



## Women and Traditional Ecological Knowledge in Nagaland: Issues of Sustainability

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### ABSTRACT

*Traditional Ecological Knowledge (TEK) is important for the survival and continuity of socio-cultural structure particularly for indigenous people. TEK is essential for sustainability of environment and ecology. It has and will continue to have a role in the life of indigenous people. TEK has sustained them for millennia before the intrusion of scientific knowledge and in the process; indigenous communities have developed a symbiotic relationship with their ecology. Naga society is one such community with more than half of the population dependant on agriculture and natural resources for sustenance and survival. Women in Naga society play a pivotal role in managing and sustaining the resources obtained from nature. They are in fact considered the real experts on preservation and continuation of TEK. From working in the field to collection of firewood to identifying the varieties of plants, they transmit TEK through daily practice and maintain close contact with nature and environment. One such importance is seen in the area of seed selection; women are natural custodian of seeds which they learn orally. The preservation of seeds, the choice of which seeds to be planted, the forecasting of weather and the pattern of cropping are some of the practices which portrays how TEK is intertwined in their lives. However with modernization and attendant forms of development with their emphasis on privatization of resources and commercialization, the importance attached to TEK system appears to be eroding. This poses the challenges of sustainability of TEK which is intertwined with the very survival of identity of the community in question.*

**KEYWORDS : Traditional Ecological Knowledge, Resources, Agriculture, Naga Women, Sustainability, Development.**

### INTRODUCTION

It is generally understood that Traditional Ecological Knowledge (TEK) represents experiences acquired over thousands of years of direct human contact with the environment though there is no universal definition of Traditional Ecological Knowledge. Hardesty defines TEK as "the study of systems of knowledge developed by a given culture to clarify the objects, activities and events of its universe" (Julian 1993:2). The term TEK became wide spread only during the 1980's, but the practice of TEK is as old as ancient hunter-gatherer cultures. TEK is thus not merely a system of knowledge and practices; it is an integrated system of knowledge, practice and belief (ibid:5). In this sense, Traditional Ecological Knowledge refers to a cumulative body of knowledge, belief, and practices, evolving by accumulation of TEK and handed down through generations through traditional songs, stories and beliefs. It concerns the relationship of living being with their traditional groups and with their environment. It is a body of Knowledge, beliefs and practices handed down through generations and acquired by a community through contact with their environment. One such community where TEK plays a pivotal role in daily sustenance is the Nagas of Nagaland.

The present paper focuses on the role of Naga women in the usage of TEK through their agricultural practices and activities. The study is based on both secondary material as well as empirical field data collected from nine villages of Nagaland namely, Sungratsu, Changki, Longkhum, Sanis, Bhandari, Longsa, Lumami, Lazami and Ghatashi. It highlights the threat to the preservation of TEK posed by development-induced changes taking place currently in Nagaland. Nagaland State consists of eleven districts namely Dimapur, Kohima, Kiphire, Longleng, Mokokchung, Mon, Peren, Phek, Tuensang, Wokha and Zunheboto where majority practice and depend on agriculture. Land in Nagaland is considered as the most valuable resource as it provides livelihood and sustenance to large section of the rural population. Agriculture being the main source of livelihood, the preservation and conservation of biodiversity becomes important having diverse implications.

In view of the rapid changes taking place in Naga society against the backdrop of modern phenomena such as globalization and privatization, an understanding of TEK in the Naga context has become imperative since it is linked with their very identity as a people. While change is inevitable and even essential, change can also become a

threat. Development and globalization has changed the rituals, cultural values and norms, patterns of knowledge, agricultural cycle and traditional practices of the Naga people. All these have a profound impact on the role of women since they are intimately linked to nature - change in their role as a conservator, transmitter and protector of nature and environment.

### SIGNIFICANCE OF TEK IN AGRICULTURAL PRACTICE AMONG THE NAGAS

Naga society is a community where more than half of the population is dependent on agriculture and natural resources for sustenance and survival. The Nagas are hence predominantly agriculturists and considers land and nature as important as life itself. On one hand it provides their daily needs and on the other hand the practice is related to the social, cultural and ritual/spiritual life of the people.

TEK has sustained the people for millennia before the intrusion of scientific knowledge and in the process the Naga people have developed a symbiotic relationship with their ecology. Traditional Ecological Knowledge of the Naga people is intrinsically interlinked with life. For the Nagas TEK contains symbolic meanings, cosmology, reciprocity and obligations. It is linked to the spiritual world- the sacred web of life, to ecosystem, to environment and to all humanity. It is stored in people's memories and is expressed in stories, songs, folklore, cultural values, beliefs, rituals etc. in the absence of any written historical document, it is shared and communicated orally from generation to generation.

