

An overview of the Eco-environmental approaches in Social and Cultural Anthropology

Paper Submission: 03/05/2021, Date of Acceptance: 15/05/2021, Date of Publication: 26/05/2021



Vinod Ranjan

Assistant Professor,
Dept. of Anthropology,
Vinoba Bhave University,
Hazaribag, Jharkhand, India



Seema Mamta Minz

Assistant Professor
Dept. of Tribal Studies,
Central University of Jharkhand,
Jharkhand, India

Abstract

This paper focuses on various ecological and environmental approaches used by Social and Cultural Anthropologists from the 19th century. The main objective of this paper is to convey the concepts and theory related to Ecological and Environmental Anthropology. In fact, Environmental Anthropology came to limelight for analysis and application of anthropological knowledge to understand and solve the present environmental issues. The input of the discipline plays a huge importance in coping with environmental hazards and issues. Among other things, it has added the understanding of our own stewardship for generations to come. The search for holistic measures to meet the controversy between nature and man led to the multi-dimensional studies resulting in new schools of thought and approaches.

Keywords: Environmental Determinism, Environmental Possibilism, Cultural Ecological Approaches, Ethno-ecological Approach, Cultural Materialism Approach, Ecosystem Approach, Historical Ecological Approach, Political Ecology, Human Ecological Approach, Human Behavioural Ecological Approach, Processual Ecological Approach, Applied and Environmental Approach.

Introduction

Man and nature have an interdependent relationship from the very beginning of civilization. The impact of nature on man and vice-versa has seen a long history. Interaction between nature and culture, people and environment has remained a fertile ground of inquiry among the scholars of Anthropology. Interestingly, Anthropologists have engaged themselves to identify ways that how societies interact with the environment, leading to the conceptualization and classification of natural processes. At the beginning of the Nineteenth-century, studies show a new way in which the relation between Nature and people emerged as a prominent part of the examination. This study opened new vistas among the scholars to study in different ways society interacts with the environment and natural resources. The early anthropologists who addressed culture-environment linkages, namely Friedrich Ratzel, Franz Boas (1896; 1911) and Alfred Kroeber (1939), both adopted an environmental possibilism position (Hardesty 1977: 4; Moran 1982: 34; Bennett 1976: 162). Within anthropology, new approaches like ecological approaches germinated. The Columbia University can be traced as the birthplace of Ecological Anthropology. As the study gradually carried out the different impacts of the environment, climate, the geographical condition affected human behaviour, ideas, and human life. Franz Boas demonstrated the influence of the environment on a larger scale. In the latter half of the 19th century and the first decade of the 20th century, a multi-dimensional study was carried out by renowned Anthropologists to find a comprehensive treatment of the controversy between environment and culture. As the outcome of the study, a new school of thoughts or concepts emerged, i.e. environmental determinism, environmental possibilism, neo-functionalism, culture areas approach, cultural ecology, historicism, and other recent approaches in ecological Anthropology like the Actor-based model, system ecology model, ethno ecology model, etc.

Since the Pre-20th century and the first half of the 20th century, global Anthropologists have shown keen interest in Society-Environment interaction and the optional use of natural resources.

Since the beginning of the 19th century and in the early of the 20th century, scholars have been concerned with the ways, the society interacts with the environment and utilises the natural resources were classified. Researchers are also paying heed to society-environment interaction and finding measures for proper utilization of natural resources.

Since the 1950s and in the 1960s, new methods of human-environment interaction developed in a new branch of Anthropology as Ecological Anthropology.

