeed Shaikh and Killi Rashid) and ward number.5 (Mahool Shaikhan and Mahool Baloch). The Loralai River run to the southern side of this transect area. The surrounding areas are relatively very fertile and partially in agricultural use. The transect area was plain, unpopulated and semi-cultivated, with high visibility.

Each transect was surveyed by a group of 4 – 6 team members, covering approximately 20 metres width of each transects. The total walked area in the study region was 10,00,000 square metres area (10 transects x 20 width of each transect x 5000 length of each transect) or 100 hectares, while the total area covered during the transect survey was 20,00,00,000 square metres (10 transects x 20 width of each transect x 200 metres distance between each transect x 5000 length of each transect) or 20,000 hectares. Geographical locations through GPS, size (widths x lengths) and height were recorded for each of the surveyed sites. Each site was marked by using hand-held Global Positioning System (GPS).

The current survey was conducted in the winter of 2015 and visibility on sites was very high, making our job of identifying archaeological sites in the landscape relatively easy. Each site was intensively surveyed for collection of all kind material cultures. Potsherds were discovered from all the surveyed sites, while lithics assemblages were discovered from 05 sites. The potsherds' collection was based on non-random or diagnostic potsherds (rims, bases, body sherds with painted, incised or applied decorations) collection strategy. These were collected from all of the sites and were bagged at the site and labelled at the camp. However, some of the collected potsherds did not warrant detailed studies because of weathering and minute size of the collected potsherds. Lithic artefacts were also collected through non-random or diagnostic assemblage collection strategy and their collection was dictated by the shape, size and material of the lithic artefact. The potsherds and lithic assemblage are studied through comparative and stylistic analyses with material culture discovered or recorded from other sites within Balochistan and other parts of Pakistan.

Due to the absence of chronometric datasets

Table 1. Comparative Stratigraphy of the Site of Loralai (adopted from Fairservis 1959: 322)

Pottery Type	Sur Jangle		Rana Ghundai		Dabar Kot	
	Presence	Period	Presence	Period	Presence	Period
Ring Ware	N		Y		Y	
Buddhist Ware	N		Y	V	Y	IV
Post Harappan Painted Wares	N		Y	IV	Y	III
Harappan Wares	N		Y	IV	Y	II
Prehistoric Wares	Y	III	Y	III	Y	I
Prehistoric Wares	Y	II	Y	II	N	
Prehistoric Wares	Y	I	Y	Ib	N	
Prehistoric Wares	N		Y	Ia	N	

Table 2. Comparative Stratigraphy of the Quetta Valley and Sites of Loralai-Zhob (adopted from Fairservis 1959: 322)

Quetta Valley		District Loralai			District Zhob
Damb Sadaat	Killi Gul Muhammad	Rana Ghundai	Sur Jangle	Dabar Kot	Periano Ghundai
		IV		Ghul Ware?	Incinerary Pot
				Jhukar Period?	
				Harappan	
III		IIIc			Zhob Cult
		IIIb			
II		IIIa	III		
I					
		II	II	Prehistoric Group I Cultures	Prehistoric Cultures
	IV				
	III	Ib	I		
		Ia			
	II				
	I				

from the study region, we have to utilize the already existing chronological frameworks for the region, specifically the frameworks developed by Fairservis (1959), for the establishment of the relative chronology through comparative analyses of the material cultures from each of the surveyed sites (Tables 1 and 2).

Since the beginning of archaeological research in District Loralai, only 3 sites have been excavated so far, representing different chronological periods. However, it was the excavations of the site of Dabar Kot which revealed Harappan material culture, indicating a strong link with the Indus Civilization. Thus, it becomes an important research agenda to investigate the presence or the

extent of Harappans within District Loralai.

The terms 'Kot Diji' or 'Kot Dijian' cultures or 'Kot Dijians' refers here to a type site of the name of Kot Diji located near the town of Khairpur in Sindh province, excavated by F. A. Khan in the early 1960s, with specific material cultures (e.g. pottery with banded decorations) that preceded and continued within the Indus Civilization (Khan, A. N. 1964; Khan, F. A. 1964). The terms 'Harappan Culture' or 'Harappans' in this paper refer to the mature phase of the Indus Civilization within the study region. We follow the relatively new understandings of including Kot Dijian culture as part of the 'Regionalization Era' of the Indus Civilization, dated to ca. 5000 BCE to



Figure 6. Map of 26 archaeological sites documented in Tehsil Bori, District Loralai (base map: www.google.com/maps)

2600 BCE (Kenoyer 1998:24). The mature phase of the Indus Civilization is considered as the ‘Integration Era’ of the Indus Civilization, dated to 2600 BCE to 1900 BCE, and we follow this (Kenoyer 1998:24).