Every activity related to agriculture, from the initial stage of field clearing till harvesting, are all interlinked with and based on TEK. The rituals performed before and after the agricultural activities, the social and cultural activities like the festivals, the days for celebration, the taboos, selected days for hunting/fishing, the days to stay home, the preservation of virgin forest and medicinal plants, the sacred groves etc are not in the form of written documents but known to the people orally and are respected and followed in Naga villages even today. The belief of indigenous people that disturbance of nature can lead to bad harvest, drought, floods or deaths of family members are other aspects of TEK. This wisdom is based on the realization that man and nature are in partnership with one another. Elders, women, men and children understand the concept and follow what is taught to them. They believed that nature is their mother and to take care and use it

without harming it was their duty. This is reflected in their traditional attitude towards plants, animals, river etc.

Traditional Ecological Knowledge is therefore important for the survival and continuity of socio-cultural structure of Naga people which is intimately linked to their agricultural practices. Therefore, TEK had and continues to play a significant role in the life of Naga people.

#### **WOMEN'S TRADITIONAL ECOLOGICAL KNOWLEDGE**

Agriculture is considered the largest source of employment for women in Naga society. This can be seen through the fact that of the total female workers in Nagaland, 65.2 per cent are engaged in agriculture as compared to only 44.4 per cent of total male workers in the state engaged in agriculture (2011 Census). The activities undertaken by women in agriculture are numerous and vital. Women in Naga society are predominantly seen as the care takers and nurturers, a role which is reflected in the folklores of the people. The folklores and folk-practices of the Nagas enfold a symbolic and ritual representation of the social construction of the role of men and women in the household and in the community (Aier, 2008:122). Males represent the face of Naga families in their given role as provider and protector while women, besides their nurturant role, are expected to be managers of the household which includes agricultural activities besides foraging and gathering from the bounty of nature.

As such, women's understanding of biodiversity tends to be broad containing many unseen insights into local species and ecosystem gained from centuries of practical experience. They play a pivotal role in managing and sustaining the resources obtained from nature. From working in the field to collection of fire woods to identifying the varieties of edible plants, they transmit TEK through daily practice and constant contact with nature and environment. It is therefore important to focus on women and their understanding of nature because knowledge about nature and environment often vests with the women. Since chores are often organized and shared based on gender lines in the patriarchal Naga society, in terms of matters related to the environment, women are often considered the daily managers. Besides women's responsibility for tending to the crops, live stocks and household chores, one major role they perform is the selection of seeds for the following season. The aim of every farmer is a good harvest and therefore an important prerequisite is selection of good seed, preservation of seeds and looking after it till the next season. As seeds constitute the primary importance in determining a good harvest, this role of the Naga women is of utmost significance in the agricultural sphere. They learned it through their mother and their mother from her mother. The process is learned and transmitted orally from generation to generation. Therefore, traditionally in Naga society, they are usually considered the natural custodians of seeds. The responsibility of continual propagation and preservation of native edible plants and vegetables largely rests on women thus keeping alive the knowledge base for their progenitors as well as contributing to the biodiversity of their environment.

Another significant role of Naga women within the gamut of TEK is the practice of seeds-exchange within the community and sometimes even outside the community. The exchange of seeds done by women forms a social network, with bonds and relationship being sustained over time (ibid: 124), thereby, directly or indirectly sharing and transmitting TEK.

Through their TEK, women play a major role in natural resource management in Nagaland. While visiting the field and collecting firewood, wild fruits and plants, they make sure to take only what is needed and save the rest for the next season. They extract from nature what is required and conserve the rest for future use. This process has helped them consume as well as preserve the resources. In most Naga villages, reserved forest has been conserved and maintained whereby women in different ways have helped in conserving and preserving it. As such, women may be in fact, considered the real experts on preservation and continuation of TEK in the community.

#### **EMERGING CHALLENGES AND ISSUE OF SUSTAINABILITY**

Women's work and knowledge is central to biodiversity conservation and utilization. Their skills and knowledge is vast and they understand the nature with clarity. Their knowledge has been the mainstay

for maintaining sustainability. For instance, the use of biomass for feed and fertilizer, proper judgment in relation to weather, for breeding and feeding of livestock's, the fuel value of firewood types, and food products and species are essential to maintain sustainable ecosystem, in which women are predominately active. This invisible engagement of women has maintained the ecological stability, sustainability and productivity under resource scarce conditions.

