



CONSTRUCTING ENVIRONMENTAL HISTORY

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Extract

Construction of Environmental history has emerged one of the most challenging and daunting task in front of the researchers. Equally, this is most thrilling sub- discipline of history where a researcher tries to explore with not only the long duree' / long duration [geographical structures, the seas, the mountains or the so-called biological determinants],medium duree or short duree but also thermometric analyses, climate biology, historical geography and demography, climatic change, glaciology[to measure the changes in the surface of glaciers or the density of the ice, geomorphology [study of moraines or depositions of rocks and soil by the glaciers], palynology[study of marshes and peat bags situated downstream of the glaciers, plant pollens], dendrochronology study of the rings of the trees], Aurora Borealisto Minimum Maunder or the Little Ice Age but also nuclear biology to C14,which is devoid of monotony of dynastic exaggerations or literary interpolations or tampering with the numismatic or material sources.

This term paper 'Constructing environmental History' is tended to open new vistas in the field of interdisciplinary historical research.

Key Words: Ecological imperialism, Maunder Minimum, dendrochronology, padyonology, Little lee Age Tambora, La Longue Durec

Introduction: Donald Worster argues in his work "The Ends of the Earth- Perspectives on Modern Environmental History, Appendix doing environmental history (ed) Donald Worster and Alfred W. Crosby that in the old days, the discipline of history was more about the dynastic political territory of the rulers of the nation states. But after the 1st quarter of 20th century when socio-political and economic history started losing their grounds historians found solace in uncovering long submerged layers, the lives and thoughts of races/mankind and tried to reconstruct history "from the bottom layers. They described the hidden layers of class, gender, race and caste.

Constructing environmental history is part of revisionist approach to make it more inclusive at the same time it does not supersede the boundaries of socio-economic religious or cultural histories of nation states. However, some of the traits of environmental history crosses the boundaries of the nation states. The wandering Taurez nomads in African Sahel, for instance or the great Whales through all over the world oceans.¹

Later, The idea of environmental history first appeared in 1970s when some of the environmental movements started like Narmada Bachao Andolan to DGSM to Chipko movement (1973), when Notwithstanding the environmental factors were studied and methodologies developed by the founders of Annals school (1929) of Marc Bloch and Lucian Febvre. It was further enriched by Braudel Lynn Hunt, Le Roy Ladurie, Gordon Manley, Jacques Le Goff Marc Ferro, Pierre Chaunu, Pierre Nora, Mona Ozouf etc. Annales school of historiography dominated the history research between 1930s and 1970s. Hence, it came to be known as "La nouvelle histoire" or the New History. This group of historians were mostly from France.

Another important centre for the environmental history is United States of America. Frontier historians like Roderick Nash wrote an essay "The state of Environmental History".² Nash recommended over entire surroundings as a kind of historical document. Richard White Frederick Jackson Turner, Walter Prescott Webb, James Malin etc. all emphasized on the role of environment in the making of American Society.

Braudel argues that if history is seen from the vantage of nature there would be a history of all change although slow a history of constant repetition, ever recurring cycles."³ Emmanuel Le Roy Ladurie, another important historian in the preface of special issue "Histoire et Environnement" of Annales school that environmental history unites the oldest themes with the newest in contemporary historiography, the evolution of epidemics and climate, those two factors being integral parts of the human eco system. The series of natural calamities aggravated by a lack of foresight, or even by an absurd "willingness" on the part of the simpletons of colonization, the description of nature caused by soaring population or by the predators industrial overconsumption, nuances of urban and manufacturing origin, which lead to air or water pollution,

¹ Worster-Doing environmental history, pg 289-90

² Donald Worster- Doing Environmental History

³ Braudel- Mediterranean and the Mediterranean World in the age of Philip II

human congestion or noise levels in urban areas, in a period of galloping urbanization. In this regard Le Roy Ladurie insisted that this was not a new environmental history but in truth it had been going on for a long time as part of a movement toward "historire ecologique".

