Archaeological Landscape of the Nile Valley Civilization in Early Egypt

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Abstract

The presence of the NileRiver and the NileRiverValley in Ancient Egypt greatly influenced the culture of its people. The ancient Egyptians began with small settlements around the NileRiver and were able to make permanent settlements only because of the presence of the Nile. As the Egyptian civilization grew, it became even more dependent on the Nile and its role in their economy. Finally, because of the Ancient Egyptian dependence on the NileRiver, it became a centerpiece of their religious practices and their belief in the afterlife. These are a few of the major ways that the NileRiver played a significant role in Ancient Egyptian culture.[i]

The civilization of ancient Egypt owed much of its character to the climate and curious configuration of the NileValley. The human story of that splendid civilization must be unfolded against its natural background of river and rock, sky and sand. Any study of it must be prefaced with a brief outline of the environmental factors involved.[ii] Herodotus said that the Egyptians lived in a peculiar climate, on the banks of a river which is unlike every other river and they have adopted customs and manners different in nearly every respect from those of other men.

The landscape constitutes the visible contours of an area of land, encapsulating the physical, abstract and human elements. The archaeological ramification of a landscape connotes a scientific perspective for investigating the material evolution of peoples in the wider social and ecological interactional matrix. It simultaneously lays an explicit stress on the complementarity between archaeological data and corresponding cultural trajectories allied with appropriate ecological niches. Moreover, the intromission of distinct technologies has enriched the fulcrum of the archaeological approach to landscape, lending it a holistic character, and thereby illuminating the hitherto dark corridors of the past. And, it is in this context that the archaeological landscape of early historic Egyptian civilization requires a deeper probing.

Keywords: ***Landscape, Geomorphology, Settlement, Floodplain, Riverine, Wadi.***

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Introduction

As a vista of natural scenery, a landscape constitutes the visible contours of an area of land, encapsulating the physical, abstract and human elements. The archaeological ramification of a landscape connotes a scientific perspective for investigating the material evolution of peoples in the wider social and ecological interactional matrix. It simultaneously lays an explicit stress on the complementarity between archaeological data and corresponding cultural trajectories allied with appropriate ecological niches. Moreover, the intromission of distinct technologies has enriched the fulcrum of the archaeological approach to landscape, lending it a holistic character, and thereby illuminating the hitherto dark corridors of the past. And, it is in this context that the archaeological landscape of early historic Egyptian civilization requires a deeper probing.

GEOMORPHOLOGICAL DYNAMICS

Before venturing into a detailed analysis, it becomes pertinent to throw light on the geomorphological changes in the given period. Following an initial stage during the Predynastic period, settlements were established at the edge of the floodplain, as the evidence from Badri, Nagada and Hierakonpolis shows. During later Predynastic and Early Dynastic times, in response to a drop in the Nile levels, settlements shifted to the floodplain on old levees. Since mud was used as the building material for bricks and daub, occasional high floods are likely to have destroyed many floodplain settlements. Building over collapsed buildings was thus advantageous for flood protection. This is particularly significant because of the rise of the floodplain as a result of aggradations. The rate of siltation varies depending on the geographic and geomorphic location of the floodplain. Estimates suggest an overall average of c. 0.9mm/yr, with a higher rate (1.2mm/yr) for the central strip of the floodplain, with a reduction from south to north, and from the central region to the edge of the floodplain (c0.85mm/yr). However, the rate can occasionally reach 6.5mm/yr, as during the period from 1841 until the end of the nineteenth century.[iii]

According to a reconstruction of sea- level changes in the northern Delta on the basis of a series of drill cores, Stanley and Warne conclude that the deceleration in sea-level rise occurred at 6500 BC, thus, allowing a build-up of alluvial silt; they discount the effect of climate on Nile flood

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discharge. Since the rate of siltation is estimated at 1.2mm/yr at the latitude of Samanoud where the thickness of Holocene alluvium is 12m, the formation of the Holocene silt may be dated back to 10,000 BP. In Upper Egypt, the average thickness of Holocene alluvium is 9.8m and the long-term average rate of siltation is 0.86/0.91mm/year. The beginning of the formation of the modern floodplain may, thus, be dated to 11,400-10,700BP. Estimates for the beginning of alleviation both in the Delta and Upper Egypt are thus concordant, providing a range from 11,400 to 10,000 BP coinciding with the onset of wetter conditions in north-east Africa.

