

## Symbiotic Co-existence of Man-biodiversity: A Case Study of Ao-Naga Tribe of Nagaland

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### Abstract

Mokokchung district of Nagaland is situated at 93°53' to 94° 53' E longitude and 25°56' to 27°40' N latitude has a total geographical area of 1,615 km<sup>2</sup> with 28966.47 ha under forest coverage (Basic Facts, 2011). Mokokchung district has disparate physical features and an aged old tradition and social frame that evince man-environmental symbiotic continuum for the past many centuries. Biodiversity- the most indispensable gift of nature is not only the most valuable life supporting natural resources for the people of Nagaland but it forms the core fabric of their socio cultural, economic and spiritual lives of the Ao-Naga tribe. Centuries of symbiotic co-existence of Man-Biodiversity among the Ao-Nagas suggest a deep rooted understanding of the nature, its ethos, traditional knowledge and spirituality on the natural environment that surrounds them. This paper attempts some pragmatic approach for sustainable management and conservation of Biodiversity basing on the Ao-Naga experience.

### 1. Introduction

The state of Nagaland located in the North-East of India lies between 25°6' and 27°4' North latitude and 93°20' to 95°15' East longitude at the confluence of Indo-Burman region displays a rich biological diversity. This region falls within the 25<sup>th</sup> hotspots of the world. Mokokchung district of Nagaland harbours a wide variety of endemic species of animals, plants and micro-organism. Presence of the high hills to a gentle slope topographical layout with an ideal climatic condition of sub-tropical humid with abundant rainfall on one hand and the socio cultural percept on the other hand provide a conducive situation for centuries of symbiotic co-existence between man-biological diversity and its continuum.

Biodiversity plays a pivotal role in the Ao-Naga community lives. For centuries they have been dependent on the natural environment for sustenance and development. For the Ao-Naga tribe Biodiversity is much more than economic or social value but Biodiversity is life itself in which they are a part. In fact, it forms the physical and spiritual needs of the people. There is unmistakably a symbiotic relationship existence and even today more than 90% of the Ao-Nagas are directly or indirectly dependent on its environment and nature.

### 2. Materials and Methods

The study is based on both primary and secondary sources. For

clear understanding of the problem, observation and collection of geographical facts and information of both natural and cultural were drawn from the field investigations, interviews, meetings and questionnaires.

### 3. Results and Discussion

In the understanding of the traditional Ao-Naga tribe 'Biodiversity' is not just a diverse life forms or is much more than economic resource but 'Sacred'. Biodiversity have played the most crucial role in the lives of the Ao-Nagas for its life supporting natural resource system, and deriving strong social and cultural ethos and believe on the nature that surrounds them. That the people did not only respected the nature or drawn resources from the nature but of all it had inspired them and that pave the way for a meaningful relation between them and the nature.

Nature and culture converge on many levels that span, values, beliefs, norms, livelihood, knowledge and language.' (Milton, 1998; Posey, 1999; Turner and Berkes, 2006; Berkes, 2008). The nature-spiritual relationship of the Ao-Nagas is defined by the prevailing Biodiversity indirectly in a very unique means rooted locally in the territory and in return it influences the surrounding environment in which they exist. Biodiversity has influence the indigenous people regarding the food habits,



custom, lifestyle as well as the social activities. For instance, certain animals and birds like Black python (*Python molurus*), Tiger, Leopard, Crocodile, Pangolin (*Manis tridespis*) are forbidden to eat, kill or even to domesticate as it might be that firm traditional indigenous knowledge system suggests these may bring ill health, misfortune, or it may provoke gods or deities associated with these organisms.

Naga ancestors worshipped and revered nature's entities reflected in forests, and are believed to be the residents of spirits or 'gods' which is also the core fabric of their traditional medicine and healing. Certain sacred sites and groves are protected and continued to maintain its sacredness till today.

Traditional beliefs of the past had played a significant role in conserving local plant diversity, instances are the Basil (*Ocimum Basilium*), *Cissampelos Pareire*, *Zanthoxylum acanthopodium*, *Elsholizia blanda* etc are used as a sacred plants or worshipping plants.

Centuries of symbiotic relationship between the Ao-Nagas and their natural environment can be found reflected in all their culture, songs, festivals, merriment etc. which revolves around the rich Biodiversity. Besides, names, stories, chants, art and crafts, music and musical instruments, dance, ceremonies, rituals, architectural designs and forms, marriage etc. reflects their intimate relationships with Biodiversity, which in return enrich the social life by adding enjoyment and well-being.

