The sun is so strong and oppressive in the Indies during the whole year, particularly during eight months that the ground would be completely burnt, and rendered sterile and uninhabitable, if by providence did not kindly provide a remedy, and wisely ordain that in month of July, when that heat is most intense, rains began to fall, which continue three successive months. The temperature of the air thus becomes supportable, and the earth is rendered fruitful.

- François Bernier

François Bernier who in course of his travels across the plains of north India, made this interesting observation on the dependence of such agricultural denominators as soil fertility on regular and timely occurrence of annual monsoon rains over the subcontinent, without which for his keen observing eyes, sustenance and viability of life in the region would have been difficult, on account of the heat of the sun.

This and many similar observations on such varied environmental factors as wind patterns, soil conditions, vegetation and forest covers, and their influences on the political-economic and social denominators of states, societies, and cultures in the Indian subcontinent, bring into focus the interaction between humans and their natural environment and the impact and influences each had on the other during the course of human history and civilizational advancements.

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The nature of political control, of subsistence and habitation patterns, of patterns of commerce and urban and industrial growth and of agricultural advancement, and of such aspects of daily life as food, clothing and shelter were all to a large extent influenced and shaped by the immediate 'natural environment' and the associated forces. Similarly environmental phenomenon such as rain, lightening, thunder, fire and others have since long influenced human societies in their cultural and religious dimensions, in form of various practices and ritual which have been adopted and evolved within these societies over a period of time, with an intention of either pacifying such forces or of attempting to gain a semblance of control over these.

On the other hand, human activities related to agriculture, to industries especially those dependent on mining and forest resources as timber for raw materials, for construction and settlement, and related to movement and migration, have been some of the most powerful and active determinant of environmental change. The nature of this give and take relationship between humans and nature has been summed by E.A. Gutkind in following words:

Man and Nature are the twin agents of a perennial revolution which shapes and reshapes the face of the earth and the nature of man's activities. This struggle at times sporadic and violent, at others gentle and constant, but forever demanding a new response to a new challenge activates the potential energies of both man and nature, moulding them into a grand pattern of advance and retreat, of creative interaction or disastrous antagonisms, and of promise or failure. ²

In a more generalized manner, one can say that the advance of civilization in various regions of Indian Subcontinent reflected a pattern of advance and retreat, of accommodation and

confrontation between human agencies and natural environment. The interaction between natural environment and the human agencies is most evident when one takes up an analysis of the agricultural expansion and clearance of once large swath of forest area in the subcontinent, and simultaneous reclaiming of waste and wetlands. Another avenue which reflects a similarly close interaction relates to the pattern of urbanization and expansion of trade and creation of network of roads and highways in the subcontinent.

**FORESTS AND FIELDS: SHIFTING BOUNDARIES**

The pattern and nature of agricultural expansion has been influenced by such environmental factors as soil conditions, availability of water in forms of rivers, lakes or ponds, by variations in rainfall pattern, and in that of temperature and humidity across the subcontinent. Thus we find northern plains watered by the river systems of Indus and Ganges witnessing a most intense and forceful expansion in agriculture and related activities across centuries.

From the early Bronze Age river valley civilizations of the Indus Valley, to the expansion of agriculture in the Gangetic Basin during the Vedic period, to a sustained intensive agricultural expansion across ancient and medieval centuries until present, the northern plains have been practically under the plough since the very civilizational beginnings in the subcontinent. The reasons are many, from the availability of water and of irrigation facilities due to massive river systems and ample monsoon rainfall which made sowing of two crops in an year a possibility, to the availability of fertile alluvial soil in the flood plains of rivers, the conditions in the region have been suitable for a sustained agricultural development over and across centuries.

The climatic conditions and rainfall patterns have also affected the nature and kinds of crops which were sown in the region. Whereas the Western parts of the subcontinent constitutes what can be called as the transit zone between the wet monsoon climate on the east and the
harsh dry and desert conditions on the west, which was suitable for cultivation of such crops as wheat, barley and cotton, the region of Gangetic doab and the areas lying further in the east experienced wetter monsoon conditions and consequently saw sowing of such crop as rice. In fact the region saw the earliest evidence of rice cultivation being discovered in the subcontinent, and for that matter anywhere else in the world. Monsoon rainfall and its intensity also played important role in ensuring the fertility of the soil. François Bernier’s comment in this regard has already been noted.

Similarly other regions which experienced suitable environmental conditions for sustained practice of agricultural activities, such as the river valleys and flood plains of rivers south of the Vindhya mountains and the fertile delta areas along the eastern seaboard of such rivers as Mahanadi, Godavari, Krishna and Kaveri, can be listed as having long and ancient tradition of agriculture and related activities. Similar evidence can be obtained from the river valleys of Sabarmati, Narmada and Tapti, in the west, in regions beyond the northern plains in the subcontinent.