EL-OMARI

The recently published sites of the el-Omari culture provide new data concerning the earliest Lower Egyptian Neolithic cultures. Located at the mouth of the Wadi Hof, 3 kilometres north of Helwan, and about 4 kilometres from the modern course of the Nile, el-Omari is actually made up of three main localities: el-Omari A, el-Omari B and Gebel Hof. El-Omari A and B are separate parts of the same site, situated at the edge of a terrace of Pleistocene gravel, at the mouth of the limestone massif of Ras el-Hof, while the Gebel Hof region is located 5 kilometres north of Helwan and at a height of 90 metres above the floor of the Wadi Hof.

Initially serving as a storage zone, and later as a zone of land and settlement, el-Omari—like the neighbouring sites of the Faiyum and Merimda cultures—was characterized by a production economy. From the beginning of the occupation, carbonized grains indicate the existence of several types of wheat (*Triticum dicoccum, Triticum compactum, Triticummonococcum,* barley *(Hordeum vulgare*), rye (*Lolium temulentum*), legumes (e.g. peas and broad beans), and flax, as well as various herbs that flourished in the fields of cereals. The fact that this is such a diverse mixture of food sources suggests that they had not reached a very advanced stage of agriculture, and the few sickle blades found might well have been simply used to chop down stalks for the manufacture of mats and baskets.[iv]

The surviving remains of domesticated animals comprised goats, sheep, cattle and pigs, the latter playing an important role in the economy, but the inhabitants of el-Omari are especially fishers, preferring deep high-water catches, judging from the abundant remains of Nile perches, alongside catfish (*Synodontis*), much sought after for its pectoral spike, in more peaceful waters. The people of el-Omari also hunted crocodiles and hippopotami, an important source of protein, but

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showed little interest in the pursuit of desert animals and marsh fowl, preferring to exploit an ecological niche between the *wadi* and the alluvial plain.

This is just the opposite of the usual situation with riverbank settlements. El-Omari was located in a particularly high place and at some distance from the flood plain, at the mouth of a drainage system that brought together the accumulated waters of Gebel Abu Shama and Gebel Gabo to the east, depositing the sediments to the north of Helwan and thus causing the Nile itself to be forced into a narrower course over to the west. This regular replenishment by rainwater combines on the one hand with the particular capacity of the limestone massif to retain water in the depressions and natural basins, and on the other hand with the numerous springs of mineral water, the existence of which is due to a system of geological faults. Thus, the immediate environment was conducive to the exploitation of natural resources, such as plant life and animals, which flourished around semi-permanent sources of water. The people of el-Omari clearly developed a close knowledge of their environment, only using the clay from 'their' *wadi* to manufacture their pottery; they nevertheless also exploited the attractions of the valley, which was beneficial in terms of sowing and harvesting, and it was there that they hunted precious extra sources of nutrition in the form of turtles, crocodiles, fish and hippopotami.

The more distant contacts, with Sinai and the Red Sea—the regions from which seashells and galena were obtained and, doubtless, also the source of fine grey flint—might all have been facilitated by the use of domesticated donkeys, el-Omari being the first Egyptian site where the bones of these animals have been found.[v]

The settlements of the people of el-Omari are comparable in their basic structures with those of Lower Egypt, but they nevertheless constitute an original group in that they were less complex than Merimda, having neither their polished black pottery nor their artistic production and architectural development. The el-Omari remains indicate a simple cultural level and a way of life particularly embedded in their micro-environment. Radiocarbon dates from the site reveal 200 years of occupation (c. 4600-4400 BC), corresponding to the most recent strata at Merimda, assuming, of course, that the range of dated materials are representative of the *entire* occupation and that the remains of the final phase of the site had not been eroded away. The existence of an unsuspected microlithic-style industry at el-Omari still makes it possible that these Neolithic people were the direct descendants of the Epipalaeolithic hunters of Helwan.

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EL-TARIF

Back up the Nile in Upper Egypt-soon to be at the heart of cultural developments in the valley-it is now necessary to look at the very beginning of the Neolithic period in the Theban region. The research undertaken at the end of the 1960s by a joint expedition of the Jagellone University of Cracow and the German Institute of Archaeology at Cairo, under the direction of the Polish Centre for Mediterranean Archaeology, discovered an occupation layer most probably dating to the fifth millennium BC.

