

Symbiosis Between Nature & Culture – A Case Study of the Apatani Cultural Landscape, India



Persis Farooqy¹

(1) World Heritage Assistant, UNESCO Category 2 Centre, Dehradun, India

■ Abstract

The Apatani cultural landscape is well-known all over the world for its unique and traditional practice of paddy-cum-fish cultivation. It is located in the Ziro valley, in the Lower Subansiri district of Arunachal Pradesh, India. This remarkable practice of yielding rice as well as fish, by the Apatani tribe, has been sustained over generations and has not been influenced by any modern techniques. Due to their sustainable usage of natural resources, the fertility of the soil has remained the same over the years, securing the livelihoods of the locals. This landscape also has bamboo and pine plantations in the undulating hills surrounding the valley. The traditional practices of the Apatanis are based on a rational use of natural resources. Hence, this relationship between nature, culture, and humans mutually supporting each other has been recognized and regarded as one of the best examples of nature-culture linkages in the world. Currently it is on India's Tentative list for World Heritage sites.

KEY WORDS: cultural landscape, paddy-cum-fish cultivation

■ 1. Introduction

The Apatani cultural landscape is located in the Ziro Valley (N27°32 - 27°37; E93°48 - 93°52) of the Lower Subansiri District, Arunachal Pradesh, part of one of the three recognized biodiverse hotspots in India (Munilkumar et al. 2007). This landscape is inhabited by the Apatani tribe, considered one of the most advanced among the 26 tribal communities in Arunachal Pradesh (Singh et al. 2008). The Ziro valley is situated at a range of 1,564 meters to 2,900 meters above sea level. Due to its remoteness, it is still untouched by modernization such as accessible roads and supporting infrastructure. This valley is surrounded all around by pine-mantled hills. It is famous for the practice of paddy-cum-fish cultivation (Munilkumar et al., 2007). Irrespective of other tribes of

Arunachal Pradesh, who practice slash-and-burn agriculture, the Apatanis practice wet-rice cultivation in a unique manner.

As mentioned by Kaning in his book entitled *The Rising Culture of the Apatanis*, historically, the original place of the Apatanis was lipyo Lembyan, which may be termed as modern day Mongolia. Later, this group of people migrated to a place called Miido Lembyan (probably Tibet) and further migrated to Nyme Lembyan (probably the area of present Arunachal and China). Finally, they reached a place called Biirri, presently known as Ziro, where they settled permanently. There are several folktales related to the settlement in the Ziro valley. A well-known legend tells that the valley was once a swampy area and was inhabited by large amphibian reptiles known as *buru*. These reptiles used to disturb

the villagers and destroy their agricultural fields by making big holes that water would come out of. It is said that after the elimination of the reptiles, the swamps were drained, the Apatanis established the villages, and they made the entire valley arable (Kaning 2008).

Since 2014, the Apatani cultural landscape has been on India's Tentative list to be nominated, under criteria (iii) and (v), as a World Heritage Cultural Site. In its statement of Outstanding Universal Value, it has been declared that the site is an exceptional example that is linked to the cultural traditions of the Apatani tribe. They are regarded as the guardians of the landscape and are responsible for maintaining the landscape over generations. It is their unique, and highly evolved, settled agricultural practices that the Apatanis are known for. The significance of such immense ecological and cultural value, in an erstwhile high seismic zone, is a peerless specimen of nature and human symbiosis (UNESCO 2016). It has been more than 3 years, however, and the dossier for the Apatani cultural landscape has yet to be submitted. The nodal agency responsible for this site, at the state level, is the Department of Cultural Affairs; at the district level, the District Research Office is responsible. The Department of Cultural Affairs is based in Itanagar, the capital of Arunachal Pradesh, which is 111 km away.

Making a dossier is a technical task that takes expertise in drafting the text, describing, and defining the OUV of the site along with a good repository of images. The officials from Itanagar make visits to the site on a weekly or fortnightly basis. The need of the hour demands a unit from the department that is exclusively engaged in this task.