However on the flip side such an aggressive expansion in agriculture and related activities has altered the landscape of the subcontinent. Forest and pasture lands over ages have given way to settled and sustained agriculture, geared exclusively to meet demand of growing human population, in process wiping off several species of plants and animals and bringing many others to the verge of extinction.

The reference to clearing of forests by burning them down and utilizing land thus cleared for agricultural purposes can be obtained in texts dating as old as sixth century B.C. in texts as


Satapatha Brahmana and several early Buddhist texts written in Pali language. Through the course of history we have continuous references in varied sources of state sponsored and backed activities of clearing forests and recovering wastelands for the purpose of expanding agricultural base. Mauryan State had a full-fledged policy on utilizing forest produce, their conservation, and also the extent to which a particular forest area may be cleared for use as farm land and grazing land. The land charters and grants of the Imperial Guptas and the later successor states of the 8th and 9th centuries have clear references to incentives being given for expanding area under cultivation, and of various natural resources such as ponds and groves being administered as part of the grant or charter.

The Sultanate of Delhi and later successor states of Medieval India followed on similar processes and incentives. The system of division of state into administrative and revenue units like iqta and jagir served as important and effective mean of expanding agriculture and clearing forest areas. Cultivators were given incentive to bring more and more territories under cultivation. Barani in his Tharikh-i Firoz Shahi mentions that during the reign of Muhammad Tughlaq about 20 lac tankas were released from treasury for distribution among the peasantry, over a period of about two years, for bringing waste land under cultivation.

During Feroz Tughlaq’s reign canals and other irrigations projects were under taken to bring more land under cultivation and improve the yield of the crops. Afif, mentions about two canals being built during Firoz Tughlaq’s reign one from Yamuna and other from Sutlej, to

6 For a more detailed discussion on clearing of land for agricultural purposes by burning down large swaths of forests in Gangetic basin, see R.S. Sharma, Material Culture and Social Formation in Ancient India, New Delhi, 1983, pp. 90 & 101-102.
8 R. Thapar, Early India: From the Origins to A.D. 1300, New Delhi, 2002, pp. 291 & 449.
bring land areas around present day Haryana, under cultivation, as a result of which, he says that two crops a season became possible.\textsuperscript{10} Ferishta writes that about 50 dams, 30 reservoirs, 10 public well were built during Feroz Tughlaq’s reign.\textsuperscript{11}

Mughal system of elaborate measurement of land and assessment of revenue based on that also enabled medieval state to keep a tab on the area under cultivation and find means of expansion of this agricultural base.\textsuperscript{12} Such evidences of agricultural expansion at the cost of forests and pasture land continued to be found till as late as the 18\textsuperscript{th} century.\textsuperscript{13}

However, till the end of late 18\textsuperscript{th} century we come across evidence of heavy forest in large swaths of Ganges valley and other regions of subcontinent, which have survived in face of such large scale although a very unsystematic process of agricultural expansion. This resulted in a condition of flux, where expansion and retreat of forests in face of expansion and abandonment coinciding with phases of economic and political instability in the region, on part of cultivators, was the norm. Irfan Habib summed the situation when he wrote:

\begin{quote}
The great cultivated expanse of plains, valleys, hills and slopes of India have been created in the course of stubborn struggle against nature... Forests and wastes have retreated, recovered, and again retreated in endless cycles.\textsuperscript{14}
\end{quote}

Other than agricultural expansion, the forests of the subcontinent, also suffered due to the political culture, which backed clearing and destroying of forests and other natural resources

\textsuperscript{10} Shams-i Siraj Afif, Tarikh-i Firoz Shahi, (tr.) from H.M. Elliot and J. Dawson (tr. & eds.) History of India as told by its own Historians, Vol. 3, p. 300.


\textsuperscript{12} Irfan Habib, Agrarian System of Mughal India, 1556-1707, 2\textsuperscript{nd} ed. New Delhi, 1999, pp. 290-97.


\textsuperscript{14} Irfan Habib, Agrarian System, p. 1.
as a mean of gaining political ascendancy over a region, which became a norm by the beginning of the Mughal rule. There have been numerous references to the armies of Delhi sultanate, clearing forests as a mean of gaining access to the strong hold of the rebellious and refractory zamindars and rajas. Muhammad Tughlaq while campaigning against the Mewatis in the vicinity of Delhi and also against Katehar, employed wood cutters to clear jungles and make roads for the army to pass. Mughals followed on with a much more aggressive policy and huge swaths of forests in such regions as Himalayan foothills being trampled under the marching Imperial armies of the Mughals. Jahangir’s prolonged campaign against Kangra saw clearing of jungle as a tool to access the city and fort by the army.

