

EXPLORING NATURE-CULTURE LINKAGES IN THE APATANI VALLEY, ARUNACHAL PRADESH, INDIA

Bina Gandhi Deori

Assistant Professor, Dept. of Ancient Indian History Culture & Archaeology, Visva-Bharati University, Santiniketan-731235, West Bengal, India; binadeori@gmail.com

■ Abstract

The Apatani Valley or Ziro Valley in Arunachal Pradesh, located in the foothills of the Eastern Himalayas, is known for its unique topography and Indigenous traditional cultural practices. The region is endowed with a rich diversity of fauna and flora. The Valley is home to several species of plants used for traditional medicine and rare species of animals native to the Himalayas. Over centuries, tribes residing in the Valley, mostly the Apatanis, developed ingenious methods to meet their daily needs in response to the environmental conditions in which they live. These methods can be seen in different spheres of their life and have defined their relationship with nature through time. Apatani Valley was included on the Tentative List of India for World Heritage as a cultural landscape in 2014. In this paper, the unique culture of the people and the nature-culture linkages as observed in the Apatani Valley are explored, as well as the natural significance of the Valley in order to consider its potential as a Mixed Cultural and Natural Heritage property.

KEY WORDS: nature-culture linkages, heritage, mixed sites, Apatani

■ 1. Introduction

The Apatani Valley or Ziro Valley, located 130 km away from Itanagar, the state capital of Arunachal Pradesh in India, is situated in the Lower Subansiri District in one of the most rugged and inaccessible topographies of the Himalayan ranges [Fig. 1]. It lies within the Himalayan global biodiversity hotspot and is home to a significant number of endemic and rare plant and animal species. A variety of medicinal plants are native to the Valley, like *Angiopteris evecta* (G. Forst.) Hoffm., *Anisomeles indica* (L.) O.K., and *Colocasia affinis* Schott. Recently, two new orchid species-*Thrixspermum japonicum* and *Gastrochilus platycalcaratus*- have been discovered as the first record in India, making it a vital biodiversity zone in the country. The Valley is inhabited mostly by the Apatani tribe, a clan-based society, recognized for its unique traditional innovations and practices in farming and natural resource management. Due to

these unique values, the Apatani Valley was included on the Tentative List of India to World Heritage as a cultural landscape in 2014. This paper explores the unique culture of the people and the nature-culture linkages, as observed in the Apatani Valley, based on interviews undertaken by the author with locals in Apatani Valley during fieldwork conducted in the years 2016-18. Furthermore, the natural significance of the Valley is explored in order to consider its



Figure 1: Ziro Valley, India (Source: Author 2017)

potential as a Mixed Cultural and Natural Heritage property.

■ 2. Significance

As part of the Eastern Himalayas, the Apatani Valley enjoys a wide range of diverse flora and fauna due to climatic and altitudinal variations. It has sub-tropical and temperate forests. The Valley is mostly covered in bamboo and pine forests of various species. The forests are rich in different varieties of species of plants with medicinal properties. According to a study conducted by C. P. Kala in 2005, a total of 158 medicinal plant species have been documented so far for curing various diseases and ailments. Many plant species traditionally used by the native people in their daily consumption are also found to have medicinal values (Yakang and Gujarel 2015). The Valley is home to different species of wildlife commonly found in the Himalayan region, such as the Clouded Leopard, Capped Langur, Malayan Giant Squirrel, Barking Deer, Indian Gaur, and the Common Palm Civet.

Because of the easy availability and accessibility to the forest resources in their vicinity, locals are highly dependent on these resources for their livelihood and sustenance. With centuries of living in close affinity in this environmental setting, the Apatani people have developed a way of life that relates closely to natural resources management. Therefore, conservation is part and parcel of their culture. The Apatani's belief system (known as *Donyi(Danyi)-Polo(Pwlo)ism*) is based on the veneration of nature and its elements, a way of life that is in harmony with the universe. For the Apatani culture, it is essential to be in synchrony with the environment that sustains them. It is the only possible way to sustain a healthy ecosystem known to them.