Wet ware terminology was suggested by Fairservis (1959:268-70), with different variations, such as Quetta Wet ware or Periano Wet ware. The presence of these wares establishes early Harappan connections, as wet wares were discovered from extensive areas in Balochistan and Sindh, including the site of Mohenjodaro’s lower levels (Fairservis 1956:356; 1959:356).

Survey Results and Extent of Indus Civilization in District Loralai

During the course of systematic transect survey, 26 new archaeological sites were documented in Tehsil Bori, District Loralai (Fig. 6). Of the 26 sites, 23 new sites were discovered through systematic survey of 10 transects and 3 sites were documented through village-to-village survey (due to unavoidable circumstances of law and

order in the region). The discovered sites mainly represented local protohistoric Baluchi cultures, Kot Dijian culture, Indus Civilization and historic period cultures in the region.

The comparative analyses of the material culture, specially of pottery assemblages from discovered sites, revealed that out of 26 sites, 13 (or 60% of 26) sites represented multi-period occupancy (Fig. 7), while 8 (or 31% of 26) were single period sites (Fig. 8). The material culture from 4 sites was not diagnostic and could not be assigned to any chronological period in the region and beyond. The existence of relatively large number of multi-period sites suggest to the continuity of human settlements in the region for thousands of years and continuity of the same landscape choices over long period of times for settlements, making it a very interesting landscape for future investigations.

The number of discovered archaeological sites from each of the surveyed transect was not uniform. At least, one archaeological site was discovered in each of the transect lines, while the maximum number of four sites were discovered

Table 3. Village Dargai Sargarh transect sites, Tehsil Bori, District Loralai

Transect	Site Name										Total sites	
AD1 - AD2					DSL-5	DSL-6						2
AD3 - AD4							DSL-7					1
AD5 - AD6								DSL-8	DSL-9	DSL-10		3
AD7 - AD8										D-11		1
AD9 - AD10	DSL-1	DSL-2	DSL-3	DSL-4								4
Total											11	

Table 4. Village Mahool Shaikhan transect sites, Tehsil Bori, District Loralai

Transect	Site Name										Total Sites	
AD21 - AD22								ML-10				1
AD23 - AD24				ML-5								1
AD25 - AD26	ML-1				ML-7	ML-8	ML-9					4
AD27 - AD28			ML-3-4									2
AD29 - AD30		ML-2							ML-11	ML-12	ML-13	4
Total											12	



Figure 7. Map of 13 Multi-period archaeological sites documented in Tehsil Bori, District Loralai (base map: www.google.com/maps)



Figure 8. Map of 8 single period archaeological sites documented in Tehsil Bori, District Loralai (base map: www.google.com/maps).

Table 5. Details of 5-Harappan, 6-Kot Dijian and wet ware sites

S. No.	Harappan sites	Kot Dijian sites	Wet ware
1	-	DSL-1	-
2	-	DSL-2	-
3	-	DSL-4	DSL-4
4	DSL-5	-	
5	-	ML-1	ML-1
6	ML-2	-	
7	ML-10	-	
8	Shabozai Ghundai site	Shabozai Ghundai site	
9	Barnima Ghundai site	Barnima Ghundai site	

from three transects. The survey of transect AD1 to AD2 revealed 2 sites, AD3 to AD4 revealed 1 site, AD5 to AD6 revealed 3 sites, AD7 to AD8 revealed 1 site and AD9 to AD10 revealed 4 sites. Thus, the group of 5 transects near village Dargai from AD01 to AD10 revealed total 11 sites (Table 3).