The government of the East India Company and the later British rule however marks the watershed as far as the history of clearing of Indian forests is concerned. Large areas hither to under untouched and often community protected forests were cleared and converted to agricultural fields with the intention of maximizing revenues. The creation of Indian Forest department with its mandate to control and utilize the resources of the rich forests of South Asia, in manner and ways profitable to the British industries and their economic and commercial interests, introduced a manner of resource utilization which was at once coercive and degenerative for the rich floral and faunal wealth of the subcontinent. The impact of British rule and its policies on India’s natural wealth and traditional resource usage patterns has been brought home most forcefully by Richard Tucker in following words:

British rule in India, like other Western Empires elsewhere in the developing world, must be seen as an elaborate system of resource extraction and allocation, determining not only who was to have access to the nature's wealth but what pattern the biotic themselves would ultimately take by the time India gained Independence in 1947.\textsuperscript{19}

**URBAN EVOLUTION & LANDSCAPE CHANGES IN THE SUBCONTINENT:**

Urban advance, closely following on the heels of agriculture, have been particularly concentrated in the areas supporting intensive agriculture and with large agricultural and mineral rich hinterland. Large state systems and political entities which have taken shape through the course of history have mostly been concentrated in the plains of North India or the coastal regions – the areas supporting intensive agricultural and burgeoning avenues of commerce and trade.

From the urban development of the Bronze Age in the Indus valley, to the urbanization in the Ganges valley and beyond in the 6\textsuperscript{th} Century B.C. to the establishment of strong and powerful centralized monarchies in the Ancient period of the Mauryas and the Guptas, the North Indian plains have remained the civilizational hub of the subcontinent.\textsuperscript{20} Similarly coastal regions

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\textsuperscript{20} R.S. Sharma, Material Culture and Social Formations in Ancient India, New Delhi, 1983, p. 123: lists around 10 sites with a strong urban antecedent, attested by both archaeological as well as literary sources during the 6\textsuperscript{th} century B.C.E. in the Gangetic valley. See also Romila Thapar, Asoka and the decline of Mauryas, N. Delhi, 1961, 2\textsuperscript{nd} rev. ed. 1997, p. 55: for an over view of urban growth and expansion during the Mauryan age and prior.
and river valleys in South and the fertile plains of Gujarat also gave rise to strong urban antecedent, primarily driven by the maritime trade and related occupations.

The medieval period saw the establishment of strong political authority of the sultanate and later of the Mughals which gave fillip to the development of the urban centres in the plains of north India, which allowed easy avenues of communication and exchange. Urban centres such as Delhi, Agra, Lahore, Multan, towards the west and Banares, Patna, Kara, Lakhnauti, Muzaffarabad, towards the east, among several others rose and declined during the period as political as well as commercial and manufacturing hubs.

Growth of urban centres has strong impact on the natural environment of the surrounding areas. The large population concentration necessitated a pattern of agriculture directed and geared towards producing enough food surplus for sustenance of the urban population not employed in agricultural activities. This resulted in clearing of forests in the vicinity, clearing of marshes and sowing of crops which may have high yield, but not always conducive to the maintenance of the nutrient balance in the soil. The urban space also creates environment conducive for the growth and spread of diseases. The cities in the subcontinent, with their inadequate waste disposal tradition and very high population concentration in a humid monsoon environment, served as perfect hotbeds for the germination and spread of diseases. The movement and migration of people across long distances in search of avenues of trade and commerce also entailed movement and spread of flora, fauna, and also of disease causing vectors and organisms across such distances.

The routes of trade and communication connecting the towns and manufacturing and trading centres mentioned above have since ages followed same path, dictated to a considerable extent by the sub-continental topography. The current national highways have more or less treaded the same path and direction as those taken by the ancient and medieval traders and armies. For example, the present Grand Trunk Road, is said to follow the same path as the
medieval highway laid by Sher Shah in the mid of the 16th century, which in turn also followed the path roughly same as the ancient Uttarapath. Abbas Khan Sarwani in his Tariikh-i Sher Shahi mentions about the road building program of Sher Shah, and informs that Sher Shah built a road from Sonargaon in Bengal to a fort in Punjab, two from Agra linking the city to Burhanpur in South and to Jodhpur and Chittor in West. Another he built from Lahore to Multan. Road building also at times resulted in clearing of jungles which stood as obstacles to easy movement of goods and traffic. Sher Shah is said to have cleared the jungles between Agra and Delhi to link the two cities. The route running from Ahmedabad in Gujarat to Delhi via Ajmer is still used, as Ajmer lies at the base of an opening in the Aravalis mountain ranges. Similarly, in South and in the West, routes have generally followed the river valleys or ran along the coast and rarely veered from the established paths, crossing over high mountains or difficult plateau terrain.