Notable eco-environmental approaches in socio-cultural Anthropology:-

1. Environmental Determinism & Environmental Possibilism approaches
2. Cultural ecological approaches
3. Ethno-ecological Approach
4. Ecological Anthropology
5. Ecosystem Approach
6. Cultural materialism Approach
7. Human Ecological Approach
8. Historical ecological Approach
9. Processual Ecological Approach
10. Human behavioural ecological Approach
11. Political ecological Approach
12. Spiritual ecological Approach
13. Applied and environmental Approach

Aim of the Study

This studies aims to analyze the various notable eco-environmental approaches in Socio-Cultural Anthropology since 1950-60. Further it would be an attempt to write a comprehensive history of Ecological Anthropology. To discuss the recent trends and development in the field of Ecological Anthropology. To describe the various concepts and theory related to Ecological Anthropology. To discuss the major work of famous ecological anthropologist like Steward, Roy A. Rappaport, Andrew P Vayda, Netting, Harold Conklin, Charles Frake, Marvin Harris, William Balee, F. Roy Ellen, Kay Milton, Eric Alden Smith, Bruce A Byers , Peter Brosius . To give a new approach to study of Eco-Environmental Approach.

Environmental Determinism & Environmental Possibilism approaches

Environmental Determinism is the concept of determining culture keeping in view with human adaptation with their surroundings or environment. The principal of Environmental determinism rests on the hypothesis of coexistence of cultural and natural areas as culture depends on Environment. Human social and cultural behavior are therefore affected directly by Physical environment or human habitat or environmental factors. Thus Social and cultural behaviors are determined by Environmental condition and factors.

In Possibilism, environment is seen as an enabling factor rather than determining factor. By and large, the scientific observations related to human and environment interaction is based on the inferences of Environmental determinism has been correlated to Environmental possibilism.

Cultural Ecological Approaches

This study opened a new foundation of Ecological Anthropology based on the revolutionary

field research by Steward during 1920s-1930s, especially the interconnection of Native American society and their environment in Western United states. During the study in 1950s -1960s Steward developed a generic theoretical and methodological framework for cultural ecology. Steward recognized that there were multiple pathways for adapting to the same biome over time, the process he called multi linear evolution. The investigation of multi linear evolution was based on a comparison of the cultural ecology of societies at the same level of sociocultural integration or stage (bands, tribes, chiefdoms, states) in the same biome (e.g., deserts, savannas, or tropical rainforests).

Steward analysed the reactions of various culture to similar environments. He made a deep analysis of available resources and its distribution in relation to the technology, economic arrangements, Social organisation and demography of certain place in connection with the cultural ecological relation. Consequently, he derives the fact that 'Culture Core' having the elements of a culture is influenced by the surrounding areas, its subsistence and economic activities. Steward based his study on different ways of earning livelihood and how energy is transferred and tried to determine the varied aspects of culture. Now, culture has become a unit of analysis.

The concept of Cultural Ecology in Anthropology is formally defined by Julian Steward's book, Theory of Culture Change published in 1955, although the term dates to his 1938 Basin Plateau Aboriginal Socio-political Groups. Steward focused his attention on cultural adaptation to the environment, identifying both functional, synchronic formulations of observed cultural features, and diachronic regularities in the ways people organize themselves, adapt to their environment, and use technology. 'Culture Core' consisting of social and cultural features with more direct functional interrelationships with the local environment. He also recognized that these localized forms of social organization and adaptation are part of and influenced by higher levels of sociocultural integration (Steward 1955) Steward's Cultural Ecology focused on "conditions determining phenomena of limited occurrence" stressing that no cultural phenomenon is universal. This approach was intended to foster scientific investigations, hypothesis testing, and comparative analysis of cultural phenomena.

Robert McNetting's observation clearly provoke and gives an ironic challenge to all cultural ecologists following in his footsteps. In its brief existence, cultural ecology has proved neither convenient nor conventional for those who have sought to practice it. Robert's valuable contributions include Hill Farmers of Nigeria: Cultural ecology of Kofyar of the Jos Plateau (1973), Cultural Ecology (1986), Balancing on an Alp: Ecological Change and Continuity in a Swiss Mountain Community (1981).

