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**Environmental Crisis and  
Social Dismemberment in Northwest India  
During the Pre-Colonial Period**

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"If we are going to face an environmental crisis  
in our own times,  
it is important to know how societies reacted  
to environmental crisis in the past."

## I

Scholars tend to argue that ecological frontiers of Asia never served as fixed borderlines. It became more 'silent' in the regions where desert conditions continuously deteriorated.<sup>1</sup> For example, during the medieval period, the interlocked regions of northwest India bounded by the river Helmand (Afghanistan) on the one side and Sutluj- Ghaggar of the Indus river system on the other, witnessed breathtaking environmental and political changes. The proposed physical amalgamation covers the present regions of south Afghanistan, undivided Punjab, Sind and western Rajasthan of the Indian sub-continent. The hot deserts of India (Rajputana), Pakistan (Thar-parkar) and Persia (Dasht-i-Margo, the Kash Desert, and the Registan), sparing the southern hunk that touches the Arabian Sea, have covered almost the entire portion of the proposed area. Here climatic variability afflicts the human social systems at and various levels. The erratic flow of Indus and Helmand rivers and around their vicinity and excessive use of land for the human consumption did not allow the people to settle free from multiple challenges. Scientists argue that because of hydrological and tectonic occurrences these rivers during the historical periods either faltered by changing paths or went dry. During the medieval period aridity crept into several parts of these regions and where desert conditions were already present this became more intensified and extensive.<sup>2</sup>

Major Raverty, who has outlined the hydrological and environmental variations, subscribes to the view that changes

in the courses of Beas and Sutluj of Indus river system, and the drying of the Hakra, were so considerable that they reduced a vast extent of a once fruitful country into 'howling wilderness'. Therefore, several flourishing cities and towns were ruined or deserted by their inhabitants.<sup>3</sup> During the same period, the water supply in Sistan (south Afghanistan) became as uncertain as that of Sind. Goldsmid who travelled from Bandar Abbas to Sistan in the middle of the 19th century observed that the soil of the two regions has much of the same character, and Sehwan (Sind), with its rich cornfields, might be found as like Sistan in fertility as connected with it in etymology.<sup>4</sup> In fact, under the shadow of similar climatic casting, political and geographical settings of shifts, the different countries look fragile. It is easy to see that a good year of inundation fills up water in dry beds and revives the extensive river system across national boundaries. Otherwise, too, millions of people living within the limits of Indian and Iranian deserts are exposed to severe heat and aridity though vulnerability to hazards varied considerably.<sup>5</sup> Another aspect is that such variations had developed dual economies. There is continuous contest between wandering pastoralists and settled peasants in order to dominate the political and economic space.

Scholars, who work on ecological and climatic developments of Central and South Asia, particularly over the vast regions of great deserts present the early phase of medieval period as a watershed in the human history. It is treated as a culmination of the progressive desiccation of environmental conditions that started roughly from third BCE or at the most after the fifth century CE, coincide with the beginning of ice or cold age in the history of Europe. During the Mughal period (1500-1700) or after the invasion of Timur, conditions, more or less, became stabilized. Recent researches have provided extensive data on the flow and direction of the major rivers of Punjab and Afghanistan. Generally, such changes in the courses of the rivers are attributed to geographical factors; particularly to the cause of flooding that bring abnormal soil deposits at certain places or creating breaches in the embankment areas.<sup>6</sup> Other historians

argue that Arab, Turk and Mongol invasions in these parts of the sub-continent not only dismantled the irrigation systems but also eliminated the traditional social order that was tied to specific forms of land use. Ultimately, such factors paved the way for ecological disturbances. Both Minhaj and Amir Khusru vividly describe how Mongols burnt the cities, cut off canal flows and destroyed irrigation systems thereby devastating the vast fertile lands of Afghanistan and northwestern parts of the sub-continent.<sup>7</sup> Rajasthani and Gujarati inscriptions of the eighth and ninth centuries have also listed the plunder and destruction by invaders, which depopulated the vast areas.<sup>8</sup> Generally such disturbances are projected in terms of a clash between disparate cultures, broadly of locals against outsiders; where external forces sow destruction.<sup>9</sup> The position of deterioration of environmental conditions connected with such political or cultural conflicts is rarely examined. Dhavlikar is of the opinion that after the fourth century almost for 1000 years due to degeneration in the climatic conditions entire India suffered badly. His observations are based on the El Nino theory that relates the character of monsoon with the flood fluctuations of the Nile river of Africa. He is of the opinion that the decline in rainfall after the Gupta period led to the contraction of trade and urban culture in India.<sup>10</sup> However, some experts differ on the outcome of large-scale behaviour of the atmosphere and its associated weather patterns. Recent desertification cannot after all be ascribed to variation of the long-term macroclimate. Contemporary desertification episodes are often the effects of interaction between mounting pressure on land and vegetation and the incidence of naturally occurring droughts, which are a normal part of the desert margin climates. There is much wider agreement with the proposition that recent droughts have merely accentuated a process of 'cultural desertification'. Too intensive or unwise land use, in which there has been little or no investment in defenses against environmental hazards or degradation, is commonly said to have exhausted the resilience of dry ecosystems. Drought has simply administered the *coup de grgce*, leaving ecosystems with more persistently or permanently reduced productivity than they suffer from drought alone.<sup>11</sup>

Environmentalists within the suggested period of early medieval centuries continue to differ even on the probable time factor of the appearance of intensified desiccation in the valleys of Helmand, Indus and Ghaggar rivers. There is little doubt that such natural phenomenon either appeared sometime in the seventh-eighth centuries or tenth-eleventh century. Some go so far as to suggest that it happened after the commencement of the thirteenth centuries. Of course, one thing seems to be common is that the large population from all these regions suffered almost at the same time, which in turn suggests that the social and political tensions promptly projected in terms of clashes of sectarian or cultural clashes in fact, had varied reasons.