Thus one can see the environmental history around for generations. Ecologist George Wood well rightly calls "The Plants and Animals" maintain the biosphere as a habitat suitable for life."⁴

Environmental history is about the role and place of nature in human life. It excludes the "social environment". Natural environment is also different from the "built environment i.e. architecture, technology, cities etc. In fact, when human being encounters non human factors/spheres, environmental history finds its main theme of study.

Worster opines that environmental history proceeds on three (3) levels, three cluster of issues addresses, (3) three sets of questions it sets to answer each driving on a range of outside disciplines and employing special methods of analysis.

The first level deals with the understanding of the nature itself. In this level organic and inorganic both the aspects of nature are included. The second level of this history includes socio-economic realms which interacts with the nature/environment itself. In this level social institutions, gender play important role where social equality is seldom maintained. So, power relation are analyzed in this level. In the third level researchers have encounters with more intangible and unique type of human encounters like mental or intellectual which includes perceptions, ethics, laws myths and individuals or groups dialogues. Though for the purpose of environmental study. We can distinguish between those three levels of environmental study. In fact, these all three levels constitute a single dynamic inquiry in which nature, social and economic organization, thought, and desires are treated as one whole and this whole changes as nature changes, as people change, forming a dialectic that runs through all of the past down to the present.

This environmental history brings a wide array of subjects, familiar or unfamiliar, some new esoteric specialty, from that synthesis as a researcher, I hope, new questions and answers will come up.

Donald Worster, outlines the difficulties, faced by the historians/researchers in doing/ constructing the environmental history, particularly when he/she encounters with the new terminologies. The historian/researcher has to apply the concepts of geology pushing our notions of history back into the Pleistocene, the Silurian, the Precambrian ages. Graphs from climatology on which temperatures and precipitations oscillate up and down through the centuries, the chemistry of soil with its carbon and nitrogen cycles, its pH balances wavering with the presences of the salts and acids, setting the terms of agriculture. Together, the natural sciences are indispensable aids for the environmental historians who must begin by constructing past landscapes, learning what they were and how they functioned before human societies

⁴ George Wood Well, Donald Worster- Doing environmental history, Page 3.

centered and re-arranged them.⁵

But, above all it is ecology, which examines the interactions among organisms and between their physical environment that proffers great help to the environmental historian ecology has been concerned with the past and present interactions, it has been integral to the study of evolution propounded by Charles Darwin. Ecology is also concerned with origins, dispersals and organization all plant life. Mankind has been dependent on plant ecology for their food, medicine, building materials, hunting habitat and rest of the nature since inception, Therefore, we say that plants have been human's allies in the struggle to survive and thrive of study of plant ecology is the first step in the construction of environmental history.

However, some scholars/historians are so impressed by the term ecology that they do not use the term "environmental history, instead they use "ecological history" or "historical ecology". Hence, Aldo Leopold, a scientist and conservationist, spoke of "an ecological interpretation of history." He illustrates how the native Indians, French and English Traders and American settlers completed against each other to capture Kentucky during the Westward expansion movement in America. Leopold asserts that the study of history and ecology should be merged⁶. In the same vein, the Kansas historian James Malin presented a series of essays terming "An ecological re-examination of the history of the United States". In examining native grassland of America and problems of adaptation Malin Asserts that "The ecological point of view is valuable to the study of history, not under any illusion that history may thus be converted into science, but merely as a way of looking at the subject matter and process of history.⁷

When organisms of many species come together, they form eco systems.⁸ Until recently the ruling authority in eco system science has been Eugene Odum who wrote "Fundamental of Ecology". In this work Eugene Emphasizes on the spontaneous work of nature while earlier works asserted on the divine role of nature where all the systems are harmoniously entwined.⁹

Moreover, John Bennett defines the ecology in this famous work. The ecological transition"- how and why humans use nature, how the incorporate nature into society and what they do to themselves, nature and society in the process.¹⁰ Another important anthropologist Julian Steward wrote, an influential book- "The Theory of culture change" in 1955 from where the idea of cultural ecology comes. In this work Julian examines the relationship between a people's system of economic production and their physical environment.¹¹ Julian Steward's work influenced a number of young researchers who established the

⁵ Donald Worster, Doing environmental history, Page 4.