On the desert edge, at the limit of the cultures, the site includes a group of Middle Kingdom *mastaba*-tombs, which were the initial focus of the German excavators. A 50-centimetre thick layer of Predynastic settlement remains was discovered when the 5-metre gap between two mastabas was excavated. This layer was situated on top of the pediments created by the destruction of the Theban limestones and Esna schists, deposited later than the silts of the Sahaba-Darau aggradation. Middle and Upper Palaeolithic artefacts, no longer in their original contexts, were mixed with the gravel of the base pediment, and typical late Palaeolithic tools (i.e. backed bladelets and Levallois elements) are spread over the surface of this formation. A layer of clay sediment, between 2 and 20 centimetres thick and probably of Aeolian origin, has been deposited on top of this gravelly material, and it is this context that has produced the heavily weathered artefacts making up the basis of a new industry: the Tarifian. Above the Tarifian material is another clay layer containing no archaeological material, and finally a Naqada-period occupation layer, darkly coloured by the ash and organic remains, is superimposed over this earlier material.[vi]

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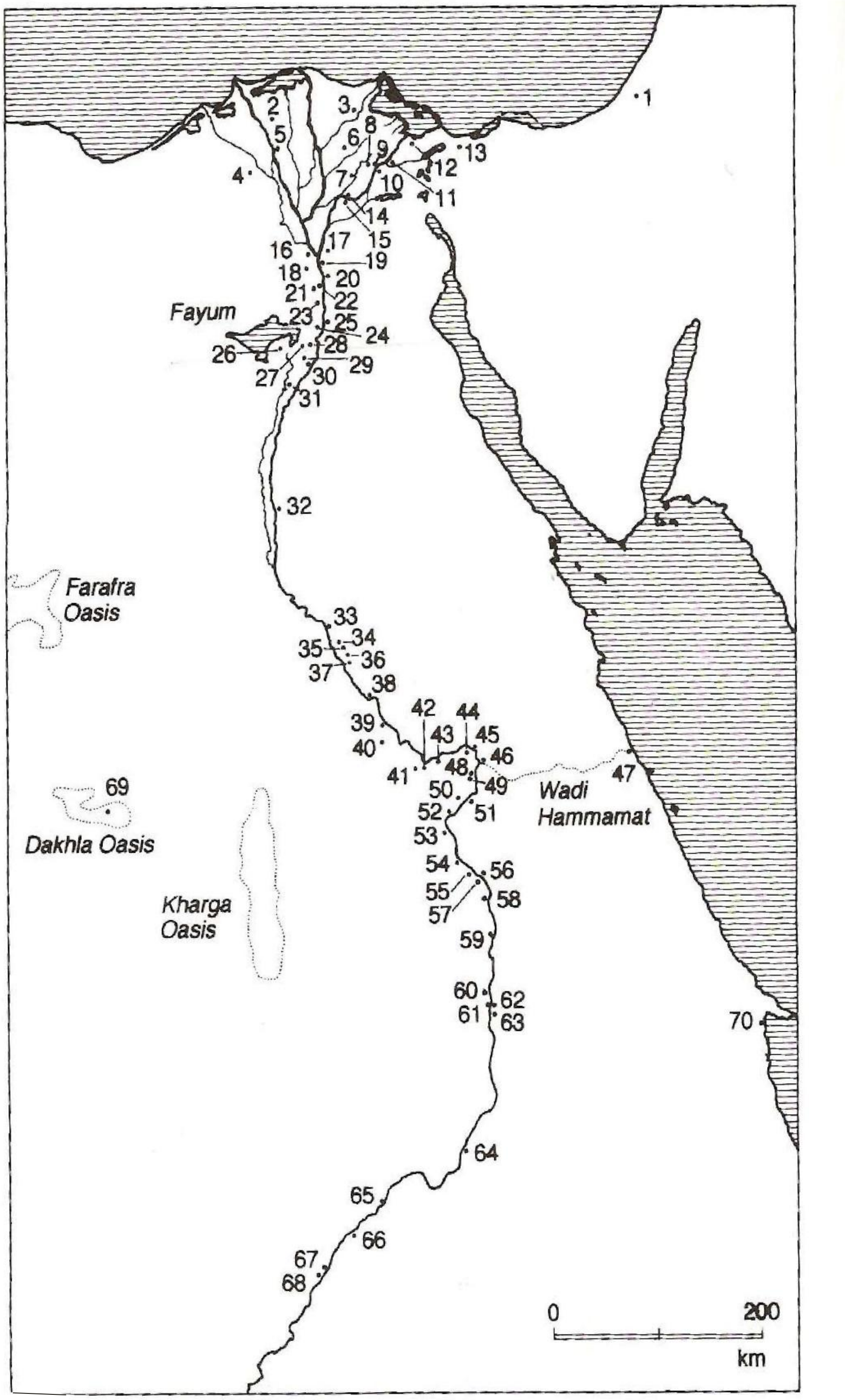
Sites of Ancient Egypt