## II-A

Lord Curzon visited East Persia and South Afghanistan towards the end of 19th century, and described the climatological austerity of the entire region of northwest frontier regions. Of Sistan, he wrote that it was one of the most unattractive and inhospitable lands in the world. He added that the number of ruins in Sistan was probably greater than in any equal area in any part of the world. The former population must have been far more dense, and at the same time more prosperous than that of his day.<sup>12</sup> Scientists also argue that the water supply in Sistan of south Afghanistan during the ancient times was sufficient and the region, which later became poverty stricken, was most prosperous. Aural Stein who excavated many sites on the Indo-Iranian border concluded that during pre and early historical periods the region saw the growth of many civilizations. From 4th to 7th century, it was the centre of both Zoroastrian and Hindu worship. The kingdom of Zabul was an important political entity and equally matched the glory and political status of its neighbouring famous state, Gandhar.<sup>13</sup> Most geographers are of the view that Sistan shows the character of a multiple and long-term crisis.<sup>14</sup> But there are others, who do not agree with the theory of progressive desiccation and forward that only during the early medieval period, the fame and prosperity of Sistan drastically declined. However, such investigators differ

about the exact time of its downfall. Yet they all agree that destruction brought by the Mongols in Sistan was extensive and serious.

Ellsworth Huntington, who does not believe in the idea of the commencement of desiccation from the seventh-eighth centuries, recommends that from 300 BC through 900 A.D. Sistan water cycle sustained a stable urban civilization. Even after this date the situation did not entirely worsen, rather people tried their best to revive the old glory. The famous city of Zahidan was founded sometime around 1000 CE and it flourished until sacked by Timur in 1388 CE. Timur or his son Shah Rukh destroyed the dams and weirs of the Helmand, on which the irrigation of the country depended for centuries. The region never recovered from this havoc. Huntington also adds that sometime in or after tenth century, the course of Helmand river was deliberately diverted northward to feed Lake Zaranj or Sistan; thenceforth it abandoned its natural flow towards southwestward via Zirrah. Lake Zaranj was considerably enlarged.<sup>15</sup> This picture of river diversion has critics yet they admit that the Sistan basin during this period as a whole was considerably more moist at least before the visitation of armed Mongols. The lake was, in the middle ages, far more extensive than it has come to be at the present day. Some historians also contest that Sistan, in fact, prospered under the Arabs from the 8th century CE which lasted until 1383, when Mongol conquerors destroyed the Helmand river control system.<sup>16</sup> The emergence of two local powerful kingdoms of Saffavids and Ghaznavids in Sistan and Zabol-Ghazna regions during the tenth and eleventh centuries bears testimony to it. For more than 200 years Sistan and Ghazna remained major centres of Hind, Persian and Central Asian politics. Al Ishtakhai, who wrote in the middle of tenth century, describes Sistan or Sijjistan famous for its fertility; dates, grapes and all foodstuffs. Arab geographers praised the city of Zaranj, situated on the bank of the canal of the lake, as the great commercial and political centre of the province. It survived until destroyed by Amir Timur.<sup>17</sup>

In fact, before the coming of the Mongols, the Ghūrids, the power from neighbouring region, gave a severe jolt to the prosperity of the Zabul-Ghazna region. Alā' al Din Jahan Soz Suri, Sultan of Herat and Ghūr in order to take the revenge of the killing of his brothers, not only gave a crushing defeat to powerful Ghaznavids but he burnt the 'Pearl of Cities', Ghazna, towards the end of 1150 CE. As many as 60,000 inhabitants of Ghazna were massacred. C.E. Bosworth writes that, 'the complete destruction of the capital and the utterly ruthless murder, rape and deportation of the inhabitants — who were certainly not responsible for the conduct of their rulers — rightly gained for this monster the name of Dihānsuz (Burner of the world), by which he is known to history.'<sup>18</sup> For a number of years the city remained a desolate place until Sultan Mu 'izz al- Din Muhammad Sām, nephew of Alā' al Din Jahan Soz made it the capital of his growing empire. He is the same Sultan who defeated Prithvi Raj Chauhan III of Delhi and Ajmer at Tarain in 1192 CE and expanded the territory of his kingdom in the central plains of India. After his death in 1206 CE, Ghazna decayed so much so that when the Mughal Emperor Babur visited it, he wondered how such a town could be preferred as the capital of a vast empire. He was also critical of its environmental surroundings.<sup>19</sup> Scientists argue that poor, uncoordinated management and excessive extraction of water for agriculture purposes, combined with long years of drought, has led to drastic declines in the water flows of Helmand river. The prosperity of the great city of Zaranj of Sistan grew on the support of water management through bunds and canals constructed especially over Helmand river, and survived for centuries against the might of moving sand of neighbouring desert. The destruction of the canal system from either where the water of Helmand was diverted from place to place by natural or man made reasons brought the end of prosperity of Sistan.<sup>20</sup> It seems that the decrease in the water supply, on the one hand, and the impoverishment and diminution of the people on the other, bear the geographic relation of cause and effect. The degradation of the natural resource base directly and severely affects the livelihood of the majority of the Afghan population as well as the country's economic development as a whole.



## II-B

In the recent past, several attempts have been made to study the nature of frequent diversions of the channels of Indus river system. Though most of such studies are contradictory in their findings, however, a holistic picture emerges from them that during the long span of medieval period, barring the years ranged from 850 to 1011 CE and 1333 to 1525 CE important changes in the long course of the Indus river had occurred. In between of these changes the period of 1625 to 1700 CE looks a stable one, however, during that period water flow in the river considerably reduced.<sup>21</sup> Raverty has discussed about five major transitional periods that passed through Indus river system between 712 CE and 1890 CE. 712 CE is the year when Arabs' invasion on Sind took place and by the end of 1890 CE, the flow in present courses of river Sutluj and Beas had, more or less, settled down. After that, we do not notice major changes in the Indus river system. Raverty in his mammoth work while contesting what once Oldham, who first time investigated that a serious crisis in the Indus river system had surfaced during the early medieval period, has said that Hakra which used to meet Indus at *Dosh i A'ab* in upper Sind had not disappeared either in 1220 or in 1223 CE. Therefore, water in *Nara* or eastern branch of Indus continued to flow for more time after that.<sup>22</sup> In fact, Raverty, though produced a lengthy account but at several places has built up his opinion on scanty sources and looks more enthusiastic in drawing the conclusions rather than making the matter more explicit. Irfan Habib has rightly pointed out that his findings should be treated with more caution.<sup>23</sup> For example, Raverty has chosen the location of Uchchh in the upper Sind for citing it as an example to explain the pattern of changes which appeared in the Indus river system but he did not bother that why in the contemporary travellers' accounts the name of Uchchh is not mentioned.<sup>24</sup>