Furthermore, during the survey of transect AD21 to AD22 revealed 1 site, AD23 to AD24 revealed 1 site, AD25 to AD26 revealed 4 sites, AD27 to AD28 revealed 2 sites and AD29 to AD30 revealed 4 sites. This means that the second group of 5 transects near village Mahool Shaikhan from AD21 to AD30 had the largest number of sites (12 sites) from the surveyed areas of Tehsil Bori, District Loralai (Table 4)

During the course of systematic survey, 5 Harappan, 6 Kot Dijian and 2 wet ware sites were documented out to 26 newly discovered archaeological sites. This is the first time that such a large number of Harappan sites and their predecessors Kot Dijian cultures were discovered in a limited surveyed region of Balochistan in general and District Loralai in particular. In fact, the presence of 6 Kot Dijian sites gives the strongest clue to the robust contact and relationship between the pre and mature Indus period sites in District Loralai and other regions of South Asia and that this region was not a marginal region but was very much part and key region of the large Indus phenomenon, particularly important for its relationship with Iran and, Central and Middle Asia. The discovery of wet ware sites is

also very important as it shows strong linkages with surrounding regions (such as Quetta Valley) and beyond (such as Indus Valley), as previously such sites were discovered in Quetta Valley and the broader Indus Valley, including the site of Mohenjodaro (Fairservis 1956:356; 1959:305, 311, 333).

Three of the five Harappan sites (DSL-5, ML-2 and ML-10) were discovered through transect survey, while the sites of Shabozai Ghundai and Barnima Ghundai were recorded through the village-to-village survey (Fig. 10). Similarly, four out of six Kot Dijian sites (DSL-1, DSL-2, DSL-4 and ML-1) were discovered through transect survey. Both the wet ware sites (DSL-4 and ML-1) were found through transect survey (Fig. 9).

The site DSL -01 was discovered in survey of AD9–AD10 transect, near the village Dargai Sargarah and it is located at longitude 30.54992°N and latitude 68.11142°E at an elevation of 1967 metres above mean sea level. The site, measuring 300 x 160 square metres, is located at the end of the eastern slopes of mountain Topi Ghar on a dry bed of a seasonal stream. The site has been extensively dug by illegal antiquity hunters, which have left large pits on site. The site was covered by potsherds, scattered all over the site. Most of the potsherds were plain, mostly in red colour with few black, grey and buff coloured potsherds, sometimes decorated with geometric patterns. The major wares from the site included Faiz Muhammad ware, Periano Painted Variant-1 and Variant-2, Killi Gul Muhammad Black-on-red



Figure 9. Map of 6 Kot Diji period sites documented in Tehsil Bori, District (base map: www.google.com/maps)