There are natural features spread across the Valley and beyond, which are sacred natural sites documented in their folklore. These are mountains or hills where it is believed that Apatani ancestors settled for some time during their journey while migrating, rivers that they followed in their paths, or a hillock where they settled. The Apatanis call these stopping places *supung* [or *lemba*]: the route leads from Wi Supung to Nyime ("Tibet") Supung, to Hising Supung (the source of the Tsangpo River), to Shango Supung, along the bank of the river, to Miido Supung, still in the Tsangpo Valley (Blackburn 2003/2004).

The study of these Apatanis' sites is a potential field of research that can fill in the gaps

of Apatani history that are mostly based on oral traditions.

Likewise, particular forests are considered sacred groves because their ancestors planted trees in these forests. In *Donyi(Danyi)-Polo(Pwlo)ism*, every element of nature, like mountains, forests, trees, rivers, and streams, are under the guardianship of a particular spirit. Therefore, the Apatanis believe that spirits that dwell, for example, in the trees, if disturbed, can cause harm. Since their ancestors planted the trees, they consider it their duty to protect the forest from any destruction. These places are believed to be the abode of environmental deities *Su-Myoro* or *Myorü* (Radhe 2018). Thus, people refrain from causing any disturbance in the forest. This deep symbiotic relationship is reflected in their traditional cultural expressions.

The Apatanis have a rich traditional knowledge system. They have developed an advanced Indigenous farming system, ingenious land use pattern, rich cultural expressions (like music, religious performances, performing arts, textile, traditional ornaments, tattoo, etc.), and an efficient natural resources management system. For instance, the Apatani practice of wet cultivation is a highly complex Indigenous farming system. Their farming is an integrated system of paddy cum fish cultivation. Fish are grown in the same plots where paddy are planted. Rice-fish farming is widely popular in other Southeast Asian countries. However, it is practiced only by the Apatani tribe in Arunachal Pradesh, while the rest of the tribes grow just paddy in wet cultivation or practice slash and burn. Millet is grown on the raised bunds that separate each plot. It is an essential ingredient in the preparation of Apatani beverage called *O*, an essential drink in all their feasts, festivals, and religious ceremonies. From the same piece of land, the Apatani farmers grow rice, fish, and millet showing a method of optimum use of land.

The Apatanis have also developed a highly complex irrigation system for the agricultural fields [Fig. 2]. Water from the nearby stream is channelized and brought into the agricultural plot through a canal or bamboo. For irrigation purposes, a cut is made through the band on each plot, or a duct made of bamboo is inserted through the band, so that excess water from one plot is drained to the next seamlessly. This ensures the equal distribution of water throughout the field and checks overflooding in the plot. In the meantime, the fish from the plot are also harvested. After harvesting the



Figure 2: Wet Cultivation, Ziro Valley, India (Source: Author 2017)

crops, the paddy stalks are burned or allowed to rot in the field, which turns into manure after a few months, adding to the fertility of the soil. This is an example of a sustainable farming system as it is wholly organic and environmentally friendly.

Highlighting the above-mentioned significant core values, the Apatani Valley was identified as a cultural landscape and included on India's Tentative List for World Heritage in 2014 under criterion (iii): unique cultural tradition; and criterion (v): outstanding example of a traditional human settlement and land use. Nominating the Apatani Valley as a World Heritage cultural landscape would illustrate an ideal example of a unique cultural tradition that emerges from nature-culture linkages.

The Ziro Valley is also known for its mesmerizing natural scenic beauty, with its extensive pine tree forests, rumbling rivers, and lofty hills. Since time immemorial, the beautiful landscape has been inspiring the local people as it is reflected in their rich folk tradition. The natural beauty of the Valley has great cultural and spiritual significance in the life of the people.