In fact, during the early medieval period entire northwest regions of the sub-continent suffered both on ecological and military grounds. It is the time when invaders, like, Huns, Arabs,

Turks and Ghūrīds, came in quick successions and overran the country. At the same time climatic conditions in both Sistan and Thar Registans had deteriorated speedily. Between the periods from 950 to 1050 CE due to tectonic changes, the Sukkur gorge of Indus became deep and wide and result of that adjacent Alore gorge which remained very short failed to divert the water in the *Nara* or eastern arm of the river. By that time, the river Hakra or Ghaggar once supported *Nara* had also run dry. The decrease of water in *Nara* was disastrous for the lives of thousands of people in Sind. Beset by internal problems the new Arab rulers did not pay attention to restoration of the canal system. The chances of resettlement of the people became meager.<sup>25</sup> Between 1011 and 1333 CE, the Indus experienced three major changes in her lower course. The Chroniclers of Sind associate such incidents with the fall of local Sumra and Sama dynasties that succeeded after the fall of Arab regime. A good number of historical tales of Sind elaborate that the tyrannical and unjust rule of these local dynasties offended the river goddess. Hence she decided to move from her original path and flow in another direction. Rajasthani tales related to the incidents of *Awad* or *Karni Shakti* or goddess worship also support such occurrences. Oppressive regimes and growing desiccation probably compelled a large number of people from the Charan community to migrate from Sind to Rajasthan.<sup>26</sup> The historical literature of Rajasthan provide evidences that are more concrete. All these point to the year 1040 CE, as a year of severe natural calamity. According to their information during the rule of prince Lakha Phulani, the legendary figure of Thar Parkar province, a long twelve years of famine and drought severely affected the people living in Sind and its adjoining regions. Although the Prince did his best to support the people, he could not check the large-scale population migration from Sind. Lakha Phulani ruled sometime around the middle of the eleventh century and was contemporary of Prince Devraj Bhati, son of famous king Vijay Ray of Bhatia or Bhatner. Devraj after the loss of Bhatner to the forces of Mahmud of Ghazna founded the fort of Derawar, on the bank of Hakra in upper Sind, however, soon left the place and moved towards the present region of Jaisalmer.<sup>27</sup> It is the

period when several parts of Afghanistan, too, was affected by severe drought and famine. The military campaigns of Sultan Mahmud and his son Masud of Ghazna worsened the situation by destroying a number of natural resources in the mountainous region of Ghūr.<sup>28</sup> Soon, the Ghūrīds retaliated and they also brought misery to the people belonging to the opposite group. Successors of Masud of Ghazna fled from Afghanistan and found refuge at Lahore. In fact, aggressive policies of Sultans of Ghazna adversely affected the economic condition of both Hind and Khurasan. There are evidences that people of Ghūr in Khurasan and East Persia not only moved towards Merv and Bukhara or Iranian plateau but also migrated to the vast plains of present Haryana and Punjab. Rather, Multan turned out to become the main destination for the immigrants.<sup>29</sup>

## II-C

Similarly, changes in the lower and middle course of Indus after 700 CE adversely affected the pattern of human settlement in the entire Thar and Parkar regions of Sind. There is a long list of the towns which had flourished in the previous centuries: these either declined or disappeared. Al-Biladuri, an author of the ninth century, while describing the details of military campaigns of Arab governor Zunaid in western India has listed the names of such towns, which could not survive in the subsequent periods. Kiraj, Navkot, Dhalia, Nurunkot, Jherver and Sudhreje Dard were prominent among them. Still a good number of people living in Rajasthan and Gujarat carry the names of these towns in the form of their sub castes or surnames. Al Biladuri informs that forces of Zunaid after capturing Kiraj (Phalodi) went to invade the territories of Marmad Mandal, Jurz and Bailman (Bhinmal in the present state of Rajasthan).<sup>30</sup> In the travellers' accounts, the word 'Maru' refers to the arid lands. It appears that the application of 'Maru' (Mau!) remained restricted to the desert parts situated on the border regions of Sind and Hind. Historians often include the land of Marwar (Jodhpur) of Rajasthan in it but in the contemporary accounts it was called 'Jurz'. In fact, the application of 'Maru' is restricted

for the land stretching towards the north from Jaisalmer; which mostly includes the territories of Budhia or Thar Parkar as well as of desert of Cholistan in Sind. Region situated southwest of Jaisalmer, including Umarmkot is called as Dhat or Mand. Perhaps, Biladuri has referred 'Maru Mand Madal' in the sense of the entire area of great Thar Desert of those years, which along with Maru and Mand includes the region of Barmer of western Rajasthan.<sup>31</sup> It appears that the application of different names for the regions situated within the limits of Thar Desert shows awareness of varying degrees of desiccation. Moreover, until that time, the town and surrounding area of Bhinmal (Al Bailman) as well as of Bhatner in the north Rajasthan did *not* fall into the limits of Thar Desert. Travellers of early medieval period record that town of Bhinmal could be approached after passing a vast sandy desert. During that time, Bhinamal, situated in the border land of Rajasthan and Gujarat was a popular commercial centre of Sind and Hind. Bhatner, though in the opinion of some scholars declined after the fall of Rangmahal culture, survived until the 14th century as an important military post and town.<sup>32</sup> Such distinctions are important: just as rivers changed course, so too did the extent and expanse of the desert.