Ethno-ecological Approach

During the 1950s-1960s, Brent Berlin, Harold Conklin, Charles Frake were leading and were an eminent character in the field of Ethno-ecological approach within Social-Cultural Anthropology. In his study Ethno-researcher find that how different culture

views on different aspects of natural domain such as soil, wild plants, birds, or insects. Ethno ecological relation has helped the societies to know the traditional and consistent knowledge of indigenous people and societies that have been stored over centuries for their traditional values and for generations. For instance, William Balee has shown that the Kaapor of the Amazon in Brazil recognize 768 species of plants from the seed to the reproductive adult stages which they utilize for food, medicines, crafts, building, and other purposes. Ethno-ecology helps in understanding the community views with ecosystem in their surroundings.

Ecological Anthropology

In the decade of 1960s and 1970s, cultural ecology and environmental determinism became unpopular within Anthropology. During the 1960s Ecological Anthropology developed as a product of Cultural ecology. New schools of thought were developed by Ecological Anthropologists. It was believed that anthropological scientists would give explanations to transition of customs and institutions with time based on their study of ecology and adaptation with the environment. Further, the anthropologist felt that the whole population is not in interaction with each other in a specific habitat around. Every community or social group has its own adaptations with nature.

Rappaport was the pioneer in bringing ecology and structural functionalism close together. He viewed culture as a product of the ecosystem. Rappaport was the leader in bringing together ecological sciences and cybernetics with functionalism in Anthropology. It pointed out that Ecological Anthropology helps in managing the resources and natural ecosystem. This approach is the outcome of adaptations and relation between human and biophysical environment. This research focuses on the view that cultural beliefs and customs aided human populations to adjust to their environment and balancing the eco-system.

Ecological Anthropology deals in with how people interact with environments and how human populations behave with nature and maintain balance in relation to natural resources for long time survival. Another thinker such as Salzman and Attwood defined Ecological Anthropology as a section of Anthropology which is the complicated relationship between human and environment, or between nature and culture or time and space. Environment and human are interrelated as human population frames its environment and is moulded by the environment and subsequently, form social, economic and political life.

In the words of Ellen, Ecological Anthropology is a systematic approach to the study of the close relationship between culture and environment. It provides a materialistic understanding of human society and culture which are products of adaptation to given environment conditions.

As per Seymour-Smith the Ecological anthropologists' believed in the concept that human populations are a unit of analysis, and culture became the means by which populations change and adopt the environment.

Conrad Phillip Kottak (1999) states that, Today's ecological anthropology and environmental

Anthropology not only explains the environmental problems but also studies the means and measures to solve the environment problems.

Ecosystem Approach

Ecosystem approach focused on human adaptation and human environment interaction. In the 1960s-80s, cultural ecology was transformed into ecological anthropology by John Bennett, Roy A. Rappaport, Andrew P. Vayda, and others. The new approach developed by Roy A. Rappaport, Andrew P. Vayda, considered human populations as one of the interacting componential species and it transformed cultural ecology and Ecological Anthropology.

This study was accomplished by applying a system to study the role of human population in the process of energy flow and nutrient cycle within ecosystem. System model applied for study and investigation of inter relation between human social system and ecosystem based on exchange of energy material and information. For example, Rappaport measured caloric input and output in the gardens of the Tsembaga people in the highlands of New Guinea who employ shifting horticulture. He related this in turn to their ritual and warfare beliefs and customs as mechanisms for maintaining the balance between the human and pig populations which could easily become competitors for many of the same food resources. Netting's own *The Hill Farmers of Nigeria* (1968), Roy Rappaport's *Pigs for the Ancestors* (1968), and John Bennett's *Northern Plainsmen* (1969). A new approach, called "new ecology," emerged tying up culture and system ecology when Steward had tied up culture with environment. The new approach called the ecosystem approach by Rappaport and Vayda conceived the thought of human population as being a part of the ecosystem. In Anthropology it was one of the first endeavours to reconcile ecological concepts and thought with functionalism.

Cultural materialism Approach

Marvin Harris was the founder of this Anthropological thought. During 1980s- 1990s Marvin Harris strongly advocated the concept and development of cultural materialism. Harris described and explained the power of cultural materialism through indigenous study of much cultural tradition such as worship of the sacred cows in India by Hindu, and prohibition for Islamic and Jewish's consumption of pork. Here cow is sacred for its useful resources like its milk, dung for fuel and fertilizer and its calf for its importance in agriculture rather than for meat and skin.