⁶ Donald Worster, Doing environmental history, Page 5.

⁷ Donald Worster, Doing environmental history, Page 5.

⁸ Eugene Odum- Fundamentals of Ecology

⁹ Eugene Odum- Fundamentals of Ecology

¹⁰ John Bennett- The Ecological Transition

¹¹ Julian Steward, Theory of culture change in worster- Page 9

relationship between nature and culture like John Bennett researched on Canadian Prairies, Harold Philippines, Richard Lee on Kung Bushman" of Africa, Marshal Sahlins on Polynesia, Robert Netting on Nigeria, Betty Meggers was on Amazon basin, Clifford Geertz on Indonesia. But it was Marvin Harris who carried forward the ideas of steward. Marvin also propounded the idea of "Techno-environment" Marvin Harris also compared his theory of cultural materialism to that of Karl Marx of "Dialectical Materialism, Thus, it can be said that there is also an age old relationship between the ecology and the nature.

Dust is an indispensable part of the geomorphology/nature. Donald Worster again tries to create the environmental history on the pretext of dust storms and its repercussion in America.¹² Worster tries to exemplify the impact of black blizzard which hit North of Texas on 14th April, 1934 and covered the east of Chicago with 12 Million tons of dust over the city plains. How this black blizzard, dust storms precipitated the occurrence of drought devastating the big grasslands of Nebraska in the 1940s which ultimately plummeted the Production of cotton ginning to 12500 bales, in 1934 from 99000 bales in the late 1920s. This dust storm compelled the natives to migrate to California. More than 30,000 Dust Bowl refugees" reached California between 1935 to 1939. Meaning is that these dust storms not only devastated the demography of America but also proved catastrophic to its agriculture leading to bankruptcy in Texas, New Mexico, Oklahoma, Colorado and Kansas.

These dust storms eroded 5, 00,000 square miles of greatplains of America, culminating in the devastation of agriculture and the animal husbandry.

Donald Worster, tries to prove that this type of disasters are "manmade". American over exploited the great plains for their agriculture. For the surplus production they did not heed on the ecological balances. Hence, the mankind has to face the brunt of ire of the nature. It is rightly said that "Nature is inflexible and demands conformity". These dust bowls compelled the ecologists to emphasize on the conservation of soil resulting in a conservation movement in America.

Any imbalance in the eco-system during the 18th-19th century was a result of establishment of ecological imperialism by the western European countries. Alfred W Crosby tries to construct very interesting ecological environmental history in his article. "Ecological Imperialism" the overseas migration of Western Europeans as a 'Biological Phenomenon"¹³

Crosby presents an interesting data of the Western European migration of Caucasoid race to the different parts of the globe from Europe to America, to Australia While the Mongoloid are confined to Asia. The Negroid are dispersed in the three continents of Africa, North and South America. Western European Englishman, Germans, Frenchmen, Italians and Spaniards are comfortably dominating places like Wollongong (Australia), Rotorua (New Zealand, Saskatoon) Canada). In facts, in the previous five centuries

¹² Donald Worster- Dust follows the Plow

¹³ Alfred W Crosby, "Ecological Imperialism" the Overseas migration of Western Europeans as a Biological Phenomenon

European Whites created Vast Settlements in both South Temperate Zone and North Temperate Zone. In Canada, United States of America, Argentina, Uruguay, Australia and New Zealand their population varied between 90 to 98% of the total population. These countries have been conquered militarily, economically and demographically, Hence, Alfred Crosby uses the term for these conquered countries as the Land of Demographic Takeover.¹⁴

Alfred Crosby raises one vital question-Why Americans, Argentineans, Australian and New Zealand are so much European Researching this questions, we finds that climate of these lands of Demographics takeover suited more to the Western Europeans than the land of Tropical Africa and Asia. In Africa and America most of them died of fever. If the Portuguese, Sustained in the African Angola, So it had obvious region of Demographic takeover through cross breeding.