The regions of Jaisalmer, Barmer and Umarmkot of Rajasthan and Sind, though integral parts of the Thar Desert were ecologically diverse in terms of moisture availability, soil type vegetation and the faunal complex. They even included large marshy oases around rocky patches and small hills dotted with shrubs and trees. These helped the local economy to sustain both agriculture and pastoral activities. The eighth century account of *Chachnama* projects these difficult and diverse natural conditions clearly, while the character of desert conditions towards the eastern side of Brahmanabad were known, contemporaries elaborate green, well watered valleys and active river channels present in the intervening lands.<sup>33</sup> Again, the tribes and nomads living on both sides of Indus in Sind were mostly Buddhists. Both Brahman king Chach and Arab General Muhammad bin Kasim persecuted them and because of that, they migrated to the Mand and Vall (Jaisalmer-Phalodi)

regions of present Rajasthan.<sup>34</sup> The place known as Baishakhi, near Jaisalmer emerged as the chief religious centre of Buddhism. However, the seventh century writer Hiuen Tsang also includes Osian, near Jodhpur as another centre of Buddhist activities.<sup>35</sup> Bauk and Kakkuka inscriptions of Mandor and Ghatiala, near Jodhpur, dating to 837 and 861 CE respectively, narrate that because of marauding activities of some predatory tribes, like Abhiras, the region became desolated. Since a serious political contest sprang up among the local ruling tribes of Parmara, Partihars, Bhatias and Nagas the past glory of the region could not be revived.<sup>36</sup> Mahmud of Ghazna had burnt the city of Brahmanabad.<sup>37</sup> Between the period of 1000 and 1300 CE, Indus at least three times changed its course and several towns located on the Indus banks disappeared or declined. Aror, the other famous capital town of Sind in the northern region also underwent sharp decline. A number of people from Mer (Med) and Jat communities who as local powers controlled the major parts of lower and central Sind, left their homes and moved towards the neighbouring regions of Kutchh, Saurashtra, Marwar and Mewar.<sup>38</sup>

The story of upper parts of Sind is not very different. The Cholistan desert from the early periods set the pattern of pastoral and nomadic life of the people. Yet, the flow of Hakra, Sutluj and *Nara*, from time to time, revived the hopes of emergence of new settlements and kingdoms. In the beginning of the 8th century a powerful kingdom of the region, known as Travani (land situated on the influx of three rivers) or Ramel successfully challenged the ascendancy of Chach in Sind. Its ruler Sohan or Sursen belonged to the Bhati family of the frontier regions and in the opinion of some historians, Ramel is a corruption of Zabul (Sistan). Marot and Bhatner, capital towns of this forgotten kingdom flourished on the banks of Ghaggar and Hakra rivers. Arab travellers explain that Ramel was located in the country of Budhia or in the modern Thar-Parkar and Bhawalpur regions of Sind. Jat tribes who after ninth century moved towards the fertile plains of Punjab, had predominately populated Budhia.<sup>39</sup> The invasions of Mahmud Ghazna and Muhammad Ghūri over

the Jat territory again pressed the natives to move from their homeland. Therefore, we could conclude that most of the Jats of Sind because of political and ecological reasons moved in to the different parts of Punjab, Rajasthan, Haryana and their neighbouring regions.<sup>40</sup> The famous trade route of northern India connecting Multan and Uchhh to Kanauj passed through this territory. Almost every famous invader of early medieval India preferred this route for reaching the Ganga-Yamuna plains.<sup>41</sup> After the ninth century this kingdom of Ramel went into oblivion, however, Bhatner as written earlier survived to remain a leading centre of north Rajasthan and Sind. Bhatner continued to resist almost every invader coming from Khurasan and Iran. Mahmud of Ghazna, after crossing a thorny desert, invaded this fort but he encountered stiff resistance. It was only after a long and intensive struggle that he could conquer it. According to his chroniclers, the Sultan collected immense booty from the fort. Bhatner, founded by one Prince Bhati of Jadam race sometime in the middle of the fifth century on the bank of Ghaggar River was also a popular Buddhist centre. Chinese traveller Hiuen Tsiang who addressed the town as well as its kingdom in the name of Satadru prominently describes its prosperity. Satadru is not Sarhind as stipulated by some archaeologists and historians.<sup>42</sup> Bhatner has a peculiar historical and geographical background. For a long time its location remained shrouded by the vast limits of the Lakhi Jungle of Punjab. Even the battle of Tarain was fought at a place known as Talwara, situated between Bhatner (Tabar Hind) and Sirsa. Amir Timur before reaching Delhi also first conquered Bhatner, after which he halted at Talwara Lake.<sup>43</sup> Bhatner though survived to witness the history of Mughal period, however, because of political as well as natural disturbances could not protect its natural wealth and ultimately fell before the strong southerly sandy winds. Its lifeline, the river Ghaggar became a seasonal channel. The history of Bhatner clearly suggests human activity as largely responsible for its corrosion. The environmental fate of Bhatner remained closely linked to survival of the Lakhi Jungle. During the medieval period, a large number of people chiefly from the tribes of Bhatias, Varhas, Chauhans, Khokkhars,

Jats, Afghans and Lobanas for political and economic reasons inhabited the area of jungle and cleared its vast vegetation. In fact, they prepared the ground for the long march of both Thar and Cholistan deserts. After the eighteenth century, the name of the Lakhi jungle remained only in the folk tales or historical texts of frontier regions. Its vast expanse and rich vegetation underwent shrinkage and degradation.<sup>44</sup>