However in spite of strong evidence of human-nature interaction, studies on the political, economic and social systems of the Indian subcontinent have generally been devoid of an essential environmental concern. Focusing essentially on the socio-economic and political life of the subcontinent, historians of India, in particular those concentrating on the medieval period have in general avoided or skipped the question of grounding their researches in the environmental milieu with in which these socio-economic and political systems took shape and flourished. One cannot but agree in essence with Madhav Gadgil and Ramachandra Guha, when they wrote that,

The historians of India have been completely unaware of the ecological dimensions of the social life, and have in essence focused more or less


22 Shaikh Nurul Hakk, “Zubat-ut Tawarikh”, (tr.) from H.M. Elliot & J. Dawson, History of India, Vol. 6, p. 188.
exclusively on the relations around land or within workplace, and never on the ecological fabric within which both the field and fabric are embedded and which these in turn transform.23

The present work essentially is an attempt in the direction of elucidating this pattern of human-nature interaction in the subcontinent, and the ways and manners in which the humans and natural environment have impinged and shaped the destiny of the other. The work focuses especially on the economic and social formations which took shape during the course of the seventeenth and eighteenth centuries in the region of Gujarat, situated at the head of the western coastline of the Indian subcontinent.

THE REGION OF GUJARAT – AN OVERVIEW

Gujarat which is commonly called Kambayat contains 70,000 villages and towns, all populous, and the people abound in wealth and luxuries...the purity of the air is so great that if the picture of an animal is drawn with pen, it is life like. And it is another matter of wonder than many plants and herbs are found wild and uncultivated there. You may always see the ground full of tulips even in winter season. The air is healthy and the earth picturesque, neither too warm nor too cold, but in perpetual spring.

Abdullah Wassaf (13th Century)24

Situated at the head of the western coastline of the Indian Subcontinent, between 21°N and 24°N latitudes,25 the region of Gujarat26 has been subject to much praise and appreciation on

23 M. Gadgil & R. Guha, This Fissured Land: An Ecological History of India, New Delhi, 1992, p. 6.

account of its natural environment and economic prosperity by the numerous chroniclers and
travellers who visited the region in course of their travels across the subcontinent. J.H. van
Linchoten who visited Gujarat sometimes towards the end of 16th century called “land of
Cambaia” as the “fruitfullest countries in all of India.” 27 Thevenot in the mid decades of 17th
century termed it “the pleasantest province of Indostan.” 28 Mandelslo in 1638 called it the
“noblest and most powerful of all Mogul’s countries,” and wrote,

There is no province in all the Indies...more fertile than Gujarat nor any that
affords more fruits and provisions which grown in such abundance there that
all the neighbouring provinces are thence supplied. 29

As late as the late nineteenth century, the volume of the Imperial Gazetteer of India, dedicated
to the areas under the Presidency of Bombay wrote that the “plains of Gujarat stand first in the
Presidency for richness of soil and density of population.” 30 The gazetteer further provides a
lavish eulogy on the natural setting of the province of Gujarat,

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25 Edward Thronton, A Gazetteer of the territories under the government of the East India Company and of the

26 In ancient period the northern parts of the region are known by the name of Anarata and the southern part was
known as Lata. The region came to be known as Gujarat after a corruption of the word ‘Gurjara-ratta,’ the
name so given to the territories under the control of ruling houses having Gurjara origins. The Gurjara tribes
entered Indian Subcontinent along with the Hunic invasions, some times in the latter half of 5th century A.D.
and settled and over time came to dominate the regions politically and socially. Over the period of time the
region under Gurjara dominance came to be known as Gurjara-ratta and by the end of the 13th century the
name Gujarat acquired widespread usage. See, J. Chaube, History of Gujarat Kingdom, 1458-1537, New Delhi,

27 A.C. Burne & P.A. Tiele (tr. & eds.) The Voyage of John Huyghen van Linschoten to the East Indies, 2 Vols.


29 M.S. Commissariat (ed.) Mandelslo’s Travels in Western India, London, 1931, p. 6.

In Gujarat the sandy wastes of Cutch leads through the treeless, if more fertile plains of Kathiawar to the well cropped fields of the central district: a park like territory intersected at intervals by the broad flood of its rivers, and well wooded, with many noble trees to shade the approaches to its busy and populous towns.31

The environment of Gujarat is unique when compared to other regions of the subcontinent on account of the climatic and geographical variations within the province. The long and rugged coastline, studded with numerous creeks, inlets, islands and sand banks; a country side comprising of numerous mountains, plateaus, fertile plains, heavy forests, numerous rivers and sandy and marshy salt deserts, completes the picture of a region, possessing of environmental diversity and complexity which very few other regions in the vicinity and also in the larger scale of subcontinent could boast of.