Source:Wilikinson,TobyA.H.,*EarlyDynasticEgypt*(London:Routledge,1999),p.XX

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CULTURE-WISE DISTRIBUTION OF EARLY SETTLEMENTS IN DIFFERENT LANDSCAPES

The total number of early Egyptian settlements that have been put on archaeological map of this area and taken into account is almost 70.[vii] The culture-wise distribution of early Egyptian settlements can be looked into by way of arranging them in accordance with their sub-cultural divisions as is given below in Table I. The total number of settlements taken into account in the present case is 67. If they are divided among different cultures then 26 of the settlements belong to the Pre Dynastic period, 6 to the transition phase between the Pre Dynastic and the early Dynastic and 35 of them to the Early Dynastic period. The Early Dynastic period seems to have experienced considerable increase in the number of Settlements (35/67). Therefore, human activities seemed to have got extra impetus in this period.

Table I

Sub-culture-wise Distribution of Early Egyptian Settlements

Serial Number	Culture	Number of settlements
1	Pre Dynastic	26
2	Transition Phase	06
3	Early Dynastic	35
Total		**67**

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GEOGRAPHICAL ZONE-WISE DISTRIBUTION OF EARLY EGYPTIAN SETTLEMENTS

More interestingly, the available data can be distributed according to the existing geographical zones as well. The area under study has been divided into seven zones (Lower Egypt, Middle Egypt, Upper Egypt, Western Desert, Eastern Desert, Sinai Peninsula and Oasis) for the convenience to understand it further. The total number of settlements taken into account in this case is 68. Thephysiographic zone wise distribution of early Egyptian settlements has been shown below in table II. We find that the majority of settlements of early Egypt period lying in Upper Egyptian region (26/68) seem to be a less favoured destination for the people of this age. Lower Egypt closely follows the Upper Egypt (22/68). Although only few settlements flourish in and around the oasis (05/68), it is interesting to note that *Fayum* (4/5) fairs better than the other all oases in Egypt. Probably, early Egyptians appear to have substantial disdain for the Eastern and western Deserts and the Sinai Peninsula region as is shown by the available settlement data. Nevertheless, we do find some of the contemporary settlements in these regions too.

Table II

Distribution of Early Egyptian Settlements in Physiographic Zones

	Lower Egypt	**Middle Egypt**	**Upper Egypt**	**Western Desert**	**Eastern Desert**	**Sinai**	**Oasis**
Pre Dynastic	6	3	9	1		1	2
Transition Phase	1		**3**			1	
Early Dynastic	15	6	14	1	1	1	3
Total	**22**	**9**	**26**	**2**	**1**	**3**	**5**

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DISTRIBUTION OF SETTLEMENTS IN AND OUTSIDE THE FLOOD PLAIN

In addition to it, the distribution of early Egyptian settlements in Nile flood plain and outside the flood plain is given in table III. The total number of settlements taken into account in this case is 70. The number of settlements in the Nile flood plain (43/70) is greater than outside the flood plain (27/70). It seems that the early Egyptian preferred to live in or near the Nile flood plain rather than very far away from it.

Table III

Distribution of Settlements along the Nile Flood Plain

Settlementsin Nile Flood Plain	Settlement Outside Flood Plain	Total
43	**27**	**70**

Distribution of Early Egyptian Settlements in East and West to Nile

The total number of settlements taken into consideration in this analysis is 70. The distribution of early Egyptian settlements in the eastern and western side of the Nile River is shown below in table IV. Interestingly, the number of settlements on each side Nile River (i.e., in the east and west) seems to be fairly equal (east-34 and west-36). This means that both the side of Nile River was almost equally occupied by the

Table IV Distribution of Early Egyptian Settlements in East or West to Nile

Serial Number	Culture	Settlements East to Nile	Settlements West to Nile
1	**Pre Dynast**ic	10	12
2	**Transition Phase**	3	1
3	**Early Dynastic**	21	23
Total		**34**	**36**

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THE RIVERINE FLOODPLAIN SITE OF CATALYSIS

It is interesting to note that in addition to temporal variability and unpredictability, another aspect of ecology that enhances the dynamicity of agrarian subsistence in riverine environment is the instability of floodplain geomorphological features. The Nile is a slightly meandering stream that carries an annual load of silt estimated on average at 57 million tons per year, with a range from 40 to 100 million tons. The Nile floodplain is rather narrow, ranging from 2 km at Aswan to 17.6 km at Minia. It is formed by an accumulation of silt (aggradation, alluviation or siltation) and erosional episodes (degradation). The rise in floodplain is often accompanied also by a rise in the level of the channel deposits.