## II-D

Even the Panjnad area of frontier regions during the early medieval period experienced a phase of serious ecological crisis because tributaries of Indus changed their paths and started uniting with each other on new junctions. The political and environmental conditions of Multan and Uchchh deteriorated sharply. Until the eighth-ninth centuries, river Ravi remained the main source of water supply for the famous city of Multan. Muhammad bin Kasim could capture the town only after cutting the supply of water from the canal of Ravi. Later on the drying up of the Ravi river forced the Arab Governor of the town to shift his residence. The disappearing of Ravi in the surrounding area of Multan could be verified from another example that the huge campus of the famous sun temple of Multan along with its large sized tank, situated in the outskirts of the town, adjacent to canal side of the river, during 10th-11th centuries converted into a place of dense settlement and busy market. However, for the relief of the people, united channel of Chinab and Jhelam slightly shifted towards the city.<sup>45</sup> The fluctuations in the flow of river Beas presents a classical case of hydrological disturbances that took place in Punjab. Without discussing much about the frequent changes broadly, we can conclude that during the early medieval period the Beas flowed as an independent river before it met Sutlej at Shujatpur, north of Uchchh in upper Sind. During the long path, it ran almost parallel to Sutlej and both of these rivers before their final union used to meet below Govindwal in north Punjab. Thereafter, their joint flow after passing Firuzpur in south Punjab again used to disperse into two independent channels. Sujain Rai, the historian of 17th century, talks about

its meeting with Sutlej near Buh in north Punjab but does not mention about its independent path after that union. However, other accounts of the Mughal period do refer its dead or old path.<sup>46</sup> Contemporary observers suggest that during the Tughluq period (most probably in the early years of the reign of Firuz Tughluq) either great flood or some great physical disturbance had forced Beas to disband her lower and middle path.<sup>47</sup> The disappearance of the river Beas in south Punjab proved disastrous in many ways. It adversely affected the flow of several channels that used to connect Beas with both Ravi and Sutlej. Particularly *Naiwals* of Ghaggar, running on the support from Sutlej and Beas, suffered extensively. Because of such changes, many parts in the regions of Bet Jalandhar Doab and Bari Doab were desiccated. Towns, like Depalpur and Kehrur lost their eminence. Interestingly, in the west of Multan there was now a vast sandy desert between the Jhelam and the Indus.<sup>48</sup> The vegetation of Lakhi Jungle in the surrounding areas of Firuzpur and Abohar suffered. There is an interesting story that during the reign of Bahlol Lodi one Ramdev Bhati cleared many parts of Lakhi Jungle and laid the foundation of Patiala.<sup>49</sup> George Thomas who visited the areas of Bhatner and Bhatinda at the end of eighteenth century talks about the presence of dry *Naiwals* of Sutlej. He felt that the Raths, Bhattis and Johiyas, who were agriculturists in the past were compelled to lead the life of nomads.<sup>50</sup> The territorial limits of Berun Panjnad were redefined.<sup>51</sup> Raverty suggests another development that since Sutlej was a tributary of Hakra and both rivers remained a part of Panjnad system, the fading of Hakra affected the course of Sutlej in the region of Uchchh. Although scholars do not agree with the findings of Raverty but the sources of Jaisalmer in Rajasthan support that until the period of tenth or eleventh century Hakra was a big Darya or river; might be receiving water from Ghara or Sutlej. After the decline of Hakra, Sutlej started joining the united stream of Chenab and Jhelam at a new junction, Jhangra.<sup>52</sup> Changes in the flow of Sutlej in lower Punjab and upper Sind not only affected the physiographic character of present Bhawalpur region of Pakistan but while reducing the humidity level also intensified the process of desertification in



Thar and Cholistan Deserts. Turks and Mongols who almost every year invaded the region accentuated the human problems and forced the people to move elsewhere.<sup>53</sup>

### III

F.K. Hare, R.W. Kates and Andrew Warren in their joint scholarly paper, 'Making of Deserts' have listed two major patterns of change in human society having causal importance in desertification. The first of them is population dynamics, for both growth and decline in population cause desertification. The second pattern involves changes based on the interaction of society at varying scales.<sup>54</sup> In fact, a case study of these interlocked regions reveals that social and environmental factors were very closely inter-connected and it was this interaction that accelerated the process and pace of desertification. It is equally important to know how different societies responded to the processes of desertification with a variety of coping mechanisms. This will explain how its effects were absorbed or accepted, its consequences are reduced, or its pressures are translated into changes in livelihood or location. So far as the population pressures are concerned the scanty collections from local literary and archival sources of the late medieval period suggest that population in both arid and semi arid regions increased considerably. Rather, studies reveal that during the period the growth in Marwar was higher than that of the Indian population. As a whole such an assessment is based on limited evidence. What matters is the intensification of resource use due to the growth in human numbers.<sup>55</sup> B. D. Chattopadhyaya is of the view that because of increase of artificial irrigation facilities, the general growth in agriculture in early medieval Rajasthan could be correlated with new techniques of production.<sup>56</sup> The popularity of Persian wheel in the same period of Rajasthan also suggests the impact of new settlers for bringing out the changes in the life style of the people.<sup>57</sup> There are examples that not only warrior groups in large number came here from all directions mainly from neighbouring northern and western regions but several agriculturist communities and pastoral groups

took shelter here. We have already discussed that after the eighth century people of frontier regions, like, Jats, Mers, Baluchs, Gujjars, Jadamis or Bhatias, Varhas, Partihars and others because of political and environmental reasons had moved in the neighbouring regions of India. During this period, several new chiefdoms with specific dynastic names sprang up in the western parts of India.<sup>58</sup> Therefore it becomes important to know whether these immigrants after their settlement in the new territories maintained their old ethnic identity or merged into the powerful local societies. Given caste divisions, how far their amalgamation into local societies did change their status. Interestingly, on the social scenario we notice diverse trends ranging from mutual contest, to larger scale perseverance and incorporation. The formation of the Rajput ruling order at the top social scale during this period clearly suggests that warrior groups of different tribes and social hordes came together for a common political interests. Similarly, people who could not qualify for this highest scale or possessed the specific professional skill, either on hereditary lines or on individual character had to accept lower rank or status.<sup>59</sup> On the contrary powerful social groups, like, Jats, Mers and Gujjars did not fragment and maintained their ethnic character. However, there is evidence that many families with diverse social backgrounds joined their tribal groups. This phenomenon suggests that several groups were on the way of losing their social identity during this period. We could conclude that the process of Rajputization, the congealing of warrior castes did not occur in isolation. The parallel processes of Jatization or Gurjarization, the formation of agro pastoral groups was also unfolding around the same time. Interestingly, during this period, in Khurasan and other parts of Central Asia local societies were reassembling in the framework of Turks or Tajiks and in fact, immigrants had triggered the cycle of that social proliferation.<sup>60</sup> There are references that those who earlier settled down as political and military leaders of the local societies, after their political defeat or because of their migration in the new areas, again, disintegrated and adjusted them at the different social scale.<sup>61</sup> However, with the passage of the time, perhaps with the consolidation of position of new social forces, the movement of people from the lower scale to the higher one