Crosby also gives two cogent arguments to explain the Europeans demographics triumphs the first is the decimation and demoralization of the aboriginal population of Canada, the United States, Argentina, Australia and New Zealand, barring Bantu-Speaking Negros of South Africa who outnumbered the English white. The Bantu tribe survived demographically and prospered because they bore the military onslaught of the Englishman, avoided the conquerors and became their indispensable servants.

Second, the Europeans manipulated, agriculture, environment in the lands of Demographic Takeover. The Europeans not only progressed in the frontiers of Siberian Taiga or the Brazilian Sertao but also in South African Veldts.

To explain these two phenomenon, Crosby analyzes four categories of organism deeply involved in European expansion (a) human being, (b) Animals closely associated with the human being like horses or the cattle, undesirable Varmints like rats and mice (c) Pathogens or micro organisms that cause disease in humans and (d) weeds.

Moreover, in the lands of Demographics Takeover migration of not only human took place but also horses, cattle, sheeps, goats and pigs, honeybees, English flies, etc.. It is interesting to note that the European rats have dominated the temperate zones of America "rabbits did the same However,rabbits fomented epidemics of Mytomatosis- a lethal American rabbit disease.

It is also noteworthy that the Pathogen and microorganism were more successful than human beings in America.

Crosby also examines how globalization of some of the disease took place from the 17th century onwards like smallpox, measles, tuberculosis, influenza and a number of other disease. In the time of demographics takeover, the pathogens transmitted from Europeans and devastated Mexico, Peru, Brazil, Hawaii etc.

¹⁴ Alfred W Crosby, "Ecological Imperialism" the Overseas migration of Western Europeans as a Biological Phenomenon

The fourth category of organism, which dominated the American, Australia, continents, as Crosby opines, are the weeds. At least 20 new variants of weeds have been identified by John Josselyn i.e. couch grass, dandelion, nettles, maliowes, Knot grass, Shepherd's Purse, sow thistle clot burr, plantin etc. has been most successful in the temperate regions of the lands of demographics takeover. Blue grass and white clover, wild oats, fennel wild radishes established their dominance in USA and Canada. Thus, we find that many of the plants in North and South America, Australia and New Zealand are of European origin. A 1953 data of plants in USA enlisted 89 weeds out of which 35 were of European Origin.¹⁵

Thus Crosby concludes in his article "The ecological imperialism" that not only the European Human beings but also the Pathogens, Varmints, domesticated animals but also weeds all accomplished demographics, takeovers of their own in the temperate, well watered regions of North and South America, Australia and New Zealand.

Besides, the ecological imperialism, established by European in different parts of world, how the colonization of India by Britain particularly in Andaman Islands, created environmental anxiety shaping the British policy in the Indian ocean has been well substantiated by Prof. Vipul Singh in his article "Cyclones, Shipwrecks and Environmental Anxiety: British Rules and Ecological Change in the Andaman Islands- 1780s to 1900s."¹⁶ He highlights how the earlier writings on Andaman islands like (a) Above the Forest- A study of Andaman Ethnoquemology, cosmology and the power of ritual (b) In the forest- Visual and Material words of Andamanese History (1858-2006), (c) Development and Ethnocide: Colonial practices in the Andaman Islands by S. Venkateshwar and (d) Imperial connections. India in the Indian Ocean Arena (1860-1920) by Thomas Metcalf, (e) Savagery and colonialism in the Indian Ocean: Power, Pleasure and the Andaman Islanders S. Sen and (f) Imperial Andamans- colonial encounter and Island history by A. Vaidik and other writings of the history of the 19th century have neglected the environmental dimensions of Andaman. However (D. Arnold¹⁷ has included some of the environmental factors and done extensive study on the spread of diseases like smallpox, cholera and Plague in Indian mainland during the 19th century and how the Western forms of medicine made their way into India especially in jails and barracks.