In this way women have been the custodians of biodiversity for millennia. They produce, reproduce, consume and conserve biodiversity in agriculture. However, as with all other aspects of women's work and knowledge, their role in the development and conservation of biodiversity has been rendered as non-work and non-knowledge (Mies & Shiva, 1993:168). Due to the patriarchal nature of property ownership in Naga society, in spite of their intensive interaction with the natural environment, decision making authority does not rest with them but with the males. This serves to marginalize and negate the significant role played by women in conserving environment through their TEK. The dispossessed status of women implies that they have little or no say over the way current changes are taking place in their environment. Some recent trends taking place in the state are increased privatization and individual ownership, especially of land under permanent cultivation such as wet rice cultivation, terraced lands, tree plantation, bamboo groves, etc. Such trends reduce the Common Property Resources of the community which in turn adversely affect the agricultural livelihood activities of women who depend on natural resource for collecting firewood, wild fruits and vegetables to life-saving medicinal plants.

The symbiotic relationship that existed between nature and men are being increasingly disturbed by the process of development seen primarily through commercialization and privatization. Rapid social change of Naga Society has developed a floating culture basically marked by consumerism (Longkumer & Jamir, 2012: 48). Given the widespread growth of money-oriented culture and materialism, it has resulted in a change of value system and attitude towards land even amongst the rural citizens with many willing to part with their land for monetary gains. For many Nagas, land has lost its symbolic importance and is rather viewed through its commercial value. Moreover, with increasing population and changing lifestyle, the Naga people face challenges of meeting livelihood needs and sustaining their environmental resources. Today, they are faced with problems of poverty, excessive deforestation and soil degradation. Though shifting cultivation continues to be the primary agricultural system in Nagaland where approximately 80 per cent of all cultivable land is under Jhum (NEPED, 1997:17), there is a trend of large scale conversion of jhumland into commercial tree plantation and into centrally (government) sponsored cash crop cultivation all over Nagaland. Such trends results in drastic changes in the environment, often leading to its unplanned destruction and making it unsustainable. The main strength of traditional practices for sustainable development is to be seen in the fact that they have evolved in close contact with specific cultural and environmental conditions. These traditional techniques have proved to be sustainable in the sense that they have given good result over a long period. Sustainable Development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Grenier, 1998:11). Sustainable agriculture and natural resource development means "the utilization, management and conservation of the natural resource base and the orientation of technological changes to ensure the attainment and continued satisfaction of human needs-such as food, water, shelter, clothing and fuel-for present and future generation" (ibid). Sustainable development focuses upon a relationship between humans and their environment and indicates a warning that human cannot push development which is against nature.

Thus, the sustainability and management of forest and agriculture are becoming a major problem in most part of Nagaland. Economic activities ushered in through the processes of globalization and development are leading to destruction of reserved forest, degradation of soil, changing the pattern of farming etc. Such changes inadvertently pose a threat to the Traditional Ecological Knowledge base of Naga women in many ways. For instance, with the shrinking of Common Property Resources through the process of privatization, there is a decrease in the forest areas where women previously foraged and derived from nature for their agricultural and dietary needs. Further,

the use of easily available commercial seeds for cash crop cultivation is leading to marginalization of traditional seed-preserving methods of the Naga women. Such changes entails that the TEK involved in those practices would no longer pass on to the future generations and would ultimately result in the loss of TEK. These are just a few instances which highlights the threat to the traditional knowledge of women which is inextricably linked to the question of a sustainable environment.

## CONCLUSION

The survival and sustainability of livelihoods is ultimately connected to the conservation and sustainable use of biological resources in all their diversity (Mies & shiva, 1993:165). Changes in the environment are inevitable but in Nagaland they have become deleterious as a result of the profit-motivated indiscriminate destruction of forests, arbitrary use of resources and increased population leading to serious concerns of sustainability. It is observed that while in the purported process of changing the quality of life, it is causing destruction to environment and erosion of TEK. Development should not destroy the life support system, either for the present generation or for future generation. Economy should not just be about the production of wealth and ecology should not just be about protection of nature but both should equally be relevant for improving the emerging problems relating to environment. Conservation and sustainable development represent two side of the same coin, closely inter-linked with one another, in that one cannot be achieved at the expense of the other. The process of development and globalization should not destroy but should sustain it. It is important to strengthen conservation measures based upon traditional knowledge and value system. Many young people are no longer interested in or do not have the opportunity for learning traditional methods which poses a threat to the survival of TEK. As we see the unbalanced and disturbance of nature and environment, so do we see the natural death of TEK.

The transmission of Traditional Knowledge has fundamental social-cultural importance to any society. In particular, the erosion of TEK has direct link with women because most agricultural activity and work performed by women is linked with TEK. Women as the ultimate care taker of nature understand the threat of such changes and issues. Proper policies and the flexibility of extending decision-making power to women can contribute in halting the total erosion of TEK. Through TEK, we have opportunities for a renewed effort to relook at the sustainability of our prevailing socio- ecological system. The role of TEK cannot be ignored as it acts as a key driver for sustainable development. To be able to understand and learn the value of TEK and create awareness is a major task but it is vital to identify its importance in order to keep alive the structural-cultural relationship with nature within the ambit of development and globalization.

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