Such complex environmental setting, also gave rise to a complex patterns of interactions between the humans and the natural environment over and across several millennia. From shaping the contours of economic and political life of the region, the complex environment also accounted for the complexities in the material cultures and social structures which took shape in the region.

The long and rugged coastline provided a definite maritime dimension to the politico-economic and socio-economic formations of the region. The regional polity and economy of Gujarat was not only affected by the larger political and economic changes in the subcontinent, especially in the northern plains, but it was also shaped up by the occurrences along the coast and by the politico-economic changes in such distant areas such as in West

31 ibid, p. 4
and South East Asia, which were connected with Gujarat and its ports only through maritime linkages.

GUJARAT – AN ECONOMIC SURVEY:

By the beginning of the seventeenth century, the ports and towns of Gujarat had emerged as among the principal trading entrepôts in the Asian trading world. Gateways to the riches of the north Indian heartland, the ports had emerged as important confluence points for the regional as well as international commerce. The linkages built and maintained by the merchants of the region during the course of the two centuries stretched from the rich spice islands of South East Asia to the marts and ports in the Red Sea and Persian Gulf and along the east African coast.

As early as the beginning of the sixteenth century, we find remarks and references attributed to foreign merchants and sailors visiting the region, attesting to maritime wealth and complexity of the region. Tome Pires writing in the mid sixteenth century wrote:

...both the Gujaratis and the merchants who have settled in Cambay...sail many ships to all parts, to Aden, Ormuz, Kingdom of Deccan, Goa, Bhatkal, all over Malabar, Ceylon, Bengal, Pegu, Siam, Pedir, Pase (Paece) and Malacca, where they take quantities of merchandise, bringing other kinds back, thus making Cambay rich and important. Cambay chiefly stretches out two arms, with her right arm she reaches out towards Aden and with the other towards Malacca, as the most important places to sail to, and the other places are held to be of lesser importance.32

By the end of the sixteenth century, the ports and towns of Gujarat were handling the bulk of trade and merchandise flow in and out of the Western coast and the influence of Guajarati merchants and shipping in Intra-Asian and regional coastal commerce reaching points hitherto unattainable in region’s history. Besides a flourishing overseas maritime trade, Guajarati merchants had forged close trading contacts with the ports on the western coast. Duarte Barbosa points to the presence of Guajarati shipping at Chaul on Konkan coast. With the ports of Malabar, the trading relations were more intimate, with Guajarati merchants indulging in trade of spices and also in the transit trade between South East Asia and West Asia, of which Malabar was an important transit zone.

The inclusion of Gujarat within Mughal administrative towards the end of the sixteenth century also brought about a close interlinking of the region with the other areas of the empire, both at a political, economic and a social level. An important example of such a close interaction can be seen in the trade in products as indigo and silk, of which such areas as Bayana near Agra for indigo and Kasimbazar in Bengal for Silk were important procurement areas.

By the early seventeenth century Gujarati traders were well entrenched in the markets and local economies of West and South East Asia. Their activities had much value for the local economies in West Asia. Nicholas Downton informs that the income from Guajarati traders

34 ibid, Vol. 2, pp. 73-77.
35 W.H. Moreland & P. Geyl, Jahangir’s India or the Remonstrante of Francisco Pelsaert, Cambridge, 1925, p. 10.
constituted the bulk of state income of Tannacerin. Peter Floris, at Moyele (Comoro islands) informs that local products can be obtained in exchange for Gujarati textiles. At Mocha, we find that the importance of Gujarat trade was so much that local economy suffered considerable damage in case Gujarat ships and their products did not reach on time. Similarly in the markets of South East Asia, Gujarati merchants along with the Portuguese were the main suppliers of textiles. In Moluccas, Gujarati goods were exchanged for Cloves and Pepper.

Internally the Mughal rule in Gujarat in the seventeenth century can be regarded as a period of buoyancy with respect to the flourishing trade and commerce. The security and stability in the hinterland regions of the Ganges basin, which had been eluding in the previous centuries, vastly improved the climate for long distance commercial exchange. The ports provided attractive opportunities for the European East India Companies who were actively seeking permanent bases for establishing their trade in the subcontinent. Moreover the entry of East India companies connected the regional maritime trade into the network of international commerce more closely.