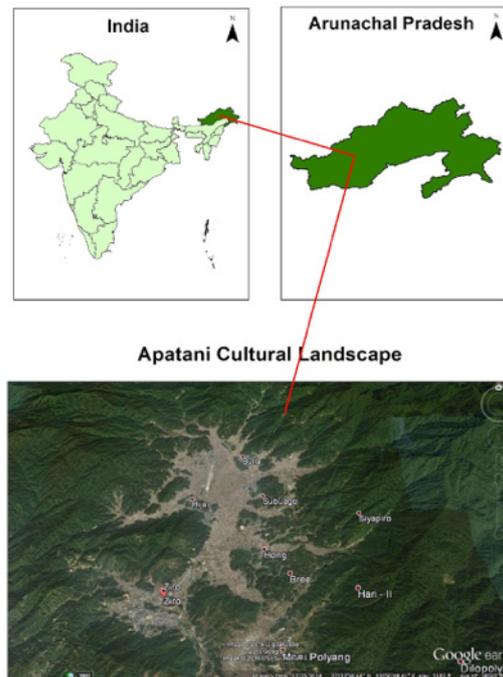


Figure 1. Location of Apatani Cultural Landscape; Source: Google Maps

■ 2. The Apatani cultural landscape: natural and cultural values

In the context of exploring the Apatani cultural landscape by the UNESCO Category 2 Centre-India, the author collected information from the Ziro Valley in July 2016, interviewed 40 local people, between the ages of 18 and 60 years old, and observed the practices of the Apatani people during monsoon season. There are seven main villages in the Ziro valley Bula (consisting of Kalung, Reru and Tajang villages), Hari, Hong, Michi-Bamin, Mudang Tage, Duta, and Hija. The total population of these villages



Figure 2. A view of Apatani Cultural Landscape © Tage Kanno

is approximately 30,000, out of which 90% belong to the Apatani tribe. The Apatani's traditional houses are built on wooden piles, mainly bamboo, and thatched with paddy-straw on the roof, which are locally available materials.

The findings show that the primary source of livelihood for the Apatanis is paddy-cum-fish and the plantation of bamboo and pine trees. Their cultivation is very labor-intensive. Fish is an important part of the Apatani diet and is consumed daily. During January and February, dykes are made along the permanent terraced fields; there is a provision of inlets and outlets for water irrigation, with bamboo screens to avoid the loss of fish. In each plot, small dams, locally called *Kiile*, are made for irrigation purposes and are located in different areas to manage irrigation water in their respective agriculture fields.

The flow of water, through human-made channels, is regulated by the locals so that no blockage occurs. Common carp (*Cyprinus carpio*), an omnivorous fish, is reared along with rice seedlings in the paddy field in the months of April and May. They feed on water plants and scavenge insects and worms found in the field. After being reared for 3 to 4 months, the fish are sold at the local market. Almost all aquatic animals, including snails, crabs, and frogs are eaten and nothing is allowed to go to waste. During this season, weeds and unwanted grass are removed from the fields. The agricultural fields are well demarcated with elevated boundaries where barley and finger millet are grown. They are used in making a local brew. After harvest, straw is burnt down, or left on the floor of the field to decay, which also helps in the prevention of the growth of weeds. Thus, the

fertility of the soil in the Apatani rice fields and gardens is always intact and results in the yielding of abundant harvests.

It was observed by the author that the artificial irrigation channels, built using the available water streams, made wet rice cultivation possible in Ziro. This is possible because of the efficient conservation of the forests surrounding the valley, which form the crucial watershed flowing down into the fields. Water supply is perennial, particularly, during the agricultural season (February to September). The Apatanis are known for their rational utilization of limited land that evolved based on experimentations. There are separate areas for human settlements, wet rice cultivation, dry cultivation, community burial grounds, pine and bamboo gardens, private plantations, and community forests. It is an example of highly successful human adaptations to the rigor and constraints of the upland regions.

The areas of gentle or steep slopes that are not suitable for crops are used to develop the bamboo and pine groves, from which the valuable trees are then used as building material and fuel. Thus, there is no wasteland in the Apatani valley; every inch of land is used for some purpose. Individual families maintain this plantation. Once the grove has been cleared, it is the duty of the respective family to plant new bamboo and pine saplings so the next generation, their children, can use them in the future. This is a practice carried out by the forefathers of the Apatanis. With such efforts, the biodiversity of the landscape has continued to remain intact over the decades.



Figure 3. Paddy field during monsoon period in Ziro Valley © Tage Kanno

■ 3. Customary management of the agricultural landscape

All of the villages in the Ziro valley are governed by a traditional village council, called *bulyañ*, which supervises, and has legal oversight of, individual's activities that can affect the community as a whole. They work efficiently by addressing the conscience of the people, rather than instilling fear of the law, and by promoting the prevention of unlawful activities, rather than through punitive actions.

The Apatanis believe in *Donyi Polo*, the ancient form of animistic religion, where the sun and moon are worshiped as gods. They continue to worship nature and are very conscious about environmental hazards, which occur when the environment is disrupted. It is due to their traditional customs and practices that the Apatanis are able to maintain their landscape in a sustainable way. In this era of rapid development, when modern society is struggling with finding strategies to mobilize communities to support sustainable development, the system followed in the Ziro valley has already set an example.

