

RICE CULTIVATION OF KERALA: CHANGING PATTERNS OF SOCIAL ECOLOGY

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Abstract

This paper examines the changing dimensions of paddy cultivation in the Chittur-Thathamangalam area of Palakkad district, Kerala, which was once a major contributor to rice production in the state. Paddy cultivation has declined in the study area, as has occurred in many parts of Kerala. The study examines the reciprocal relationship between ecology and human society, with particular attention to the ways in which human societies interact with, modify, and adapt to their natural environments. Culture, beliefs, customs, and religion are closely associated with the habitats in which people live, shaping their perceptions and practices concerning the environment. In the Chittur-Thathamangalam area, a condition of liminality can be observed, largely owing to the decline of rice cultivation and the subsequent conversion of wetland paddy fields into real estate. At the same time, the area has not experienced significant industrialization, contributing to a distinctive pattern of socio-ecological transformation. Drawing on the framework of social ecology, the paper analyses the changing relationship between society and environment in the study area and reflects on its socio-ecological dimensions, including caste, gender, and sustainability.

Keywords: Paddy cultivation; Social ecology; Socio-ecological transformation; Land-use change; Caste; Gender; Sustainability.

"The past lives in art and memory, but it is not static: it shifts and changes as the present throw its shadow backwards. The landscape also changes, but far more slowly; it is a living link between what we were and what we have become. This is one of the reasons why we feel such a profound and apparently disproportionate anguish when a loved landscape is altered out of recognition; we lose not only a place, but ourselves, a continuity between the shifting phases of our life."

-Margaret Drabble (1979)

Social Ecology: Society-Nature Relations Across Time and Space

The perspective of social ecology reconstructs and transforms current outlooks on both social issues and environmental factors while promoting direct democracy. The socio-ecological niche, in any given region of agricultural activity, is created by the convergence of agro-ecological, and socio-cultural factors. The approach is capable of linking social factors that create inequalities based on caste, racism, sexism, gender, pollution and exploitation.

Rural landscapes are social-ecological systems characterized by complex interactions between social and ecological variables and are shaped by ecological and social dynamics. Social ecology emphasizes that the destiny of human life goes hand-in-hand with the destiny of the non-human world including the landscape. Each landscape is a "cultural construct" and is inextricably linked with its locale. Culture in turn is the effect of human adaptation to ecosystem, for, "each culture results from the material process of human appropriation of nature for survival (Gurukkal 2012, p.31)."

The mission of social ecology is to analyze the complex problems of contemporary society which occur in the social and physical environments. Social ecology addresses the social and behavioral consequences of the interaction between human beings and their environment. It also explores the causes and consequences of processes of segregation- the differential social mechanisms of exploitation and exclusion.

The consequences of agrarian change in the study area are examined from a socio-ecological perspective. Insights provided by social ecological perspective enable us to understand society-environment relations across time and space and how the decline in paddy cultivation resulted in a transformation of the rural society in the study area.

Paddy fields were the keystone of social life almost 40 years back at Chittur-Thathamangalam. Lives revolved around seasonal works in the paddy fields. Intimacy the people of Chittur-Thathamangalam had towards their agrarian landscape and related activities are fast disappearing. Rice farming was central to the social life of the people in Thathamangalam and many other social practices including their rituals and belief systems have been related to it. Land was considered sacred by the landlords who approached the land with due reverence as they were handed over by their ancestors. Preserving the land was their moral duty too. For the lower caste/class labourers, land was the only source of livelihood. Paddy lands and the 'intangible cultural heritage' i.e., the practices, knowledge, skills, artifacts and cultural spaces associated with paddy cultivation, which was transmitted from generation to generation, are being lost over the years. Paddy fields in Chittur could also tell the stories of a time-space experience of torture, agony, hunger, domination and suppression. The losing of wetland agro-ecosystem, that is, the traditional paddy fields involve irreversible transformation of the ecosystem. Delicate ecosystems that rice cultivation supports have changed in the village. The traditional rice field was full of life. Even after the harvest of rice, the rice field ecosystem harbours beneficial organisms. Life was born and re-born with the paddy cycle and it is this life cycle that balances the ecosystem.