Taking into consideration the rich flora and fauna of the region, the Talle Valley Wildlife Sanctuary, 30 km from Ziro, was established in 1995. The Talle Wildlife Sanctuary is under IUCN Management Category IV. It is a popular wildlife sanctuary as well as a biodiversity hotspot in Arunachal Pradesh. Including the Talle Wildlife Sanctuary (TWS) as a part of the nomination can be an asset as it is categorized under the Important Bird and Biodiversity Area (IBA) category and is also an Endemic Bird Area (EBA). TWS is also home to certain species of plants, such as the *Agapetes atosanguinea* Airy Shaw, *Agapetes*

buxifolia Nutt. ex Hook. f., and the *Agapetes incurvata* (Griff.) Sleumer, which are endemic to Arunachal Pradesh. There is also a demand to declare the TWS as a Butterfly Sanctuary because three of the world's rarest butterflies, the Bhutan Glory, the Kaiser-e-Hind, and Brown Gorgon, are found there.

Added to the potential to fulfill natural criterion (vii), other significant natural values of the Valley are yet in need of further exploration, such as the Valley being a potential site for criteria (x) in order to evaluate the potential of the Valley as a Mixed Cultural and Natural Heritage site.

■ 3. Management

The Department of Environment and Forests, Government of Arunachal Pradesh, a state-sponsored agency responsible for conserving the environment, identifying, establishing, and conserving protected areas in Arunachal Pradesh is the main body that looks after the management of forest resources. Conservation and management of forests and their biodiversity and conservation and development of wildlife are a few of their primary goals.

The Apatanis also have their Indigenous resource management system that is centuries old. It is deeply rooted in their religious and spiritual beliefs. Sacred groves are maintained for centuries, and any kind of cutting and extraction of plants and their parts is restricted. Sacred groves locally known as '*ranthii*' are associated with the corresponding village or villages. Six sacred groves have been identified as part of a major research project sponsored by UNESCO, New Delhi (Dutta et al. 2017).

Bulyañ (traditional village council), with its limited role, still regulates and manages forest resources. The *bulyañ* consists of the experienced elder members of the clan who supervise matters related to community forest resources because traditionally, the forests were clan-controlled. Anybody not abiding by the laws and destroying the sacred groves are accordingly punished by the *bulyañ*. As a result of strict community forest protection, the Apatanis maintain bamboo groves to meet their daily needs [Fig. 3]. This also helps in the protection and conservation of Indigenous species of plants.



Figure 3: Bamboo Groves, Ziro Valley, India (Source: Author 2017)

Through traditional festivals and ritual performances, the Apatanis also conserve forest resources. During *Dree*, *Myoko*, *Murung*, and other minor festivals, plants of certain species are used to prepare ritual altars and other religious paraphernalia [Fig. 4].



Figure 4: Ritual Image, Ziro Valley, India (Source: Author 2017)

Bamboo (*Phyllostachys bambusoides*), Cane (*Calamus acanthospathus*), part of trees (*Castanopsis hystrix*, *Castanopsis indica*), are regularly used in most of the rituals. Therefore, these species of plants are also cultivated in home gardens to make them more accessible.

Plantation of species of Bamboo, *Michelia*, *Pine*, *Castanopsis*, *Prunus*, etc., and caring and conserving species of *Calamus*, *Sachharum*, *Mahonia*, etc. in forests have been given high priority because of their ritual and cultural value (for details see Yakang and Gujarel 2015). Practices like the restriction of felling of trees of certain species, abstinence from venturing into the forest after the performance of certain rituals, maintaining sacred groves, and the use of different parts of plants in rituals are essential parts of the Apatani belief system. They can be seen as a means to conserve forests and natural resources.

Regarding agriculture, government organizations, like the Department of Agriculture, the Indian Council of Agricultural Research (ICAR), and *Krishi Vigyan Kendra* (KVK), conduct agriculture-related research and provide all necessary aids to the farmers. The local farming communities have their agriculture management system, like the traditional practice of collecting and conserving their seed banks, that help to maintain farmers' traditional knowledge and their local varieties.

■ 4. Current State of Conservation and Challenges for Continuity

Rapid urbanization has brought unprecedented changes to the Apatani Valley. Unplanned construction of concrete buildings has rapidly changed the face of the Valley. Agriculture-based economy is gradually giving way to a market-oriented economy in which every product from the forest comes with a price-tag and is exploited to extract more profit.