became rather difficult. The stark example is again from Sind. Chach, who belonged to a priestly family after assuming the royal status, passed severe punitive orders against the local ruling tribes, the Lohanas and Jats. Surprisingly, this development came after his marriage in the Jat family of either Budhia or Brahamanabad. Jats were instructed not to use arms and horses. Although Jats primarily engaged in agriculture and pastoral activities yet in the eyes of the authorities, they remained robbers, looters, and causing harm to the flow of trade moving between Hind and Sind. Arab and Turk invaders vigorously followed the policy Chach or his predecessors.<sup>62</sup> Nevertheless, Jats continued to enjoy their status as peasants and soldiers both until the time of consolidation of the Mughal government in their areas. We all know that how even during the Mughal rule itself, at the time of Aurangzeb and his weak successor's situation again changed and the Jats succeeded in challenging their authority.<sup>63</sup> In Rajasthan, the Rathors of Bikaner could succeed in the land of Jangaldesh only after making alliances with the Jat settlers. It is interesting to note that one of the powerful groups from the Jat communities in the area was of the Khamp of Sarans who according to the information of Bhati records had the descent from Bhati or Jadam race.<sup>64</sup> This process of social transformation or conversion from one social group to another one has been termed as from Jat to Unjat in the regional records,<sup>65</sup> which suggest that these terms had been applied at the time of writing and rewriting done at the later times. It happened precisely at the time when the caste affiliations within the society have taken a firm grip too, with the backup of both religious and social descriptions. In the changed situation Rajputs, like the Kshatriyas had been accepted as a so called martial race or 'superior caste' of the emerging Hindu social order.<sup>66</sup> Thus during the pre-medieval period the people of losing side often found themselves at disadvantage on both religious and social grounds.

## IV

The records of ruling Bhati clan of the erstwhile Jaisalmer state in Rajasthan provide vital information on developments of both social and religious conversions. Bhat's records elaborate that once they were the residents of frontier regions and ruled Zabul, Ghazna and Gandhar. Before becoming famous as Bhat's they perhaps before fifth century or so, they were called as Jadam's.<sup>67</sup> Prince Ratbil (Rainsi), who resisted the first wave of Arab invasion over the land of Sistan and Zabul was from their family.<sup>68</sup> James Tod in his firm opinion considers their descent from Indo-Scythians and Sistan word is the corruption of *Shakasthan*.<sup>69</sup> In their records, Bhat's have also used the application of Śaka, in several contexts.<sup>70</sup> Finally, Arabs pushed them away from the frontier land of Punjab and it appears that after their migration they scattered in groups and settled down in most parts of western India. They served as warrior groups and succeeded in establishing their authority in many parts. The kingdom of Ramel was one of them; at the same time, they pushed them into different occupational societies. Lakhi Jungle where most of them moved in their adverse days ultimately settled as agriculturists.<sup>71</sup> Sandhus among the Jat Sikhs are Bhat's. Those who opted for trading activities in Sind grouped them as Bhatias.<sup>72</sup> In the following table a list of those persons who originally hailed from the Bhati community or Jadam race, from time to time, had moved to Jat and other communities has been given. Although details about the people who embraced Islam or moved to other communities and continued to address themselves as Bhati or Bhatti, are also there yet all of them are not covered in the list.

Table<sup>73</sup>

Name of the old Race/ or Community	Name of the Person	Name of the Father of the person	Name of the New caste or sub caste	Period
Jadam	Palsen or his descendants	Udaisen or Udaikaran	Sasanval Udaykarnot Jat Mewat	
Jadam	Khadaksi	Jagmal	Jat (Punjab)	
Bhati	Saran	Tannu Rao	Saran Jat	11th century
Bhati	Mudhji	Tannu Rao	Moodh Jat	11th century
Bhati	Beej	Tannu Rao	Beej Jat	11th century
Bhati	Aan	Tannu Rao	Raibari	11th century
Bhati	Kunbhoji	Tannu Rao	Gujar	11th century
Bhati	Kularioji	Tannu Rao	Gujar	11th century
Bhati	Ularaj	Tannu Rao	Maheshawari	11th century
Bhati	Daga	Tannu Rao	Maheshawari	11th century
Bhati	Saluneji	Tannu Rao	Suthar	11th century
Bhati	Phool	Tannu Rao	Barber	11th century

The genealogical tables of some other prominent clans, like, Jadam of Karauli and Bayana, Badujjar and Kachhawahas from different parts of eastern Rajasthan, preserved in the Archives Office at Bikaner, reveal that their families, from time to time, went on to disintegrate on different occupational lines. Most of them were absorbed in the agricultural and pastoral communities.<sup>74</sup> It appears that with the passage of the time the trends of growing division between peasant and soldier groups from the same racial stock became decisive. In this context, the example of the Gill Jats of Punjab is, also, noteworthy. Gills form one of the most important and largest Jat communities in India. Although they claim their descent from Raghuvanshi Rajputs or from Jat of *Raghobansi* clan but recent studies have shown that they by descent are Varhas, who had once (during eighth and ninth centuries) ruled over the frontier parts of the country (including Kabul) and at that time their rulers with the title of Tegin were known as Turki Shahis. Later on perhaps after the capture of their power by their ministers Hindu Shahis they had settled around the regions of Bhatinda and Talwandi (Towards