In a village like Thathamangalam, rice cultivation provided the base to continue certain sets of ideas and beliefs for generations. It may be noted that, in the traditional agrarian structure, only the lower caste men and women would work in the rice fields. Even their children would also work in the field or engage themselves in herding the cattle of the landlords. The children received no pay until they reached fifteen. It is equally noteworthy that the upper caste men and women did not work in the rice fields historically. Even contemporary ethnography points to the fact that work participation of higher caste men and women are far below that of lower caste men and women in the rice fields. In the agrarian structure, village served as a social and economic unit and maintained continuity for generations. The tempo of village life and agrarian community was relatively slow. Rituals and agrarian activities related to paddy cultivation imparted a sense of habituation that made agrarian scenario more intense.

The decline of paddy cultivation and the transition from a feudal mode of production to a capitalist mode of production during the last fifty years had caused a radical reorganization of agrarian society in Thathamangalam. The different forms of capital employed in the agrarian set up changed rapidly.

The ecological factors played a major role in the structuring of rice communities. Division of labour was an unavoidable aspect in paddy cultivation. The ecological and cultural factors played a major role in imparting social solidarity of the landlords as well as the agricultural labourers. The social consciousness of the respective classes and castes depended on their structural location in the village social hierarchy. With the advent of modern technologies in agriculture and the centralized control of farming and external input, the practice of collective work in the fields began to disappear.

It has been noted in the course of the study that subsistence pattern of the people that depended on the ecological conditions of the village was fast changing, leading to the decline of the allied activities that supported agriculture, which was also a source of livelihood for many other social groups, such as basket weavers and pot makers, among others. These rural jobs have disappeared from the village.

The respondents, who belong to the older generation and are from the dominant caste, still cherish the memories of paddy cultivation. They expressed the incalculable thoughts of loss, lack and longing of the past. According to them, the loss of paddy cultivation has created a loss that is unexplainable and incalculable. Most of them still continue with the traditional worldview. Many of them are bound with a feeling of attachment to this land area and are reluctant to leave the place for whatever cause. Old beliefs and memories bind the villagers, especially the dominant castes, to this area and are still cherished by the remaining inhabitants.

However, labourers of older generation who belonged to lower castes felt no nostalgia for the past and shared the memories of incredible miseries of hunger and suppression that they had undergone. They are only worried that they lost their work in the paddy fields.

One of the important aspects of the current change is the eclipse of the image of the prosperous farmer and the rise of men engaged in business or modern professions emerging in former agrarian villages.

Rationalization of Agriculture

In modern times, according to the demands of market, agriculture has been rationalized. Under the conditions of capitalism, there were substantial changes in the way production, exchange, and consumption would be organized and controlled. Considering the transformation of agriculture in Chittur-Thathamangalam area, one could discern fundamental change in agricultural practices including the exchange of resources produced. According to Max weber¹ (Weber, Baehr, & Gordon, 2002), capitalism is connected to the rationalization of society. The new changes in agricultural practices dented the older social relations in the village. Uncertainty and instability have become woven into capitalism, which produces not only weak social bonds, but also corrodes trust and commitment and leads to social imbalance.

Caste and Social Ecology

Like any work, agrarian labour carries with it a hidden symbolic element- it is a material activity to make a living but it is also the way they create themselves in relation to others through the meanings invested in forms of work. Caste emerged as a powerful instrument for establishing social distance. When we reconstruct the history of the gradual emergence of a topology of work, some forms of work came to be regarded as superior to others. These forms became sources of social distinction. The pre-capitalist social system had a long history of caste oppression and discrimination. The Dalits were subject to untouchability and other forms of discrimination.

Observing environment through the lens of caste makes it clear that loss of paddy cultivation in Thathamangalam and the breakage of the caste hierarchy in the villages have changed the social relations in the study area. The study revealed that for lower caste people, experiences of environment were ridden with metaphors of pollution, impurity, and dirt. Historically, Dalits were made to work in the field as agrestic slaves. The abolition of slavery did not mean that they could become completely free from the labour bondage. Dalit women were the worst affected being the victims of various forms of social practices and sexual exploitation. These instances prove that the lower castes occupied a lower position in the agrarian class structure. The feudalistic agrarian relations witnessed a radical transformation with the land reform of 1970s.