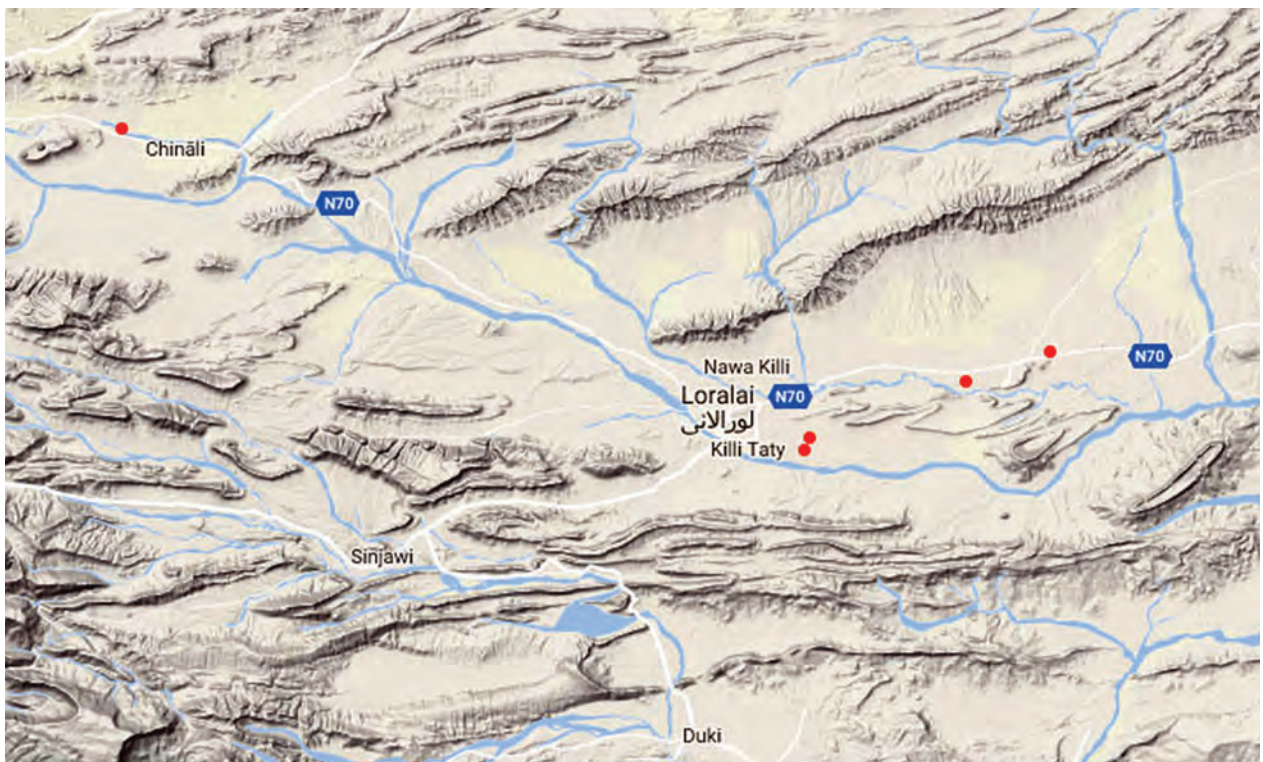


Figure 10. Map of 5 Harappan period sites documented in Tehsil Bori, District (base map: www.google.com/maps)

slip, Quetta associated Polychrome, Ghul Painted ware, Khojak parallel striated, Rana Ghundai red-on-red slip, Pirak site pottery and Kot Diji, which makes this site very interesting. Based on the pottery assemblages from the site, it may be argued that the site was settled at the start of the 5th millennium BCE, as mainly represented by Kot Dijian wares, and continued in existence till the end of 8th century BCE, as evidenced from Pirak pottery.

The site DSL-2 was discovered in survey of AD9 - AD10 transect. The site is located at latitude 30.54990°N and longitude 68.11522°E at an elevation of 1971 metres above mean sea level. The site, measuring 80 x 50 square metres, is a low mound that is almost intact. Potsherds are very scant, mostly consisting of coarse wares in red or buff colours. The diagnostic potsherds, mostly with broad black bands at rims, were almost exclusively of the Kot Dijian tradition.

The site DSL-4 was discovered on the same transect, AD9 - AD10 transect, between villages Dargai Sargarh and Dargai Zakhpail. The site is located at latitude 30.54774°N and longitude 68.12559°E at an elevation of 1937 metres above mean sea level (Fig. 11). The site, measuring 150 x 120 square metres, has extensively been excavated by illegal antiquity hunters, with thousands of potsherds lying around. The majority of the collected potsherds were in red colour, but potsherds in buff, brown and grey colour were also encountered. The diagnostic pottery assemblage included the Circle Stamped ware, Rana Ghundai Red-on-red ware, Faiz Muhammad Painted ware, Jangal Coarse Painted ware, Jangal Painted Variant-1 ware, Polychrome ware, Periano Painted Variant-2 ware, Quetta Wet ware, Kechi Beg Wet ware, Loralai Striped ware, Kot Diji ware (Fig. 18). The presence of potsherds in the central Balochistan pottery traditions and Kot Diji make this site very interesting. Some of the collected potsherds had potters' marks.

The site of Barnima Ghundai was discovered near the village Barnima through village-to-village survey. The site is located at latitude 30.40694°N and longitude 68.85123°E, at an altitude of 1296 metres above mean sea level (Fig. 17). The site measures about 40 x 50 square

metres area and occupies a strategic position on the low hill, spin ghar. Similar to other important sites in the study region, this site has also been excavated by illegal diggers and boulders from structures are spread all over the site. There are very few potsherds on the site, mostly in plain red colour with some grooved, incised and stamped decorations. Some of the potsherds are also decorated with geometric designs. The collected diagnostic potsherds primarily included Ghul ware, Kot Diji ware and Harappan wares (Fig. 26). The finding of a broken serpent-shaped terracotta figurine is very important and it is similar to the one found at the site of Lewan within the Kot Dijian phase (Fig. 25).