Presently, the Talle Wildlife Sanctuary is the only Protected Area in the whole district. More such potential areas need to be identified by the Department of Environment and Forests for the protection and conservation of wildlife. TWS is home to certain species of plants enlisted as Vulnerable on the IUCN Red List, such as *Agapetes atosanguinea* Airy Shaw, *Agapetes buxifolia* Nutt. ex Hook. f, and *Agapetes incurvata* (Griff.) Sleumer.

With traditional agriculture being more labor-intensive, village youths are venturing out of

the Valley in order to seek better education and job opportunities. This urban migration of youths over the years is one of the leading causes of loss of traditional knowledge and traditional cultural expressions. As the youths spend much of their time outside their village and community, they do not get enough time to learn and train in the Indigenous knowledge system from the elderly members of the family or clan. Traditional knowledge is learned or trained informally on the spot while participating in the process. With the passing of the old generation, the community is gradually losing its valuable wealth of Indigenous knowledge.

With the introduction of Western education, certain traditional institutions that are based on age-old cultural ethos of the community are gradually being neglected. With the spread of Christianity among the Apatanis, the traditional system based on their Indigenous values is also weakening. Therefore, it is a challenge to uphold the traditional value system of one's ancestors while embracing a different belief system.

In general, there is a feeling of apprehension among the locals. This is mainly due to the inaccessibility of information regarding the implications of the heritage status of the Valley. Issues like ownership of the land in the demarcated area, financial compensation if there is any need to be discussed with the stakeholders. These can be addressed and communicated through the local village council and non-government agencies operating in the region.

The preparation of the nomination dossier by the Directorate of Research, Government of Arunachal Pradesh, is still being processed. There are specific impending technical issues about the mapping of the area and the definition of boundaries of the nominated property. The identification of the forest area and the definition of the components of the property in the main town are still under discussion in relation to urban planning and the potential restrictions and regulations stemming from a potential heritage designation. In the earlier dossier, the cultural aspect overshadowed the natural values of the site, likely because the nomination of the Apatani Valley was done as a cultural landscape under the cultural category. As mentioned above, TWS potentially fulfills the natural criteria (x) as it is home to rare plant species that are endemic to the region. *Pleioblastus simone*, a bamboo variety, is found only in the Talle Valley. Recently, an extremely rare species of plant, *Petrosavia sakuraii*, was located here. TWS is also home to different kinds of rare

species of amphibians, orchids, butterflies, and the most endangered species, such as a clouded leopard.

Tourism in the Valley is another sector that needs urgent attention. Various schemes have been implemented to promote tourism as a means to boost the local communities' income and employment generation. The Ziro Music Festival, an annual musical event, is an initiative by the local youths and artists from the Northeast region of India that brings several tourists to the Valley. Through this event, tourists also get a glance at the Apatani's life when they visit the villages and experience culture firsthand. Due to its remote location, tourism is being promoted to bring more tourists to the region. Due to the lack of more available options, it is seen as an important sector of economic development.

■ 5. Recommendations

There is an urgent need for collective efforts, including the concerned government departments (including agriculture, horticulture and environment and forests), non-governmental organizations operating in the region and the community members for the conservation of natural resources and continuation of traditional practices that upholds the Apatani Valley heritage values. A common platform is needed where information is shared freely and openly, and important issues regarding the implication of a heritage designation need to be discussed with the active participation and involvement of the local public. Activities regarding nature conservation need to be briefed and discussed regularly in their meetings. The *Bulyaŋ* should continue its work, hand in hand with government departments for the management of natural resources.

The Directorate of Research, Arunachal Pradesh, is already updating the nomination dossier including all necessary information as directed by the agency at the national level. However, the possibility of drafting a nomination under Mixed Cultural and Natural heritage should be further reflected upon.

Regarding youth and local communities, more horticulture schemes should be implemented in the region, like the introduced Kiwi plantation, so that the farmers do not have to leave the Valley to look for other alternatives.

Programs focusing on the importance of

natural sites and its association with the Apatani heritage and different aspects of the Apatani culture should be organized in educational institutions to create awareness among the Apatani youth. Cultural events, including storytelling and painting based on folklore, could be introduced as part of the academic curriculum, both by the private and public schools. Following the same course, higher educational institutions should also organize workshops targeting academics for discourse on the Natural and Cultural Heritage of the Apatani Valley and its interlinkages.