the south of Amritsar) in Punjab and from there some of their families went towards Sind and Gujarat, where they became famous as Makwanas or Jhalas. Their family traditions also corroborate that they are from the union of a Varia Rajput (Punjabi address of Varha) and his Jat wife from Bhullar family. Further, it is narrated that they were residents of upper Sutluj and Beas. The name of Varia, borne in Lakhi Jungle was Shergil. In the Malwa region of south Punjab, these Varhas constantly remained in struggle with the Bhatias of Bhatner, and Marot. Bhati records suggest that modern Bhatinda or actually Vitheda was the seat of Varhas. The rivalry between Varhas and Bhatias proved disastrous for both. Further, the Bhati records provide the information that these Varhas along with the Panwars or Parmars of western Rajasthan during the period of tenth century expelled them from their forts of Bhatner and Tanot and forced many of their families to move into other castes or societies. Similarly, after some time when these Bhatias succeeded in taking the revenge of their defeat they also killed the Varhas as possible as it could become and for rest of them laid the condition to opt for the profession of other castes; so that in future these Varhas could not reassemble and attack upon them. Somehow, these Varhas as political entity survived until the period of the establishment of the Turkish Sultanate at Delhi. Perhaps after the defeat of Prthviraj Chauhan and his allies from the hands of Sultan of Ghūr these Varhas also ceased to remain in power in the central and lower parts of Punjab.<sup>75</sup> They might have continued to remain in authority at the village or local level but their position remained dependent upon the mercy of the *Iqta* or *Pargana* authorities. And majority of them might have turned towards agriculture and other works. Abul Fazl in his Ain has shown the presence of Varhas in the *Mahals* of Sarhind, Sumana, Karyat Rae Samu and Machhiwara of *Sarkar* Sarhind of *Subah* Delhi and *Mahals* of Bajwara, Dardak, Rahimabad and Sankarbanot of *Sarkar* Bet Jalandhar Doab of *Subah* Lahore.<sup>76</sup> It is also a known fact that the Chahil Chauhans had their sway over some parts in the western Haryana and south Punjab and now most of them are also known as Jats.<sup>77</sup> Perhaps more research in this direction will shed fresh light on such groups, who after

their dislocation and under various political pressures merged into different, larger social agglomerations for their survival.

In this regard, the example of Mer or Med who migrated from coastal and lower Sind to Rajasthan and Gujarat is glaring. The region of Mewar became 'Medpat' after their impressive settlement, which though started from the ancient times, became a regular feature after the Arab invasion on Sind. However, both Rajputs and Turks for their different political and economic reasons pushed them in the hilly Aravali parts of Central Rajasthan. With the passage of time, the Mers who controlled the seaports of Arabian Sea became nomads of the Aravalli range.<sup>78</sup> After Ghaggar became a seasonal river several groups of Johiyas, Rathis and Bhatias turned towards nomadic or semi nomadic life. George Thomas observed that a good number of Johiyas and Bhati or Bhattis of Ghaggar region migrated to Ganga-Yamuna plains and beyond.<sup>79</sup> The growing number of pastoral classes particularly of Ribaris in the Thar Desert is another instance of social movement. The Rajads of Thar Parkar, a leading pastoral community of Dhat and Thar Parkar regions trace their origin from the hordes of Bhati, Chauhan and Parmars.<sup>80</sup> Even Nainsi, 16th century writer of Rajasthan cited that when the region of Merta became desolated many people from warrior groups turned towards agriculture and became Jats.<sup>81</sup> At the time of preparation of the Marwar Census Report in 1891 under the orders of Rathore government of Jodhpur many castes engaged in agriculture and rearing of animals listed their descent from warrior castes.<sup>82</sup>

## V

Such social conversions did not always take place peacefully, particularly when growing population changed the demographic and environmental context. The struggle between Bhatias and Varhas in Lakhi jungle became very violent. Varhas who are addressed as "Gopalas" tried their utmost to resist Bhati and Jat settlers, who wanted to bring the land under cultivation. In the struggle, a large number of Varhas were killed and even pregnant

women were not spared. It is interesting that both Varhas and Bhatīs sought the intervention of Sultan of Ghazna to settle their dispute who, otherwise, himself was also in favour of expansion of agriculture in his kingdom. In Khurasan Ghaznavids forced the Ghūrīds to settle down for agriculture.<sup>83</sup> The story of Haji Ratannath, whose tomb is situated in Bhatinda, clearly indicates that during this period water channel links between Sutlej and Ghaggar completely dried and he led a campaign to revive those channels. He was from Rawal cult of Nathīs and his successor again Ratananth from the family of Varhas became more popular as Khwaja Khidar or Khizr. In the local traditions of entire Punjab and Sind, Khwaja Khidar is revered as a water-god and people identified him with lord Varun of Hindu mythology and Mihtar Iliyas of Sufīs.<sup>84</sup> Khwaja Khidar or Khizr has various names, such as Khwaja Khan, Zinda Pir, Bir Baital, Dumindo, Uderolal and Jhulelal. Besides their fame as water gods, or Indus river gods, people remember them at the time of digging of a new well or putting rim on Persian wheel. Mihtar Eliyas is the patriarch who guides the travellers in the area of a jungle.<sup>85</sup> Particularly, the popularity of these local deities grew in those regions, where significant change in the environmental conditions had taken place. Rajasthan provides a different and contrasting picture. Here, after the entry of so many groups from the neighbouring regions, a serious contest ensued for capturing the grazing fields. The famous Gogaji Chauhan of Bagardesh died while resisting local as well as external powers. In Bagardesh still the percentage of rainfall is very low. However, contrary to it, in order to bring the social harmony among the different communities at the local level, heroes who, in most cases were from agriculturist communities, sacrificed their lives to protect the cattle wealth of opposite groups. Tejaji was prominent among them. During the medieval period, a number of social and religious movements came out to spread the message of saving the environment in the desert parts of Rajasthan. Bishnoi movement is prominent among them. The creation of Oran or the land where cutting of vegetation is prohibited, near the site of the temple or religious place was another important step towards the protection of environment.<sup>86</sup>



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<sup>62</sup> *Chachnama*, *op. cit.*, pp. 36-37, 48, 171; G.S.L. Devra, *Formation and Settlement of Jat Societies in the Northwest Regions of the Indian Sub-continent During the Early Medieval Period*, *op. cit.*, pp. 12-27.