The site ML-1 was discovered in the survey of AD25 - AD26 transect, near the village Shaikhan. The site, measuring 450 x 584 square metres, is located at latitude 30.34743°N and longitude 68.62629°E at an altitude of 1412 metres above mean sea level (Fig. 13). The site consists of two mounds, and it is regularly being excavated by illegal antiquity hunters. The site is littered with thousands of potsherds, most of which are plain red in colour. The collected potsherds had geometric, floral and zoomorphic designs. The material culture also included microliths, including blades, cores and flakes. A broken head of female figurine in terracotta was also found on site. The diagnostic potsherds collected included Jangal Painted Variant-2, Faiz Muhammad Painted ware, Faiz Muhammad Painted variant-2 ware, Periano Painted variant-1, Quetta wet ware, black-on-buff of Damb Sadaat-II and Kot Diji wares (Figs. 19 - 20). From the diagnostic pottery collection, it seems that the site was inhabited around the middle of 5th millennium BC and abandoned at around mid-3rd millennium BC, just before the start of the Harappan/Indus Civilization mature phase.

The site DSL-5 was discovered in the survey of AD1 - AD2 transect. The site is located at latitude 30.55783°N and longitude 68.12357°E at an altitude of 1960 metres above mean sea level (Fig. 12). A seasonal stream, Dargai Manda, flows to the northern side of the site. The site, measuring 60 x 40 square metres, is a low flat mound and it almost intact; however, the local

Table 6. Details of the Harappan and Kot Dijian sites' location, transect, area and height from mean sea level

Site Name	Location	Transect Name	Area (in hectares)	Height [above mean sea level (in metres)]
DSL-1	30.54992°N 068.11142°E	AD09 - AD10	4.8	1967
DSL-2	30.54990°N 068.11522°E	AD09 - AD10	0.4	1971
DSL-4	30.54774°N 068.12559°E	AD09 - AD10	1.8	1937
DSL-5	30.55783°N 068.12357°E	AD01 - AD02	0.24	1960
ML-1	30.34743°N 068.62629°E	AD25 - AD26	26.28	1412
ML-2	30.34071°N 068.65078°E	AD29 - AD30	0.56	1395
ML-10	30.34927°N 068.66294°E	AD21 - AD22	0.4	1384
Shabozai Ghundai	30.38705°N 068.79301°E	--	40	1313
Barnima Ghundai	30.40694°N 068.85123°E	--	0.2	1296

villagers are using rich clay deposits of the site for construction of the site and as part of the manure. The number of potsherds on the site is relatively low and it is mostly in red and buff wares. The collected potsherds are mostly plain, sometimes grooved and incised, and are of the Harappan pottery tradition.

The site ML-2 was discovered in survey of AD29 - AD30 transect, near the village of Shaikhan. The site is located at latitude 30.34071°N and longitude 68.65078°E, at a height of 1395 metres above sea level (Fig. 14). The site measures around 80 x 70 square metres area and is located on the northern bank of the Loralai stream. The site has been extensively excavated by illegal diggers and villagers for antiquities. The site has thousands of potsherds. The majority of the collected potsherds are plain red ware, with some brown, pale red and buff wares were also found. Some of the potsherds are grooved and decorated with geometric designs. The major diagnostic wares included the Harappan perforated pots, mat impression wares, rope ware and black-on-buff cream ware (Fig. 21). In fact,

twenty-five percent of the collected potsherds were of Harappan pottery tradition.

The site ML-10 was discovered on transect AD21 - AD22 near the village Mahool Shaikhan. The site is located at a latitude 30.34927°N and longitude 68.66294°E, at an altitude of 1384 metres above mean sea level (Fig. 15). The site, now measuring 80 x 50 square metres area, has been mostly destroyed by illegal antiquity hunters and has been bulldozed for plantation of orchards and seasonal crops. The majority of potsherds collected from the site are brown, pale-red and buff colours and are plain pottery, with few potsherds with incised and grooved decorations. Most of the potsherds are of the Harappan pottery tradition, with few potsherds having Indus script scribbling/markings on them (Fig. 22).