Such interaction and relationship is verified in the designation of protected areas and nature reserves perceived as a 'sacred' or 'Ait' (enchanted ground) in the vernacular Ao-Naga dialect and other faith-based or sacred designation of the land spread all over the region. For instance even today various local communities in the Mokokchung district have selected several traditionally sacred areas such as 'Yangermanglopok', 'Nashimer', 'Aidang', 'Shirkimong' (Mopungchuket village), 'Kalomong', 'Tsurong valley', 'Shamalong', 'Tenemtsuyong' (Debuia village) etc for spiritual reasons (Figure 1).

While on the other hand, the present scenario have witnessed in the cultural diversity been manipulated and altered the local Biodiversity through modernized tradition, customs and mindset that keep on changing with time. As such traditional knowledge on Biodiversity is rapidly eroding with the pressure of modernization coming in the way. The exploitation of animals and plants species to furnish to the need of contemporary societies is causing extinction to many key species in the region.

Biodiversity in Mokokchung district of Nagaland is changing at an unprecedented pace affecting the overall biological setting of the region. Rapid deforestation is caused due to the traditional jhum cultivation as well as the recent commercial farming which demands for a large tract of lands. Over the last

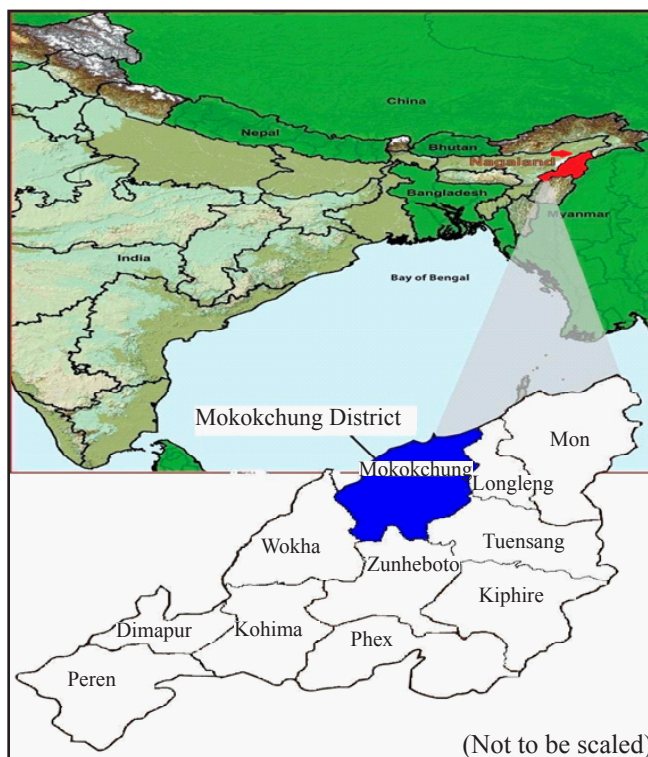


Figure 1: Locational map of Mokokchung district of Nagaland, India

two and half decades, Mokokchung district have experienced rampant logging and commercialization of forest. So much pressure was exerted within a short span of time that decline of forest on one side and more plantation of commercial trees on the other have caused drastic alteration on the existing forest. This has adversely affected the natural habitat of the wild animals and birds. This dynamics have caused grave concern for the sustainability of once a strong co-existence and dependence between man and environment of the Ao-Nagas.

All these activities have threatened the constant nourishment of the rich diversity putting a heavy pressure on the socio-economic, customs, cultural practiced and expression, traditional knowledge and spiritual welfare of the indigenous people.

#### 4. Conclusion

Mokokchung district of Nagaland has conducive topographical and climatic condition that had supported once an extremely rich forest and Biodiversity. The Ao-Nagas are also known for their aged old tradition and social frame that evince man-environmental symbiotic continuum for the past many centuries. The indispensable traditional knowledge possessed by the people have played a crucial role in their approach towards natural resource management and their entire world view towards symbiotic relations and co-existence with their

environment. However the modern development forces and introduction of consumerist lifestyles have intermittently affected the entire Biological setting causing uncertainties for the future. Against the backdrop of the many new policies and dominant views of the modern conversationalist considering the ongoing development in Nagaland and Mokokchung district in particular, it would be worthwhile to take account of the invaluable traditional knowledge and wisdom to salvage centuries of man-environmental relations aid for the effective management of the Biodiversity of the region.

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