This period also saw the emergence of Surat as the premium trading entrepôt in the region, as it began to rival some of the greatest trading emporiums in Asia as well as in Europe. Father Manuel Godinho, who visited Surat in the year 1663, described the commerce and the

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38 ibid, p. 364


40 ibid, Vol. 2, pp. 31 & 78

41 Samuel Purchas, Purchas, His Pilgrimes, Vol. 3, p. 449
maritime connections which the traders and inhabitants of the place have forged in the course of the seventeenth century in following words,

The commerce of the place is carried by the English and the Dutch from Europe, by the ships of the Red Sea from Africa and by the natives from Asia and Asia Minor. The best of the goods come into Surat from inland by caravans of bullocks and camels, which enter its gates every hour...of the foreign ships that call at this port there is no count. There will be found at all times of the year in Surat, ships from China, Malaca, Macassar, Jacatara, Maldives, Bengal, Tenacerin, Caxam, Mascut, Madagascar, Ormuz, Basra, Sind, England; infact from whatever part of the world one is after.42

The region of Gujarat continued to flourish through the course of much of the seventeenth century. The establishment of the English and Dutch factories at Surat, besides the Portuguese who were already entrenched at Diu provided further fillip to the trade and commerce of the region, especially in such commodities as cotton textiles43 and indigo.44 Besides, the region was also known for its industries and artisans specializing in manufacturing items from precious stones, such as agate and carnelian.45

The flourishing trade and commerce was adversely affected during the course of the eighteenth century. The political turmoil in the Indian subcontinent, with the decline of the

42 G.M. Moraes, “Surat in 1663 as described by Fr. Manuel Godinho”, in Satish Chandra (ed.) Essays in Medieval Indian Economic History, New Delhi, p. 144

43 Cotton in the region was available both in the raw form as well as a finished product in form of calicoes, chites, baftas, sailcloth, carpets, among many others. See William Foster (ed.) Early Travels in India, 1583-1619, London, 1927, pp. 301-302.

44 S.N. Sen (ed.) Indian Travels of Thevenot, p. 16. Also see, M.S. Commissariat (ed.) Mandelslo’s Travels, p. 29.

Mughal political and military authority and the increasing disorder and lawlessness in the countryside, siphoned off the ports of the region from the procurement and production centres of north India and Deccan. The merchants of Gujarat lost much during the period of political uncertainty. The security to their trade in countryside was replaced by state of lawlessness and extortion by the local zamindars and roving bands of Maratha marauders.46

The merchant marine of Surat also lost their hold over the carrying trade to West Asian ports in face of stiff competition from the English, who backed by their effective naval superiority and were able to provide much better protection against the piracy of the Malabar pirates and other Europeans such as the Portuguese. The growing strength of the Maratha navy under the Angrias and the extortions of the Mughal naval commander – the Siddi, and the tripartite rivalry between these and the English further worsened the situation.47 The loss of such important centres of trade as Baroda and Ahmedabad by the mid of 18th century to the Marathas created an atmosphere which was not conducive to trade and commerce in the region.48

However, by the end of the eighteenth century Gujarat and its cotton producing regions still remained important in overall scheme of things of the European companies functioning in the region, especially the English. The English during the latter half of the eighteenth century had taken control of Surat, backed by the bankers and merchants of Surat. They fought with the Marathas over the possession of important islands as Bassain and over the possession of the cotton producing regions of Baroda. By the end of the century, the English had entered into alliances with the Gaikwar rulers of Baroda and with the independent rulers in the region of


48 ibid
Kathiawar and Kutch, over the use and extraction of such commodities as cotton, saltpetre and salt.

GUJARAT – A SOCIO-CULTURAL OVERVIEW:

The social and cultural life which developed in Gujarat in the seventeenth and the eighteenth centuries was equally complex in its variations and diversity. The coming together of merchants and artisans from all over the world, attracted by the opportunities of commerce and trade which the ports and markets of the region provided since ancient times, created a complex and heterogeneous social and cultural pool in the region. The Mughal nobility, drawn from varied ethnic stock, showed keen interest in the region, due to its commercial prosperity. The settling down of the Europeans and of merchants of such nationalities as Arabs and Armenians, and others such as the Parsis and Jews, besides the famous Banya and Jain merchants of Gujarat, contributed significantly to the increasing complexity in the population pool of the region during the years under survey. Besides the Rajput zamindars and their retainers which included people of various tribal stock as Kathis and Kolis, further complicated the social setup in the region. Equally complex was the cultural scenario. The religious and cultural practices of various communities and sects created an interesting mosaic, where the traditions and practices of various communities and nationalities and religious groups created a vibrant and colourful picture.