Caste is no longer a major determining factor of occupations as was the case in the pre-land reform era. Land reforms could significantly break the traditional caste-class nexus. Different castes responded differently about these things: for lower castes, these changes enabled their betterment. They felt relieved from the clutches of the caste and exploitation. The next generation of lower caste labourers moved from manual labour to self-employed jobs and other professions.

Social ecology suggests that the roots of current ecological and social problems can be traced to hierarchical modes of social organization² (Bookchin, 1885). From the perspective of economic rationality, one could observe hierarchical mentality and hierarchical organization entrenched in many parts of India. Although Bookchin talks about western context where class domination is the norm, in India, most often, natural resources have been monopolized by the dominant upper caste. They were not allowed to use as much resources as they can. The hierarchical claims on natural and environmental resources in India followed almost the pattern of caste hierarchy. Social ecology takes a reconstructive and transformative outlook on societal-environmental issues and tries to re-harmonize human communities. From this perspective, it is possible to critique caste based agricultural production that deprived the lower caste labourers even of their subsistence.

Another significant aspect of the contemporary change is the perception of land only as a commodity for sale. According to the Structural functional theory, institutions change according to the organizational needs of the system. Here, the traditional farming practices have almost completely stopped. A process of depeasantization may be observed noticeably. The market rationality in agriculture has replaced traditionality and land now became an economic object.

Gendered Issues

The ideas of social ecology try to conceptualize the dynamic relationship between gender, environment and other aspects of social and cultural life and is concerned about the gender, environmental and social changes. The introduction of new technologies could not resolve the gender problems in rice farming. For example, the new labor-saving technologies badly affected women labourers. Gendered issues in paddy farming were studied while addressing the labour class women community in Thathamangalam. Due to the decline in paddy cultivation, women are displaced from paddy related works.

Social ecology is against the subordination of women and the exclusion of women from the nature. Social ecology admits the inherent capacity and quality of women in ensuring sustainable human-environmental relationships and is of the view that women should be included in all aspects pertaining to the environment. Women friendly technologies in agriculture are to be developed to ensure the participation of women in agriculture related activities.

Experimental Programmes to Revive Paddy Cultivation, New Schemes to Promote Paddy Crop

According to M.S. Swaminathan (2007), "The importance of rice will grow in the coming decades because of potential changes in temperature, precipitation, and sea-level rise, as a result of global warming. Rice grows under a wide range of latitudes and altitudes and can become the anchor of food security in a world confronted with the challenge of climate change."

Disappearance of the paddy fields has transformed the landscapes, and life of the people in the study area. There is a possibility that the old 'Rice Bowl' would be severely damaged in the near future. Perhaps, it is this anxiety that forces the inhabitants to support the various 'experimental' developmental programmes that are being implemented in the region in a consecutive manner, each time with the hope that paddy cultivation will not stop and 'life' gets produced in the region. Effective measures are to be taken to preserve traditional farming practices in each area. Sustainable rice farming will be practical only if it is profitable. To make paddy cultivation more profitable, the State government should provide institutional support to farmers with appropriate policies and legislation. The timely availability of quality seeds, mechanization, better storage, effective procurement and timely payment, irrigation facilities, are to be ensured for effective cultivation.

Systems Perspective and Reviving Traditional Ideas for Sustainability

Over recent years the concept of 'knowledge' as a general term has been replaced with ideas of contextualized 'knowledge'. Elaborating on Shotter's (1997) idea of knowledge-from-within, we argue that knowledge-cultures are socially evolved based on the understanding of surroundings built on multiple knowledge-forms and farmers' experiences. Concepts of socio-ecological resilience (Holling, 1973) and systems perspective are relevant in this context.