Historical Ecological Approach

The historical ecology approach, studies the mixed relation between human being and the environment in historical and holistic approaches. Historical ecology examines how culture and environment mutually influence each other over time (Barfield 1997:138). Ecological view observes the idea of relationship between humanistic approach and its impact on environment be studied, human activities bring changes in landscape and ecosystem. Historical ecology represents the study of human activity in context with the social, political activities in relation to surrounding landscape with regional and local activities in environment and its impact on human beings and on

the environment. In other words, it can be said that society and environment have an impact on each other and human beings utilize environment/landscape as per their requirements for social, religious, and community needs. For example: The diachronic approach of William Balee, John Bennett, and Carole Crumley studies the link between Sociocultural and environmental systems over a period of time and the changes that take place in a region and a particular area while previous researches were synchronic and studies analysed a particular society and studies were made in isolation. Synchronic studies were traditional and not dynamic and it had no permanent effect on its environment.

For instance, in the Republic of Guinea in Africa, foresters, botanists, and conservationists interpreted relics of forests near villages as having escaped deforestation by villagers that created the surrounding savannas. However, James Fairhead and Melissa Leach demonstrated that these forest patches are actually generated and managed by the villagers as a focus for their rituals and other cultural practices. In other words it can be said that forests are anthropogenic rather than purely natural. Other studies show that impact of external factors impacted more on local societies and ecosystems, and contact resulted in growth of colonialism and more recently world globalization. William Balee based his study on the historical ecology paradigm. Balee carried out his field work in the Amazon basin in Brazil.

Balee makes all possible attempts for integration of different types of ecology which was a part of Processual framework. Their main resources being the yellow-footed tortoise and its extensive search in the village vicinity. Amazonian People (1993) and are the editor of *Advances in Historical Ecology*.

Human Ecological Approach

In general Human ecology studies the version which human groups make their environment for survival with existence. This can be studied like as:

1. What culture does and work to solve their existing problem.
2. How communities and group of the people/society understand their environment.
3. How they share their knowledge of the environments to society.
4. Study of Epidemiology/pandemic of infectious disease.
5. Pattern of Nutrition, Reproductive function and Demography.
6. The study Human manipulation of natural resources and its impact on nature and environment.

F. Roy Ellen studies with the Nuauulu in west Java has helped in conceptualizing the indigenous people and their understanding about the environment.

Processual Ecological Approach

Processual Ecological approach is a new coinage for the new trends in the Anthropological development which is based on the relationship between the local population and their environment which is influenced by various external forces. It also assessed changes in individual & group activities focussing on human behaviour and extends

restrictions. Also the decision-making model was triggered by this ecological approach.

Kay Milton has a number of achievements in the field of anthropological research in the recent years. Her study is based on the multi-disciplinary study of environmentalism. Eeva Berglund established the fact that anthropology has a legitimate role to play in the study of Environment. In her well known book, *Knowing Nature, Knowing Science: An Ethnography of Environmental Activism* she analyses the role of Techno-Science in Environmental discourse. Brosius, a well known researcher in his article in *Current Anthropology* speaks about the anthropologist involved in the study of Environment exploring the shift and changes in the Past, Present and Future. Brosius also emphasises the fact that such engagement of Anthropologist in Environmental concerns was not at all inevitable. It examines the interaction of populations and environments. Processual ecological anthropology studies the transformations in individual and community activities and is based on the information of external aspects and human behaviour.

The main focus of this approach are :-

1. The importance of diachronic studies in ecological Anthropology.
2. The examination of relation of demographic variables and production system.
3. The response of population to environment stress
4. The formation and consolidation of adaptive strategies.
5. Political economy and structural Marxism.

Human behavioral ecological Approach

Human behaviour ecological approach led by Eric Alden Smith and Bruce Winterhalder emphasis on individuals adaptation with environment and use of natural resources rather than group adaptation and group social behaviour. It also focussed on the relative costs and benefits and individual finds while using the natural resources. Such an approach points out the ways in which adaptive strategies are used in different natural conditions. This type of study shows selective in nature.