The site of Shabozai Ghundai was discovered near the village Shabozai through village-to-village survey. The site is located at altitude of 30.38705°N and longitude of 68.79301°E, at a height of 1313 metres above mean sea level (Fig. 16). The site, measuring 800 x 500 square



Figure 11. General view of site DSL-4, Tehsil Bori, District Loralai



Figure 12. General view of site DSL-5, Tehsil Bori, District Loralai



Figure 13. General view of site ML-1, Tehsil Bori, District Loralai



Figure 14. General view of site ML-2, Tehsil Bori, District Loralai



Figure 15. General view of site ML-10, Tehsil Bori, District Loralai

metres area, has been extensively excavated by illegal diggers, leaving traces of walls and room structures. There are thousands of potsherds on the surface of site, consisting mostly of plain red ware, with some grooved, stamped and incised decorations. The collected diagnostic potsherds from the site included rope ware, Jhukar Painted ware, Jangal coarse painted ware, Ghul ware and Kot Diji wares and Harappan wares (Figs. 23 - 24).

Of the 10 surveyed transects, evidence of Kot Dijian and Harappan/Indus Civilization was found at five transects, namely AD1-AD2 (site DSL-5), AD9-AD10 (sites DSL-1, DSL-2 and DSL-4), AD21-AD22 (site ML-10), AD25-AD26 (site ML-1) and AD29-AD30 (site ML-2). The sites were generally located between altitudes of around 1300 metres to 1980 metres above mean sea level. The Harappan sites were located between altitudes 1300 metres to 1960 metres; in fact, four of the Harappan sites (ML-2, ML-10, Shabozai Ghundai and Barnima Ghundai)

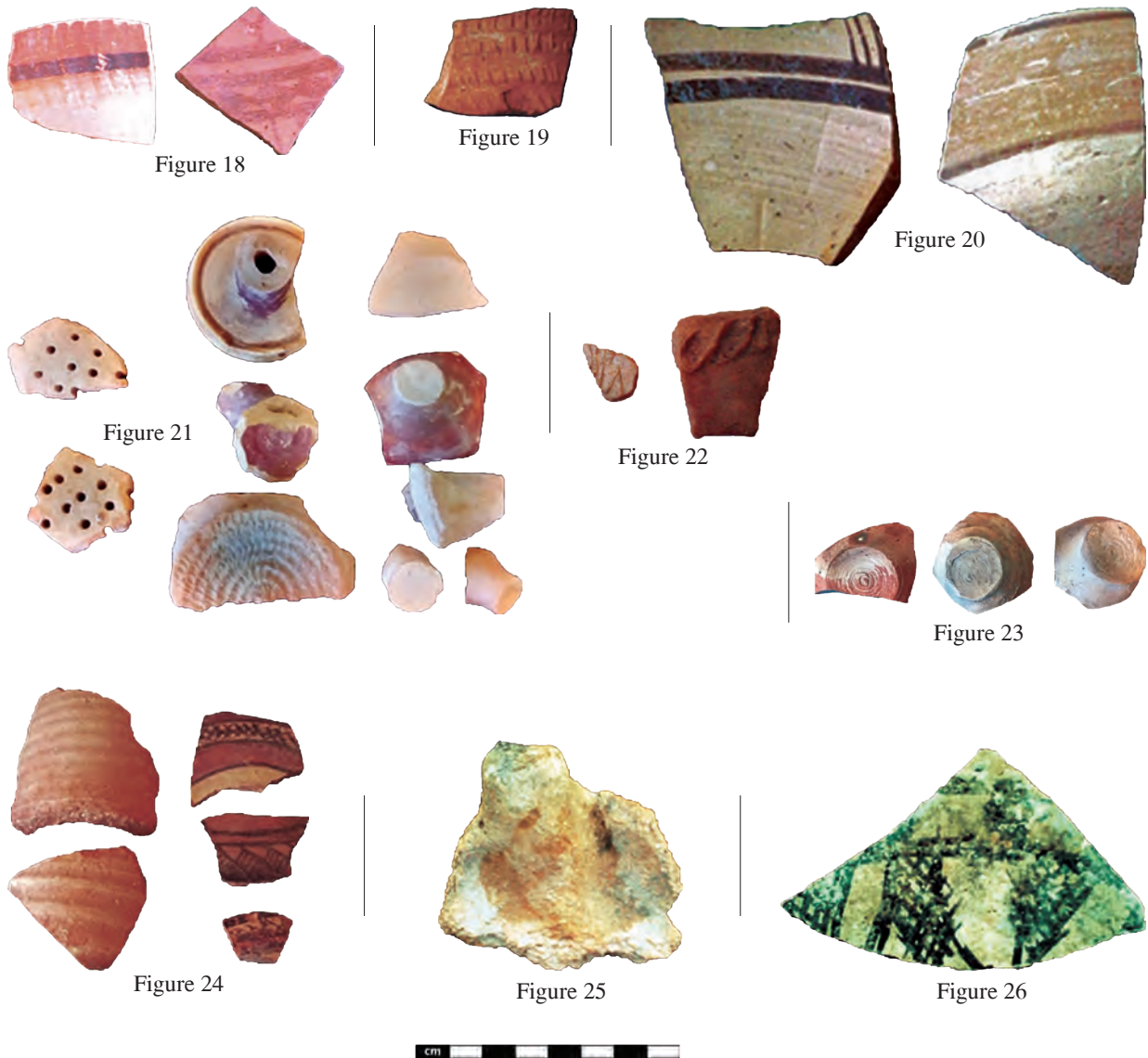
were located between altitudes of 1300 to 1400 metres, while the fifth site (DSL-5) was located at an altitude of 1960 metres. Altitude-wise, the Kot Dijian sites could be classified into two groups; the first group of three sites were located between altitudes of 1300 metres to 1420 metres, while the second group of three sites were located between the altitudes of 1930 metres to 1970 metres. Most of the Harappan/Indus Civilization sites (DSL-5, ML-2, ML-10 and Barnima Ghundai) were less than half hectare in area, with the exception of Shabozai Ghundai, which is 40 hectares in size. While the Kot Dijian sites ranged from half hectare to 2 hectares to 5 and 27 to 40 hectares. This means that Kot Dijian were present in relatively large sites as compared to the Harappans. In fact, single period Harappan/Indus Civilization sites (of less than half hectare) are relatively small as compared to the single period Kot Dijian sites (of less than half hectares to five hectares). The largest sites, Shabozai Ghundai and ML-1, are primarily multi-period sites with a combination of Kot Dijian and