- <sup>63</sup> Irfan Habib, 'Jatts in Punjab and Sind', *Essays in Honor of Dr. Ganda Singh*, Punjab: Past and Present (Ed. By H. Singh and N.G. Barrier) Patiala, 1976, , p. 96.
- <sup>64</sup> *Jaisalmer ri Khyat* p. 36; G.S.L. Devra, *Rajasthan ki Prashashnik Vyastha*, Bikaner, 1981, pp. 3-4,7
- <sup>65</sup> *Jaisalmer ri Khyat*, pp. 37, 39.
- <sup>66</sup> G.S.L. Devra, 'The Internal Expansion of Society and formation of Medieval Polity', Presidential Address, Medieval Indian Section, 59th Session *Indian History Congress Proceedings*, Patiala, 1998.
- <sup>67</sup> *Jaisalmer ri Khyat*, pp. 30-31.
- <sup>68</sup> G.S.L. Devra, 'Ethnicity of Shansabānis of Ghūr (Central Asia)- A Study based on Rajasthani (Indian) Sources', presented in the 19th Conference of International Association of Asian Historians, held at Manila (Philippines), 22-25 November, 2006; Paper included in the proceeding and released in the format of CD.
- <sup>69</sup> James Tod, *Annals and Antiquities of Rajasthan*, Oxford, 1920, Vol. II, p. 1170.
- <sup>70</sup> *Jaisalmer ri Khyat*, pp. 18, 22,30. In Ghazna they performed Śaka.
- <sup>71</sup> *Jaisalmer ri Khyat*, p.34; Ghanshyam Lal Devra, *Rajasthan Ke Abhigyan Roop*, *op. cit.*, pp. 62-66.
- <sup>72</sup> *Jaisalmer ri Khyat*, pp. 34, 36-37.
- <sup>73</sup> *Ibid.*
- <sup>74</sup> *Malaysingh ka Itihas*, VS 1151-1203, *op. cit.*; *Badgujaron ke halat*, No. 1/144, Non-archival records, Rajasthan Archives office, Bikaner.
- <sup>75</sup> H.A. Rose, *A Glossary of the Tribes and Castes of the Punjab and North-West Frontier Provinces*, Delhi, Vol. 1-3 (combined), 1999 (Reprint), pp.299-300; G.S.L. Devra, *Political Wilderness And Social*

*Dismemberment-Varhas: A Forgotten Clan of North- West India (Pre-Medieval Period)*, op. cit.

<sup>76</sup> Abul Fazl , *Ain - i - Akbari*, Vol. II ( Tr. By H. Blochmann ) , Delhi, 1989 (Reprint), pp. 301, 320-21.

<sup>77</sup> G.S.L. Devra, *Rajasthan ki Prashasnik Vyastha*, op. cit., p.9.

<sup>78</sup> *Chachnama*, pp. 36-37; Elliot and Dowson, op. cit., Vol. I, pp. 104-06; James Tod, II, pp. 792-94. Most of the Rajasthani scholars believe that this name 'Medpat' for the present region of Mewar became popular after ninth or tenth century-G.N. Sharma, *Rajasthan ka Ithas*, Part I, Agra, 1973, p. 2; Shri Krishan Jugnu, *Mewar ka Praambhik Itihas*, Udaipur, 2009, pp. 18-19.

<sup>79</sup> William Franklin, op. cit., pp. 140-44.

<sup>80</sup> James Tod, *Annals*, III, pp. 1297-99.

<sup>81</sup> Muhta Nainsi, *Marwar ra Pargana ri Vigat*, Vol. II, Jodhpur, 1968, p. 41 (Danga Jats were Chauhan Rajputs).

<sup>82</sup> *Report Mardumshumari Raj Marwar*, 1891 CE, Jodhpur, 1997 (Reprint), pp. 45, 83, 110-12, 568-70.

<sup>83</sup> *Tabkat*, pp. 329-332.

<sup>84</sup> *In Hamir Mahakavya* it is clearly stated that the Prince was resident of 'Gopaanchal' or the land of Gopal (Land of cowherds) -Nayanchand Suri, *Hamir Mahakavya*, (Tr. by Nathulal Trivedi in Hindi), Series, 1998, Rajasthan Oriental Research Institute, Jodhpur, 1997, pp. 25-26 (Sarg 1-15) ; R. B. Singh, *History of Chahmans*, Varanasi, 1964, pp. 163, 184-85; Dasharath Sharma, *Early Chauhan Dynasties*, Delhi, 1975 (Second Revised Edition), pp. 33, 63 (n.1); Dasharath Sharma writes that Chandraraja was the son of Gopalachandra; In *Kathasaritsagra* of Somadeva of Kashmir (1063-89 CE) there is a reference of Gopala of Sind (North or Northeast Sind?) in the story of the conquests of legendary *Vikramaditya* of Ujjain, quoted in, K. C. Jain, *Malwa Through the Ages*, Delhi, 1972, pp. 158, 160; For the discussion, see, Dominique-Sila Khan, *Conversions and Shifting Identities*, Delhi, 1997, pp. 228-39; G.S.L. Devra, 'Emergence of Nath Cult in South



Punjab', Paper presented in the seminar jointly organized by Sikh Study Center and History Department of University of Rajasthan, Jaipur, 29-30 March, 2008.

<sup>85</sup> H.A. Rose, *A Glossary of the Tribes and Castes of the Punjab and North-West Frontier Provinces*, *op. cit.*, pp. 562-63; Dominique-Sila Khan, *op. cit.*, p. 229.

<sup>86</sup> *Report Mardumshumari Raj Marwar*, *op. cit.*, p.61; Pushpa Bhati, *Rajasthan ke Lok Devta avam Lok Sahitya*, Bikaner, 1991, pp. 90-91, 101-02, 120-22; Gold, Ann Grodzins Gold and Bhoju Ram Gujar, *In the Time of Trees and Sorrow: Nature, Power, and Memory in Rajasthan*, Duke University Press, Durham & London, 2002, p.14; Ghanshyam Lal Devra, *Rajasthan Itihas ke Abhigyan Roop*, pp. 131-33; Mayank Kumar, 'Nature, Natural Resources and Social Stratification in Early Modern India', Paper presented in Indo-Swedish workshop on Ecology and Society, Jawaharlal Nehru University, New Delhi, Nov. 2010.