Political ecological Approach

Decision taken by the government to use of natural resources impacted deep on political, social, environmental and economic also. This type of decision is concerned with socio, economic, political and environmental justice. As for Example, Susan Stonich analyzed how the economic development policies of the National Government and International agencies impoverished the economy and habitat of farmers in Honduras. This also explored the violation of human rights of people and abuse of environment studied by Barbara Rose Johnston. The most junk impact on society and environment can be seen as USA tested atomic explosion on Marshall Island during cold war contaminated environment due to radioactive elements. Robert Hitchcock and other anthropologists are among those who have worked together with the San hunter-gatherers of southern Africa to help them maintain community-based resource management to preserve their economy and development of their cultural identity in the face of external forces attacking on their traditional lands and resources including

farmers, herders, miners, tourists, and even wildlife conservationists. In such a situation they have to protect both nature and culture, yet sometimes a conflict or rivalry arises. The most striking case in this regard is the Makah Indian Tribe of the Olympic Peninsula in the state of Washington who clashed with major environmental and animal rights groups when in the mid-1990s they sought to resume their annual hunting of a small number of grey whales as part of their cultural traditions.

Spiritual Ecological Approach

Religion and culture both are an integral part of society and mankind life. Religion is as old as human faith in existence of some superpower which control nature and natural phenomena. No one society is known to us that does not have faith in one or more religion. Society varies from their faith in one or more religious and spirituality faith or existence of their almighty. Spirituality is an integral part of religion, it also extend the personal relationship with nature, people and supernatural phenomena. Religious faith and spirituality can help in sustainable development and reduce environmental crisis, and it can be also resolved by the way in fundamental changes in human behaviour which will be resulted in green environment development. Religious and spiritual faith in nature and natural phenomena will be helpful in eco- friendly development, conservation of natural resources and its management. Ex the river Ganga has a religious as well as spiritual connection with Hindu Hinduism. For example, Bruce A. Byers and colleagues have shown that the Shona in the Zambezi valley of northern Zimbabwe consider some mountains, forests, and rivers to be sacred. Their sacred places and the biodiversity therein are more likely to be conserved in contrast to secular counterparts.

Applied and Environmental Approach

This approach relates to adaption and adjustment of human with its natural surroundings and environment. In applied environment approach condition of survival of human being in natural way is measured how he reacts with the environment and how to adjust in and react with the Nature.Environmental Anthropology is a rather young offshoot of Ecological Anthropology, which is the study of interrelationship between groups, cultures, societies and ecosystems in which they are embedded across globe for ever.

Environmental Anthropology gains its prominence during 1980s primarily for focusing on analysis and application of Anthropological knowledge to contemporary environment concerns.The contribution of environmental Anthropology has a global relevance in coping with natural resource, hazards and other environmental issues. Anthropologist have been able to addressed a number of major environmental issues such as population explosion, natural resource depletion namely soil erosion, unchecked economic development , habitat destruction i.e., deforestation, biodiversity loss, environmental mismanagement, population hazards, global warming, conflict zone and climate change. As far as concern environmental anthropology is concern it has contributed to our understanding from local to global for human survival and for future incoming

generations. Environmental Anthropology has marched a long way from its foundation to maturity in establishing itself as a discipline which continues to contribute to our understanding of human ecology and adaptation from local to global levels so long as human beings see and breathe.

New lights of thought reflected by some authors as Brosius (1990) describes as human activity impact on environment and also stress to investigate the study of environment and its construction. As a result new branch of ecological anthropology emerged with a new will of applied anthropological sub field emerged. The new branch environmental anthropology resulted in contributing a broader area relating to local, national, international and global issues resulted in arising and advocating the natural resources, hazards, and environmental problems. Environment anthropology study and identified the environmental problems of the communities, social groups and solved by them way of their social, cultural and behaviours. Environmental anthropology contributes in formulation of policymaking, its implementation for the sake of environment and society.