GUJARAT: A HISTORIOGRAPHY

The region of Gujarat has been intensively studied and the historical scholarship scrutinizing the various facets of its polity, economy and society has been varying rich and extensive. The early British administrators and scholars such as Alexander Forbes, M.S. Commissariat and E.C. Bayly, attempted to lay down in systematic chronological patterns, from the
translation and understanding of the local Persian and Gujarati sources, a chronological and structured political account of the region.

Alexander Kinloch Forbes, fascinated by the culture of the region, and inspired by the work of James Todd on Rajputana, attempted a similar study on the Rajput rulers and zamindars of Gujarat. His work, *Rasmala: Hindu Annals of Western India, with particular reference to Gujarat* is a fascinating study of the early Rajput dynasties of Parmars and Solankis, who ruled the region in pre-Sultanate period and of the Rajput principalities during the rule of Gujarat sultans and later under the Mughals. He ends his discussion with the Maratha ascendancy in the region. The Sultans, the Mughals, and their subadars however, remained peripheral in his treatment.

M.S. Commissariat attempted to fill in the lacunae, with his masterly *History of Gujarat* which details the political development in the region from the establishment of the Sultanate rule over Gujarat till the fall of the Mughal Empire, in the middle of the 18th century. Commissariat made extensive use of the Persian records and those of the European companies on the region.

However, the above mentioned approach towards writing history neglected the economic and social facets of the region to a large extent. A definite change came in the approach to study history with the Marxist History writings. The Kings, the Sultans and their generals receded in the background and the focus shifted decidedly on the economic systems operating in the region and its impact on the social classes. The emphasis on the Maritime trade, the participation and clout of local mercantile communities in the Asian trading network, the

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system of trade and monetary exchange as they evolved and matured over period of time acquired central focus in these writings. The state itself came to be studied and analysed in its role as an appropriator and distributor of resources and to what extent did it came to affect the economy and society of the region in its above mentioned roles.

The writings of such scholars as Surendra Gopal, O.P. Singh, and B.G. Gokhale helped in bringing out and elaborating the various facets of economic and social life of the region and in its flourishing port cities such as Surat in the course of the seventeenth and eighteenth centuries.

M.N. Pearson, in his Merchants and Rulers of Gujarat and subsequent works has shifted focus on the nature of alliance which took shape in between the various state actors and the mercantile classes in response to the aggressive political and mercantile manoeuvres of the Portuguese along the Gujarat coast in the 16th century. The threat to the Oceanic trade of Gujarat and to the eminent position of the Gujarati merchants with in the Asian mercantile world, from the aggressive manoeuvres of the European trading companies in the region; and in the markets of West and South East Asia; and the multi-layered and multidimensional response it generated within various sections of the Gujarati mercantile and political classes, became focus of attention in the decades following.

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51 Surendra Gopal, Commerce and crafts in Gujarat, 16th and 17th centuries: a study in the impact of European expansion on pre-capitalist economy, New Delhi, 1975.
Ashin Das Gupta in his *Indian Merchants and Decline of Surat* and in his other works on Gujarat and on Indian maritime trade in general, focused extensively on the world of Gujarati merchants, on their daily life, and on their ever changing fortunes in an unpredictable, highly competitive and constantly evolving Asian Maritime commercial world. He tried to situate the rise and decline of the trading entrepot of Surat within the larger frame of changes taking place in India as well as in West and in Southeast Asia. The life and changing fortunes of the merchants and bankers through the course of first half of eighteenth century formed the basis for the study of changing conditions in polity and economy of the eighteenth century Gujarat.

In recent times, Lakshmi Subramanian attempted a comprehensive study of the changing fortunes of Indian merchants and traders in light of the changing politico-economic conditions in the region, through the course of the eighteenth century. Farhat Hasan also recently has attempted a insightful analysis into the working of the Mughal state at the level of the localities and local markets, with specifically focusing on the Port cities of Surat and Cambay.

However, the above approaches towards writing history have a definite lacuna, for they neglected to a large extent the impact of environmental factors on the economic social and political formation which took shape in the region. Environmental factors, in general have appeared on the periphery of historical causations and rarely central to them in history writings in Subcontinent. Principal concerns of historians have revolved around such themes as nature of state, of administrative institutions, of economic and social structures as they took

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56 A bulk of Ashin Das Gupta's works in form of his articles and research papers published in various journals and presented on various forums have been compiled posthumously in a useful collection compiled by Uma Das Gupta. See, Uma Das Gupta (ed.) *The World of Indian Ocean Merchants, 1500-1800: Collected Essays of Ashin Das Gupta*, New Delhi, 2001.

shape over centuries. The acceptance of the fact that natural environment can appear as an active participant in historical narratives, has generally been missing and neglected.