Each village holds ingenious practices and locally sustainable practices that is the sum total of accumulated knowledge of generations, passed on from generation to generation. Traditional agriculture is often considered unscientific, to be rejected in the emerging scientific era. However, many of the sustainable practices of the local farming communities are brought back in to limelight having proven the test of time. Traditional agrarian techniques offer solutions for site-specific problems which is gained by the trial-and-error methods for a long time. These indigenous knowledge systems are to be reconstructed with a vision to ensure environmental sustainability and to improve the quality of human life for the present and coming generations. These indigenous cultural systems probably teach us how traditional people lived in harmony with nature. The social ecological perspective incorporates concepts from systems theory to bridge the gap between people and their environments.

Traditional agricultural landscapes are socio-ecological systems, in which nature and culture interact with each other. Local residents are the bearers of traditional culture and agricultural

knowledge and are therefore the stewards of the agricultural landscape. Without the active participation of local residents, the preservation of agricultural landscapes cannot be sustained. The effectiveness of preservation practice among local community members has to be analyzed. Paddy fields have turned out to be *fields without life*. The culture of collective working in farm, their attachment towards village life, their feelings, values, beliefs, etc. have been affected by this transformation. One may feel alienated in one's own village. Although Chittur-Thathamangalam area has undergone a process of continual change and transformation, it will be remembered as an area with its beautiful paddy fields.

The sociologist Dipankar Gupta (2005, p. 752) rightly avers, "the village is no longer a site where futures can be planned.' He adds further, 'the village is shrinking as a sociological reality, though it still exists as space.'" (Gupta, 2005). In this context, social ecology's task for humanity is not simply protecting nature, but rather creating an ecological society in harmony with nature.

Social structure of the village has undergone a dramatic change in the context of decline in paddy cultivation. Gender patterns have undergone a drastic shift. Any malfunctioning of the social practice that disturbs the stability of a system may be termed dysfunctional. Paddy cultivation has become dysfunctional these days. Paddy fields were indeed the cultural expression of rural life and provided a distinct cultural space for many years. It varied for landlords, labourers and was legitimized through rituals. Many of the institutions regulating agrarian culture such as rituals and festivals have become dysfunctional in the study area. Loss of paddy culture has made associated art forms and rituals meaningless. Many of them are practiced merely for the sake of doing or as a part of celebrations and may turn dysfunctional in the coming years.

Though the study pertains to a particular region, we should go outside the barriers of our local thoughts and have a holistic approach to understand the loss of eco habitats throughout the globe. It would only be appropriate to remind the words from Karl Marx's *Capital* (Volume 3): "Even a whole society, a nation, or even all simultaneously existing societies taken together, are not the owners of the globe. They are only its possessors, its *usufructuaries*, and like *boni patres familias*, they must hand it down to succeeding generations in an improved condition." (Marx & Engels, 1894, p.776)

Social ecology argues that progress could be achieved for both the human and non-human spheres of life by practicing cooperation with nature, with humans adopting the naturalist values of non-hierarchy, diversity etc. It advocates the recovery of nature through the restoration of an individual ecological consciousness. "The good of the whole is achieved through rich individuality and complex interrelationship of the parts (Clark, 1990, p.5)."

Conversely, social ecology argues that the distinct ability of humans to reason can lead to the integration of a democratic human society with a complex and dynamic ecology. Social ecology challenges the current capitalist system and all forms of oppression including racism,

gender inequality, ethnocentrism and patriarchy and offers a reconstructive and revolutionary vision for an ecological society. Social ecology aims to replace our mentality of domination with an ethics of complementarity to promote an egalitarian society. Social ecology emphasizes the physiological, emotional, and/or social well-being of human beings. Social ecology aims at the reorganization of society giving due importance to rational scientific technologies; it also advocates the importance of sustainability and maintenance of diversity and interaction for a flourishing ecosystem without disturbing the natural evolutionary process. Efforts are to be made to consciously connect humans and their environments.

"The soil is the great connector of lives, the source and destination of all. It is the healer and restorer and resurrector, by which disease passes into health, age into youth, death into life. Without proper care for it we can have no community, because without proper care for it we can have no life."

-Wendell Berry (2015)

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