The rate of siltation is not uniform and has varied dramatically through time. The change in siltation rate is, in general, associated with significant changes in the position and geometry of the channel as well as the various landforms of the floodplain, which have major implications for agriculture. At present, the cultivated floodplain lies about 9m above the bottom of the channel. Irrigation canals in Upper Egypt are situated at 4.5m above the bottom of the channel. A high flood with as much as 10m water height can thus flow over the bank and inundate the land. Canals are, thus, essential to deliver water when the Nile flood is low, since low floods may consist of no more than 7.5 m.[viii]

Rarely static, a floodplain is delimited near the channel by either a high ridge (levee) on the concave, deep side of the channel or a sandy point-bar on the shallow convex side of the channel. A levee is formed during an inundation as the floodwater tops the bank, rapidly depositing it is load of fine sand and coarse silt. As floodwater flows away from the channel, water velocity diminishes and sediments accumulate with greater thickness closer to the channel. Following the initial surge of the flood, finer silt accumulates in depressions (floodbasins). Water also percolates through the ground creating a groundwater reservoir. Groundwater then seeps laterally to sustain backwamps (*birkets*) bordering the outer edge of the floodplain. With frequent changes in floodwater discharge and the amount of suspended silt load, the channel and floodplain undergo significant changes that can radically alter the distribution and extent of arable areas as well as access to irrigation water and drainage. It may, thus, be surmised that one of the earliest consequences of riverine agriculture, following the establishment of land ownership, was the resolution of social conflicts that may have arisen as a result of the dynamics of floodplain geomorphology. The emergence of mediators to

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resolve conflicts probably developed eventually into an organizational structure that served as an element in the making of early states.

An example of the dramatic changes in floodplain geomorphology is provided by the changes in the Cairo area mostly between AD 942 and 1281, coincident primarily with the major episodes of low Nile floods were not in existence before the Nile shifted westward.

The gradient of the river controls the flow of floodwater over the floodplain from south to north; in historical times this required a coordination of activities between communities to control the flow of water downstream by the building of artificial dykes, which could then be opened to release floodwater downstream. Floodwater could also be diverted to side channels from which feeder canals might be extended to the uplands. The continued build-up of the floodplain may deprive outer parts of the floodplain of water. Episodes of low Nile flood discharge may also have the same effect, and the combination of the two can be disturbing. In this way, the riverine floodplain has played an instrumental role in determining the locational contours of Early Historic Egyptian Sites.

The concentration of majority of the early Egyptian settlements in Upper, Middle and Lower Egypt and especially in or near Nile flood plain rather than the areas such as Western and Eastern Deserts and Sinai Peninsula is startling as well as interesting. In fact, the area of maximum concentration is also the area of Nile valley and delta. Both of these enjoy a very rich fertile soil. The Nile flood leaves highly fertile black silt annually in the flood plain area. Its mud contains of combined nitrogen, 0.2% of phosphorus anhydrides and 0.6% of potassium. The major part of the flood plain soil is light loam and thick black clay soil. On the whole, the flood plain area is a fertile zone. It was fit for agriculture and sustaining large population. The early Egyptians practiced simple basin irrigation. They subdivided the flood plain into enclosed basin of varying size by building dams. These were opened to the flood and closed as the water receded. After the water has been held in the higher lying basins for a few weeks, they were released into lower lying ones. The fields were planted in succession. Not surprisingly, some of the ancient Egyptian seasons were called "*Nile*" (i.e., the flood season lasting 70 days from late August to the end of October) and "*Sefi*" (i.e., summer low water from May to August).

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The settlements in and near the Nile flood plain submerged to an average depth of 1.5 metre during the flood. They appeared to be divided up by the thick walls of earth. The early Egyptians build their settlements and villages on elevated land to avoid inundation during the flood season. In fact, they were built compactly with houses separated by only very narrow alleys. Boats were probably the only means of transportation between these villages during the flood season. According to the traditional views, the ancient Egyptians became proficient in the planning and engineering of their villages and irrigation. They constructed embankments, barrages and dams and dug innumerable canals to irrigate their land and manage Nile flood. Early Egyptians also enjoyed the good quality of ground water that too at shallow depths in the flood plain area. The fertile soil of the Lower Egyptian flood plain has produced a region of meadows and large cultivated land. In fact, it constitutes a distinctive economic zone with highly individual geomorphic and biotic attributes.