The Directorate of Research, as they are the office directly connected to the nomination, should conduct workshops for the public to impart information on UNESCO, World Heritage, and its implication for the Apatani Valley. This will be a useful exercise for the people to clarify their doubts, if they have any, and have an informed opinion as their say is of prime importance regarding the Valley getting a heritage designation. The Department of Tourism should promote eco-tourism as the region has the potential for sustainable development for the socio-economic empowerment of the local community and the conservation of natural resources.

The Apatani Valley is an extremely important site with significant natural and cultural values. These values are revered by the locals and have shaped their outlook. The unique nature-culture linkages, as found in the Valley as a result of continuous interaction with each other, have created a unique community that nourishes and nurtures. Appreciation of traditional knowledge, be it traditional medicine or Indigenous methods of farming, is growing. Therefore, the Apatani Valley, with its unique cultural traditions, needs to be globally recognized as an outstanding cultural landscape, while its natural values continue to be explored.

■ Literature cited

Blackburn, S. 2004. Memories of Migration: Notes on legends and beads in Arunachal Pradesh, India. *European Bulletin of Himalayan Research*, 25/26: pp. 15-60

Deori, B. G. 2018. Study of the Intangible Cultural Heritage of the Apatanai Tribe, Arunachal Pradesh. Project submitted to ICH (Division) INTACH, New Delhi

Dutta, J., Muang, O., Balasubramanian, D. Pangging G. and Arunachalam, A. 2017. Sacred Groves of Ziro Valley Dominated by Apatani Tribes in Arunachal Pradesh. *Indian Journal of Hill Farming* 30(1): pp. 132-138

Farooqy, P. 2017. Symbiosis between Nature and Culture: A case study of the Apatani Cultural Landscape, India. *Journal of World Heritage Studies, Special Issue 2017*: pp. 51-55

Lee, E., Domashov, I. and Manral, U. 2018. The Role of Indigenous and Customary Knowledges in Nature-Culture Linkage. *Journal of World Heritage Studies, Special Issue 2018*: pp. 144-151

Kala, C. P. 2005. Ethnomedicinal botany of the Apatani in the Eastern Himalayan region of India. *Journal of Ethnobiology and Ethnomedicine* 1 (11): pp. 1-8

Ngilyang, T. 2017. Wildlife in the Traditional Lifestyle of the Apatani Community of Ziro Valley, Arunachal Pradesh. *Bulletin of Arunachal Forest Research* 32 (1&2): pp. 53-61

Panda, S. and Sanjappa, M. 2012. Checklist of Ericaceae of Talle Wildlife Sanctuary in Lower Subansiri District of Arunachal Pradesh, India. *Journal of Threatened Taxa* 4(1): pp. 2322-2327

Press Information Bureau, Government of India, Ministry of Environment, Forest and Climate Change 2016. Khangchendzonga National Park (KNP) and Climate Change. Sikkim Inscribed as India's First 'Mixed' Site on UNESCO World Heritage List. 16th July 2016. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=147212> [Accessed on 02 April 2019]

Radhe, Y. 2018. Su-Myoro or Myorü Sü: Environmental Deities. *Popirscope Select Edition Vol. I*: pp. 122-129

Sikdar, M. 2014. Traditional Practices in Agriculture among the Apatanis of Arunachal Pradesh. *The Tribal Tribune* 6(3): pp. 1-5

Sikdar, M. 2014. Traditional Practices in Agriculture among the Apatanis of Arunachal Pradesh. *The Tribal Tribune* 6(3): pp. 1-5

Takhe, K. 1993. The Advancing Apatanis of Arunachal Pradesh. Hapoli: Takhe Omang

UNESCO World Heritage Centre. 2014. Apatani Cultural Landscape. <https://whc.unesco.org/en/tentativelists/5893/> [Accessed on 12 March 2019]

Yakang, B. and Gujarel, P. R. 2015. Traditional use and conservation of some selected plants used in festivals and rituals in Apatani plateau of Arunachal Pradesh, India. *International Journal of Conservation Science* 6(2): pp. 189-200