Keeping in mind the colonial designs of East India Company and geo-strategic importance of Andamans. Prof. Singh describes Andamans as "A colony of a colony". He analyses the British interest to establish a penal settlement comparable to the Australian Botany Bay after the 1857 revolts and Denmark's control over the adjacent, Nicobar Islands, in the 18th century. Thus, Prof. Singh in his article examines two different phases of the penal settlement at the Andamans, 1789-96 and post 1857 and compares them with each other. He looks at the two phases of settlements on the Andaman Islands as an outcome of a combination of factors- British Imperial strategy and "Environmental anxiety."

¹⁵ Edward Salisbury- Weeds and Aliens (London- Collins, 1961), page 87.

¹⁶ Prof. Vipul Singh, "Cyclones, Shipwrecks and Environmental Anxiety: British Rules and Ecological Change in the Andaman Islands- 1780s to 1900s.

¹⁷ D. Arnold: Imperial Medicine and Indigenous societies, MUP 1998.

Initial interest of the British in these Islands was swayed by its strategic location in the midst of the Indian Ocean and to establish a flag post to secure the empire in India, Australia, Mauritius and South East Asia. While the second phase of the British colonization of the Andaman Islands was characterized by the anxiety of the forces of nature. For example, the frequent cyclones which wrecked many of the British Ships to the Islands.

In the wake of frequent cyclones, the aspects of migration and mobility played an important role. This also led to the beginning of livestock breeding, transmission of diseases and the resultant mortality among the indigenous societies which proved to be a major setback to the British scheme of converting the Islands into colony through the integration of indigenous communities. Hence, they began to rely more on convict labour for the clearing of forests and agricultural cultivation. Which quickly changed the Andaman's demographics while the indigenous population was undergoing a decline, the number of South Asian convicts and their families increased. Prof. Singh concludes that the ecological imperialism¹⁸ of the British on the Andamans was characterized by environmental anxiety, diseases and disasters rather than creation of a powerful "Neo Europe".

Likewise Prof. Vipul Singh, the environmental factors proved catastrophic to the Easter Islands or Rapa Nui in the Pacific Ocean region as has been cogently substantiated by Benny Peiser in his article "From Genocide to Ecocide: The Rape of Rapa Nui". Decline and fall of Easter Island and its alleged self-destruction and extinction of population have been illustrated by Jared Diamond¹⁹ in his book; "Collapse : How societies choose to Fail or survive" Jared Diamond posits that the people of Easter Islands destroyed their forest, degraded the Island's topsoil, wiped out their plants and drove their animals to extinction. As a result this self inflicted environmental devastation, its complex society collapsed, engulfed into the civil war, cannibalism and self destruction. While his theory of ecocide has become almost paradigmatic in environmental circles, a dark and gory secret hangs over the premise of Easter Islands self destruction- an actual genocide terminated Rapa Nui's indigenous populace and its culture. Diamond however, ignores and fails to address the true reasons behind Rapa Nui's collapse. However, Benny Peiser cogently argues Jared Diamond's model of "Environmental Revisionism" and explains why this model does not hold upto the scientific scrutiny.

Benny Peiser criticizes the Jared Diamond by using his model as "Eco-Pessimism" which does not

¹⁸ A. W. Crosby: Ecological Imperialism: The overseas Migration of Western Europeans as a Biological Phenomenon, in D. Worster (ed). The end of the Earth (New York: Cambridge University Press, 1998) Page. 167

¹⁹ Jared Diamond, "Collapse : How societies choose to Fail or survive"

rest on an unjustifiable belief in what he calls the "Rousseau-esque Fantasy" of the 'ecological noble Savage.' Diamond's Eco-Pessimism, in fact, has deep historical roots. Deisar argues that collapse is perhaps the prime upshot of the amalgamation of environmental determinism and cultural pessimism in the social sciences. Environmental determinism essentially applies the one sided rigidity to historical events and societal evolution.²⁰

Peiser concludes that Easter Islands or Rapa Nui is a poor example for a morality tale about environmental degradation. Easter Islands tragic experience is not a metaphor for the entire earth. The extreme isolation of Rapa Nui is an exception even among Islands, and does not constitute the ordinary problems of the human-environment interfaces irrespective of exceptionally challenging conditions, the in fact, their society, their people and culture were systematically destroyed by the Europeans which Jared Diamond does not mention.