WesternDesert is a dry region situated at the eastern end of the Great Saharan Desert. It is an area of sand plains, sandstone and limestone escarpments. There are also areas of massive dunes, barren rock, deep depression (harbouring oases) and distant desert highlands. The highlands consist of plateaus and *wadi* valleys and are permanently deserted. Most of the soil is sandy as well as saline. Half of the desert (i.e., mainly northern) is almost 300 metres from sea level (i.e., almost 100 metre above the surrounding Nile flood plain). The southern part is even higher than this (i.e., 300-500 metres from sea level) and almost 300 metres above the surrounding Nile flood plain. So, the desert soil was not as suitable as the Nile flood plain for agriculture and other related activities. Even the water for drinking and other purposes was not easily available. Generally, the ground water is available at very high depths. Even the climate is extremely arid. The day temperatures reach over 50 degrees centigrade in summer. The night temperature touches freezing points in December and January. Moreover, there is very little wildlife in this desert.

EasternDesert lies between the Nile valley and the Red Sea. Its surface level is around 300-2100 metres above sea level, which is an almost 100-1800 metres above the surrounding Nile flood plain. It mainly consists of limestone, Nubian sandstone, and igneous and metamorphic rocks. The EasternDesert consists of high mountain ranges, wide plateaus and deep and dry canyons Unlike Nile valley and delta, it has a harsh and inhospitable climate. Its northern half is nearly devoid of vegetation as a result of the arid climate. Most of the Western and EasternDeserts receive 5–50-millimetre rainfall. Again, like WesternDesert, there is severe lack of drinking water in

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EasternDesert also. There is lot of variations in the quality of water. Generally, the ground water is bracklish or saline.

It is clear from the above discourse on the locational analysis ofPre-Dynastic, Transition Phase and Early DynasticEgyptian settlements that the Upper, Middle and Lower Egypt along with the Nile flood plain and its surrounding areas were the hub of early Egyptian settlements rather than the areas such as Western Desert, Eastern Deserts and Sinai Peninsula. Such an emerging pattern suggests that in all likelihood, the life was less threatened in the former areas in comparison to the latter ones. In fact, the possibilities of survival were relatively greater in the Nile flood plain, the surrounding area and in the Nile Valley and Delta region, as these areas enjoyed relatively fertile soil, sweet drinking water that too at shallow depth, abundant water for irrigation and dense vegetation and rich flora and fauna. Moreover, they reduced the threat of annual Nile flood by building their settlements on relatively elevated land through careful observation and management of Nile flood. Such emerging trends also exhibit that the geographical condition and natural forces had significant role in determining the settlement pattern in early Egypt. It also points out that in the early stages of human development, when the technology was in the less developed stage, nature did play a crucial role in the survival of mankind.

[i] Barnes Hauptfuhrer, The Nile River and its Affect on Ancient Egypt, 2000,URL:http:www.civilization.com
[ii] J.E. Manchip White, *Ancient Egypt* (New York: Thomas Y. Crowell Company, n.d.), P.1.
[iii]Hassan Fekri A., The Dynamics of a Riverine Civilization: A Geoarchaeological Perspective on the Nile valley, Egypt, *World Archaeology*, vol.29,No.1, (June, 1997),pp.51-74
[iv]Midant-Reynes Beatrix, *The Prehistory of Egypt: From the first Egyptians to the first Pharaohs,* Ian Shaw, trans. (Massachusetts: Blackwell Publishers, 1992),pp.118-124.

[v]Ibid., pp.118-123.
[vi]Midant-Reynes Beatrix, *The Prehistory of Egypt: From the first Egyptians to the first Pharaohs,* Ian Shaw, trans. (Massachusetts: Blackwell Publishers, 1992), pp.124-126.

[vii] Data of Settlements, their location and nature of the culture represented by them is based onWilkinson, Toby A.H., *Early Dynastic Egypt*(London : Routledge,1999),p.1.
[viii] Hassan Fekri A., The Dynamics of a Riverine Civilization: A Geoarchaeological Perspective on the Nile valley, Egypt, *World Archaeology*, vol.29,No.1, (June, 1997),pp.51-74

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