Peter Brosius (1999) describes Environmental Anthropology as trans-disciplinary work and identifies three major current trends- a critique of essentialised images, an emphasis on contestation and consideration of stakeholder and an interest in globalisation. The way communities and social groups identify and solve environmental problems by examining culturally diverse perceptions, values and behaviours is the primary academic concern of Environmental Anthropology. As a result it plays major roles in improving and facilitating the communication process among diverse stakeholder groups. Environmental anthropology contributes in formulation of policymaking, its implementation for the sake of environment and society.

Conclusion

The environmental and ecological issues and problems are as important as the questions of existence of a living being. In the sphere of an environment and ecology the human play vital role because we highly influence it. Thus,the anthropological approaches to deal with the environmental problems are very effective. In this regard, various theories of eco-environment help to understand the problems related to human actions towards the environment.

References

1. Brosius, Peter J. 1999.*Analyses and Interventions: Anthropological Engagements with Environmentalism.Current Anthropology* 40(3), 277-309.Kopnina, Helen and Shoreman-Quimet, Eleanor.2017. *Routledge Handbook of Environmental Anthropolgy*.London: Routledge. 12-13 Kottak, Conrad P. 1999."The New EcologicalAnthropology."*AmericanAnthropologist*, 101 (1):23-35.
2. Milton, K., ed. 1993.*Environmentalism: The view from anthropology*. London: Routledge.Milton, K. 1996. *Environmentalism and Cultural Theory: Exploring the Role of*

Anthology : The Research

- Anthropology in Environmental Discourse.* Routledge, London/New York.
3. Moran, E. F. 1996. *Environmental Anthropology: In Encyclopedia of Cultural Anthropology* Vol. 2. D. LeVinsion, M. Ember (eds.). Henry Holt and company, New York.
 4. Moran, E. F. 1990. *The ecosystem concept in anthropology.* Westview Press, Boulder, Colorado, USA.
 5. Moran, Emilio F. 2006. *People and Nature: An Introduction to Human Ecological Relations.* Malden, MA: Blackwell Publishing.
 6. Netting, R. McC. 1977. *Cultural Ecology.* Cummings Publishing Company, Reading, Massachusetts.
 7. Orlove, Benjamin S. 1980. *Ecological Anthropology, Annual Review of Anthropology* Vol 9:235-273.
 8. Rappaport, R.A. 1968. *Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People.* Yale University Press, Newhaven.
 9. Rappaport, R.A. 1969. *Some Suggestions Concerning Concept and Method in Ecological Anthropology.* In: D. Damas, Ed. *Contributions to Anthropology: Salzman, Phillip Carl and Donald W. Attwood.* 1996. *Ecological Anthropology In Encyclopedia of Social and Cultural Anthropology.* Alan Barnard and Jonathan Spencer, eds. Pp.169-172. London: Routledge.
 10. Steward, J. 1955. "The Concept and Method of Cultural Ecology." In *Theory of Culture Change: The Methodology of Multilinear Evolution,* Urbana: University of Illinois Press.
 11. Smith, E. A. 1984. *Anthropology, evolutionary ecology, and the explanatory limitations of the ecosystem concept.* Pages 51-85 in E. F. Moran, editor. *The ecosystem concept in anthropology.* Westview Press, Boulder, Colorado, USA.
 12. Thin, Neil. 1996. *Environment In: A. Barnard & J. Spencer (eds.), Encyclopedia of Social and Cultural Anthropology,* 185-188. London [u.a.]: Routledge.
 13. Vayda, A.P., Ed. 1969. *Environment and Cultural Behaviour.* The Natural History Press, New York.
 14. Vayda, A. P., and B. McCay. 1975. *New directions in ecology and ecological anthropology.* *Annual Review of Anthropology* 4:293-306.
 15. Winterhalder, B., and E. A. Smith. 2000. *Analyzing adaptive strategies: human behavioural ecology at twenty-five.* *Evolutionary Anthropology* 9:51-72.