Constructing environmental history would be incomplete, if one does not take into consideration the pedterms of climatic changes, In fact, climatic changes have been an universal and constant natural phenomenon since centuries. However, on account of climatic changes between 1350 to 1700 in the late Medieval Early Modern World period, not only the population of Western European countries halved but also proved catastrophic to the economy, polity and society. The climatic changes like floods, droughts, endemic epidemics like Black Death caused by pneumonic and bubonic plagues, witch-hunting, civil and religious wars devastated at least the Western Europe the Most. During this period 1350-1700 or better known as "Late archaic" or "Late Organic Period" (After 1700 CE World witnessed the beginning of mineral energy economy) in fact, the whole global witnessed new geopolitical or ecological polity. For the first time in the world history since the Paleolithic dispersals, the people and the ecologies of the world United into a global commercial and political economy, driven by the inhabitants of a peripheral yet geographically favoured collar of Europia.²¹ J. Brooke asserts that during the aforementioned period rising population and cultural energies shaped the critical synergy or urbanization and global trade and empire building.

Union the onset of industrial Revolution, the demography of different global regions followed divergent trajectories over there four centuries, which brought fundamental changes in the global political economy in the first age of globalization or J. Brooke others that social and political formations were more adaptive and resilient in the face of the "Little Ice Age" or the "Minimum Mounder" During the 17th century than the "Hall Statt Minimum" of 1200-700 BC of the Bronze Age.²²

Corroborating Otto Hintze's duality view of State formation, J. Brooke also asserts upon the importance of geographical location in not only the state formation but also in the empire building. Geographical Locations not only makes some of the states impregnable to the invaders but also the states

²⁰ Peiser, 2003

²¹ J. Brooke, Climate Change and Medieval age, p. 413.

²² J. Brooke, Climate Change and Medieval age, p. 416.

surrounded by deep seas makes these states most suitable to the seas voyages to the maritime trade culminating in the establishment of their colonies and empires worldwide.

J. Brook also presents the divergence debate of Kenneth Pomeranz & Wong, Andre Gumdra Frank, P. Prasanan and K. N. Chaudhary's view point of Euro-centrism, Sino-centrism and Indo-centrism respectively in which geographical factors like locations seas and minerals played indispensable roles.

Finally description of Franken Stein "Whether or Tambora:- the eruption that changed the world by Gillen D'archy wood is indispensable to the construction of environmental history. Wood agrees how "Universal Fog" and cold were attributes to volcanic eruptions in the nearby Iceland delayed the official ratification of the treaty of Paris in Dec. 1783 liberating 13 American colonies/states. The eruption of the Iceland volcano Laki in June 1783 brought abrupt cooling, crop failures and misery to Europe Latitude is critical to the relations between volcanic eruptions and climate. As a high northern volcano, Laki's Ejecta did not penetrate the Trans-hemispheric currents of the planets climate system, and its meteorological impacts were confined to the North Atlantic Europe.

Gillen wood asserts how Tambora the Volcanic stealth bomber of the early 19th century proved disastrous to the Napoleonic Wars, Wood, agrees that how the volcanic eruptions of Mount Tambora in the Synda arc of the Indonesian archipelago caused radical shifts in temperatures and rainfall and a flow-on T-Sunami of famine, disease, dislocation and unrest. It is also evident from this article that how endemic diseases like Cholera, Operated the conscience of the 19th Century and devastated not only the European but also the Orient Despite, its global presence and indiscriminate path, Cholera Spawned ways of thinking about the differences between East and West. Moreover cholera discourse became a cornerstone of Western orientalism, the racist legacies of which continue to pervade geo politics in the twenty first century.

In the nutshell, this term paper or the researcher's craft tries to delve into details of the environmental factors which play indispensable role in the construction of an environmental history.

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