It was not until the beginning of the decade of 1990s that some change in the attitude can be deciphered and one came across bolder attempts being made at bringing environmental changes at the forefront of historical enquiry, at making environment more of an active participant than being a mute spectator in historical enquiries. Influenced by the environmental and green movements which have been steadily gaining strength in voicing their opposition to the unrestricted and unhindered discretion of natural resources, brought about in wake of industrialization and growing population demand on natural resources, historians of the region have woken up to the antiquity of human-nature interaction and influences which such an interaction had on the course of human history and also on the natural environment. The literature thus produced has been categorized in a distinct field of historical enquiry, that of 'environmental history.'

The present work thus attempts to contribute to this growing body of literature. While attempting a comprehensive over view of the evolving patterns in economy and of the social and cultural setting in the region, the work at the same time attempts to situate the developments in the above mentioned formations with in the natural environment of the region of Gujarat.

**SOURCES:**

The inter-disciplinary nature of the intended study has already been highlighted. Thus the sources used for the above study have been derived from variety of sources and from such across disciplines. The study of economic and political conditions of the region of Gujarat during the course of two centuries have been based basically on the study and analysis of the records of the English East India Company pertaining to the region during the course of two
centuries. The English Factory Records and the collection of letters and journals written by
the company officials and factors in the region over the course of 17th century provides an
interesting and a very elaborate view of the economic and political conditions in the region.
The war of succession, rebellions and incursions in the region and rising Maratha power is
very well detailed.

The volumes of the Surat Factory Diaries and the Public Department Diaries of the Bombay
Presidency preserved in the Maharashtra State Archives, and covering almost whole of the
period of 18th century, forms an equally important compilation with regard to the analysis of
political developments and the consequent impact on the Economy of the region. The motives
of various actors as Marathas, Siddis, Angrias, Gaikwars, and the English relation with these
powers, and the changing fortunes across the centuries can be discerned in detail from careful
scrutiny of these records.

The memoirs and journals of the travellers and merchants who visited the region in course of
two centuries form another important body of documents. The observations of these travellers
on the politics, economy, society and cultural setting of the region constitute an important
documentation on above elucidated formations in the region.

However, the use of European sources has its limitations when it comes to describing the
regional geography and also of the society and culture of the period. The inadequate
knowledge of these travellers with regard to the geography of the subcontinent, as also their
tendency to incorporate and believe tales of magic and gossip with little scientific base and
scrutiny, often render their observations to be false or way off the mark.

The translation of official histories and documents written in Persian during the period forms
an important body of source for cross checking into the claims of the European sources. These
sources however also have their own limitations. Written to praise and exalt the status of the
patrons of the writers and chronicles, these works have often tended to overlook and ignore the fallacies and failures of the kings and emperors. Important events have been often just summarily passed over, for they might not have fitted into the picture which the author might be intending to portray.

The analysis of environmental conditions in the region, forces us to look into records generated from unfamiliar disciplines of geology, climatology, geography, and biology, among others. The survey reports of the East India Company and of later British government have been extensively cited as also the gazetteers pertaining to the region of Gujarat, written under the aegis of the British government in India, during the late 19th and early 20th century.

**PATTERN OF STUDY:**

1. **ENVIRONMENT & HISTORY**

The initial section titled ‘Environment & History’ is an attempt to situate the current study in broader field of environmental history. It attempts an understanding into the ways and manners in which the field has evolved over time within the subcontinent and also in the other regions across the globe. The methodologies of the field and its close relation to other field and subjects of study such as ecology, geography, archaeology, among others have also been scrutinized.

2. **GUJARAT: REGION AND ENVIRONMENT**

The section takes a geographical over view of the region of Gujarat and reflects on the changing topography and climatic conditions in the region, as a result of natural occurrences over the period of time.
3. **Polity & the Ocean**

The section details the political changes in the region of Gujarat across the two centuries under observation. It attempts to enhance our understanding of the dynamics of Mughal state formations and also its ultimate disintegration by a careful scrutiny of records of the period taking Gujarat as a case study and also in light of stronger understanding of such environmental limiters as topography and climate.

4. **Maritime Economy & Environmental Facets of Gujarat**

The section follows a multi-layered approach. While the initial section deals with an elaborate study of the economic systems and institutions working in the region and their evolution in sync with the changing political contours of the subcontinent across two centuries. The second section attempts to situate these economic and commercial systems within the natural environment of the region.

5. **Environment & Society**

The final section attempts to understand the cultural ethos of the region and how environment came to influence the various aspects of social, religious and cultural life of the region. Such activities as eating, dressing, and to the extent to which these were regulated by the environmental factors forms the focal area. At another level, a study of diseases, their transmission and cure, also constitutes an important part. Finally the interface between environment and human culture as reflected in folk literature and religious practices also is to be examined.