Figure 16. General view of Shabozai site being converted into agricultural fields, Tehsil Bori, District Loralai



Figure 17. Illegal Excavations on top of Barnima site, Tehsil Bori, District Loralai



Harappan/Indus Civilization and Kot Dijian and wet ware material cultures respectively. If the size of the settlement is considered as an indication of the longevity of the cultural phase, the Harappans/Indus Civilization presence was relatively short term as compared to the Kot Dijian period in District Loralai.

The Harappan and Kot Dijian period material culture primarily came from different sites from each other, except at the sites of Shabozai Ghundai and Barnima Ghundai, where material culture from both periods was found. As there were certain differences in the patterning of sites in different altitudes and size-wise, the landscape

choices of Harappan and Kot Dijian cultures were not always the same. The choice of landscape was probably dictated by the environment, resources and proximity to extant trade and communication routes.

Each of the Kot Dijian and Harappan sites was located within their particular landscape; landscape could be defined as a place where economic, social, religious, political and others varied range of activities played by the people (Tilly 2008:272). Alcock and Cherry (2004:3) and David and Thomas (2008:327) defined landscape as not just the location of a site but, it is a central part of archaeological investigations.

Landscape features such as water resources, access routes, passes, mountains and agriculture land have influenced almost all the ancient settlements, and the Kot Dijian and Harappans were no exception to this. The Kot Dijian and Harappan sites in District Loralai are primarily located within the mountain valleys or piedmont regions, with large tracts of flat lands around them. The sites are also closely linked with perennial water streams in the region. The availability of cultivatable land and perennial water resources suggests that both the Kot Dijians and Harappans were practicing agriculture, possibly seasonal agriculture. Although we do not have access to environmental/climatic datasets for the region, based on the presence of Kot Dijians and Harappans and possibility of vast farmable land around these sites, we may suggest that the environmental conditions were conducive for sustained agriculture, especially in monsoon seasons or rain based agriculture, and settlement activities in this region at the time of Kot Dijian culture and Harappan/Indus Civilization. Furthermore, it could be very important future research agenda to understand the two main urban centres of the pre and mature Indus Civilization phase and their relationships with the surrounding contemporary settlements, in order to know their sphere of influence or hinterlands.