About 70% of the population of the Ziro valley depends on agriculture; whereas the rest of the population is involved in ecotourism, plantation of commercial crops, and timber. Their management of the land and its uses, for various purposes, are based on their age-old practices. As a part of the customary system, the houses are built on land higher than the paddy fields in the villages. The house sites have further advantages to enrich the paddy fields with human waste, animal

waste, and other forms of garbage washed down by rainwater. This type of rainwater drainage is called *supyu*, which adds manure to the nearby paddy fields. On the other hand, the villages are quite hygienic places to live and leave no place for stagnant water; hence, there are decreased chances of waterborne disease outbreaks. The irrigation channels also carry loads of loam and silt into the fields, by washing away decayed leaves and trees.

■ 4. Current state of conservation and challenges for the continuity of the landscape

The unique paddy-cum-fish agriculture has been practiced over generations and is able to withstand the adverse effects of development. Modernized techniques have not influenced their agricultural practice in pursuit of higher yield. There is no use of fertilizer, except for organic manure. The entire processes of the agricultural cycle are completed manually by each individual household. It is unlikely that hired labor is engaged to work on the agricultural fields.

There is a fraction of villagers, belonging to a younger generation, that are moving out of this area, in search of better education or employment, but the dedication and importance of their agricultural practices remain close to their hearts. During the harvest season, all of the family members, from youth to elderly, whether residing in Ziro or outside, get together to work in their fields. It is also observed that locals are growing commercial crops instead of laboring in their agricultural field. Though this trend has not overridden



Figure 4. Apatani woman practicing agriculture in Ziro Valley © Tolik Megu

their traditional agricultural practices, there is likelihood that there will be a shift from labor intensive agriculture to less labor intensive sources of livelihood. Also, in the process of nomination of their landscape as a World Heritage site, there is not much involvement from the locals.

■ 5. Recommendations

Traditional practices of harvesting forest resources of the tribal people, well-known for their sustainability, while quickly dwindling in other parts of the world, are still seen among the Apatanis. It is due to the continued existence of strong customary laws and spiritual beliefs that these practices remain alive today. Stringent regulations laid by official authorities have often failed to yield the expected results. However, the Apatani traditions have not only helped in the optimal harvesting of resources from the forest, but also have improved their effective conservation. This is regarded as an example of the sustainable management of natural resources.

Presently, the process of elaborating the nomination file is being handled by the state government under the Department of Cultural Affairs. Villagers are not taking a major part in the process of making their landscape a World Heritage site. Since it represents their traditional practices, the role of the Apatani local communities will need to be greater than it is presently. During the field visit in July 2015, the meeting between stakeholders and the author revealed that there is no clear understanding of the process for nomination. It is mostly being handled by the Department of Cultural Affairs, Government of Arunachal Pradesh. Talking to one of the officials revealed that it might take 5 to 10 years to come up with

the final nomination dossier for the Apatani cultural landscape. Currently, the UNESCO Category 2 Centre-India is not playing any role in this nomination.

The footfall of tourists is expected to escalate, once the property attains the designation of World Heritage. Hence, it is important that the appropriate measures are planned before the massive boom of tourism brings negative impacts to the site. The future of this region lies in the hands of the higher authorities – the Cultural Department, the Fisheries Department, the Agricultural Department, the Irrigation Department, and the Education Department. In order to keep the practice of paddy-cum-fish cultivation lucrative and profitable, different state departments should collate and plan strategies to ensure this practice. Initiatives taken will assist in decreasing the shift away from their traditional practices of paddy-cum-fish cultivation, leading to its viable and sustainable future. In order to retain the youthful population, better infrastructures, like colleges and employment opportunities, will be needed. At the village level, committees can be formed that will link these departments, and their policies, to the locals. Also, an exclusive committee for the nomination of the Apatani cultural landscape should be formed. It should be an inclusive committee of government officials, local stakeholders, researchers, experts in the field of World Heritage, and NGOs. They should hold meetings regularly and make the drafting of the dossier, for this landscape, their first priority. With all of these tiny efforts of conservation, the viability of the Apatani cultural landscape can be seen in the future. In India, there is no other place like this landscape; therefore, the importance of the Apatani cultural landscape should be preserved.

■ Literature Cited

Dollo, M., Samal, P.K., Sundriyal, R.C. and Kumar, K. 2009. Environmentally sustainable traditional natural resource management and conservation in Ziro Valley, Arunachal Himalaya, India. *Journal of American science*, 5(5): pp.41-52

Kaning, M. 2008. *The Rising Culture of the Apatanis*. Arunachal Pradesh: Himalayan Publisher

Munilkumar, S. and Nandeesh, M.C. 2007. Aquaculture practices in Northeast India: Current status and future directions. *Fish Physiology and Biochemistry*, 33(4): pp.399-412

Singh, A.K. and Varaprasad, K.S. 2008. Criteria for identification and assessment of agro-biodiversity heritage sites: evolving sustainable agriculture. *Curr Sci*, 94(9): pp.1131-1138

UNESCO 2016. Apatani Cultural Landscape <http://whc.unesco.org/en/tentativelists/5893/> [accessed 5 August 2016]