Furthermore, the Kot Dijian and Harappan sites are primarily located near a route connecting Afghanistan, Iran onward with Central and Western Asia through Quetta, Khyber Pakhtunkhwa and Punjab through Dera Ismail Khan, Zhob and Qila Saifullah, Sindh and Punjab onward with South Asia through Sakhi Sarwar and Loralai as well as Sindh through Loralai and Duki. The Kot Dijian and Harappan material culture, which is the third largest group of diagnostic assemblage from the surveyed region, testifies the importance of these routes and connections. The possibility of the existence of this relationship is very important for understanding the presence of Kot Dijians and Harappans in this region and future research may explain this relationship in detail.

In fact, our surveyed region is located at the centre of the major pre and mature Indus Civilization urban and trading centres (see Fig. 3.3,

Kenoyer 1998:50); with the site of Rahman Dheri in Dera Ismail Khan in Khyber Pakhtunkhwa in the north, Harappa in Punjab Province in the east, Ganweriwala in Punjab Province in the south-east, Kot Diji, Chanudaro and Mohenjodaro in Sindh province in the west and Mundigak in Afghanistan in north-west, District Loralai seems to be at the centre of major trade and communication routes connecting inter and intra regions of South Asia and beyond.

It is important to note that our survey was very limited in nature and was confined to a limited area of Tehsil Bori, District Loralai and the results of the survey may not be representative of the archaeological cultures of the region and Balochistan province. The present survey suggested that settlement activities continued within District Loralai c. 4500 BCE to 8th century CE, with significant chronological gaps in the third millennium BCE and last quarter of first millennium CE to first quarter of second millennium CE. No evidence of Palaeolithic or prehistoric existence was discovered from district Loralai. However, there is sparse evidence of Neolithic microliths from different sites, which need further research. By virtue of their sheer size, and the quality and quantity of the material culture on surface, the sites of ML-1 and Shabozai Ghundai represents the best sites for future excavations in the region. The sites are rapidly being destroyed as a result of antiquity hunters/smugglers and expansion of agriculture.

Furthermore, by the discovery of a large number of archaeological sites in a limited area, and particularly documenting the presence of absent archaeological phenomena, such as the presence of Kot Dijian culture and Harappans/Indus Civilization sites, we are successful in showing the importance of region in the past and the application of robust systematic methodologies. Future systematic research in the region, and other parts of Balochistan, may result in the discovery of more archaeological sites, particularly of the Harappans/Indus Civilization sites, and may inform us more on their landscape choices and preferences, their contemporary social, political and economic relationships with other regions and cultures of Balochistan, Pakistan, South Asia

and beyond.

Summary

Balochistan in general and District Loralai in particular has seldom been a focus of systematic research by Pakistani archaeologists and the archaeology and, to a large extent, the settlement history of region is poorly understood. Robust research methodologies, such as transect and landscape surveys, have sparsely been applied in the Khyber Pakhtunkhwa province by Pakistani archaeologists; however, these have not yet been introduced in other parts of Pakistan. Most of the traditional archaeological surveys in Pakistan are based on village-to-village surveys. The application of systematic transect survey has the potential to increase our knowledge manifold of any given region.

The current systematic transect survey was the first of its kind in Balochistan province. It was carried out in Tehsil Bori of District Loralai. The main purpose of survey was to document the settlement history of the region and to investigate the presence of Harappans/Indus Civilization sites. Past researchers, such as Fairservis (1959), have suggested this region to be as marginal and not representative of the Harappans or Indus Civilization. Archaeological research in the past has led to the documentation of 25 archaeological sites in the whole of district Loralai, consisting of one tehsil Bori and Makhter sub-tehsil.

The systematic survey of 10 transects led to the discovery of 26 new archaeological sites, doubling the knowledge of archaeological sites in the region. These sites included 8 single period sites, 13 multi-period sites, 6 Kot Diji period sites and 5 Harappan/Indus Civilization sites. The discovery of relatively large number of Kot Dijian and mature Harappan period sites in a limited surveyed area suggests that Harappan presence in District Loralai was not marginal but rather robust. Furthermore, the landscape choices of both the Kot Dijians and Harappans were not always a perfect match, but both were largely linked with their location on trade routes and near water resources for agricultural purposes in mountain valleys or piedmont regions. Future research, through further systematic surveys exploring the

different landscape settings and trial trenching, may hopefully reveal detailed information about the settlement history and Harappan presence in the region.

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