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THE APATANIS: AN INSIGHT INTO THE CULTURAL HERITAGE OF A UNIQUE AGRARIAN COMMUNITY OF ARUNACHAL PRADESH, NORTH-EAST INDIA

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Abstract : North-east India is the home for numerous indigenous people. The Apatani people, inhabiting the Ziro valley of Lower Subansiri district, Arunachal Pradesh, are one of the foremost tribes of this region. The Apatanis belong to the Tibeto-Mongoloid stock. Their folklores trace their descent from the legendary ancestor, Abotani. Unlike most of the other tribes in North-east India who practice shifting or slash-and-burn (*jhum*) cultivation, the Apatanis are settled agriculturists and practice permanent cultivation. Their sustainable agriculture is the source of an economy which is quite different from the surrounding populations. They practice environmentally sustainable, traditional sedentary agriculture in the form of the unique paddy-cum-fish cultivation (which is linked with animal husbandry), an example of a highly evolved indigenous farming system. The *Apatani* society is *patriarchal.* The participation of Apatani women in the paddy-fish cultivation and their socio-economic position has not been adequately explored. Gender inequality and violence against women, similar to the rest of the country, prevails among the Apatanis. This paper briefly investigates their language, beliefs and practices with the focus on the role of women in this traditional micro culture.

Key Words : Heritage, Tradition, Inequality, Ecology, Knowledge

Introduction

Heritage may be defined as a legacy inherited from our past that we pass on to the future generations to learn from, marvel at and enjoy. There exists interconnectedness among all the forms of heritage – tangible and intangible, cultural and natural (Robischon 2015). Cultural heritage not only refers to the so-called tangible heritage, but it also includes those which cannot be touched, and can only be experienced, existing transiently in the thoughts, words and actions of human beings. This intangible heritage of a community encompasses the stories people tell and the things they do, transmitting them across the generation by oral or gestural means, and also continuously recreating them in response to their history and environment, therefore, helping people to define who they are, and where they belong to. This living heritage is manifested by, but not limited to, the following overlapping domains: oral traditions, performing arts, beliefs and customs, traditional ecological knowledge and craftsmanship (Stefano et al. 2012). Since the carriers of this heritage are mortal, it dies with each person and is reborn with each new member of a community, resulting in its amazing diversity, vitality, but also in its inherent fragility (Singer 2006).

The growing danger of disappearance of intangible cultural heritage across the globe is a result of numerous factors that include mass migration, urbanization and environmental change. Our awareness of the significance of intangible cultural heritage has grown only recently, mostly due to the efforts of UNESCO and its *Convention for the Safeguarding of Intangible Cultural Heritage* (2003). The importance is not so much of the cultural manifestation itself, but rather of the wealth of knowledge and skills associated with it. Central to the effectiveness of policies and programmes for environmental conservation is an understanding of the inextricable link between cultural and biological diversity (Maffi 2005). Safeguarding intangible cultural heritage is a key factor in maintaining cultural diversity in the face of increasing globalization and cultural homogenization. It can also contribute to each of the three interdependent dimensions – economic, social and environmental – of sustainable development (Hawkes 2001).

North-east India, with distinctive geographical, historical, social, cultural and political attributes, is home to a multitude of ethnic groups. This includes145 small and large tribal communities of both the hills and the plains, constituting 12.5 percent of the tribal population of India and 25 percent of the population of North-East India (Irshad Ali and Das 2003).The Apatanis are a small but unique hill tribe inhabiting the Ziro valley (22° 34' N, 88° 24' E), Lower Subansiri, Arunachal Pradesh, located in the lower ranges of the Eastern Himalayas. They share similarities with other tribes of central Arunachal Pradesh who are collectively referred to as the Tani group. However, the language, beliefs and practices of the Apatanis are distinct from all the other Tani tribes. The Apatanis are *stout,* well-built, *short* to medium height, belonging to the Mongoloid stock (Goswami and Das 1990). Their language belongs to the Tani sub-group of the Tibeto-Burmese branch of the Sino-Tibetan language family, harbouring a number of features which are rare or absent in the other Tani languages (Post and Kanno 2013). The Apatanis, in sharp contrast to the other hill tribes of the North-East, practice sedentary agriculture that has been nurtured and perfected over the centuries by their traditional ecological knowledge (Rai 2005). Topographically secluded from the rest of the region, their distinctive eco-cultural landscape presents the paradigm of the harmonious coexistence of humans and nature. The Ziro valley (1,524-2,738 m), aptly called the 'rice bowl' of the Eastern Himalayas, consists of extensive terraced fields surrounded by thickly forested hills. The river Kiile, flowing from north to south, supports this rich agro-ecosystem. The Apatanis dwell in villages wedged between the rice fields and forest tracts. Their seven large original villages(*lemba*) are Hong, Hari, Biila (Reru, Tajang and Kalung), Dutta,Hija, Mudang-Tage and Michi-Bamin (Kani 2012). Recently, due to the rising population estimated at more than 60,000 (Census of India 2011), five satellite villages have also appeared, viz., Siiro, Lempya, Biirii, Nenchachagya and Siibe (Kani 2012). Many families have also settled in the towns of Hapoli (or Haopolyang) and Old Ziro located at the two ends of the valley (Fig. 1a-b).The endogamous Apatanis are segmented into 78 exogamous clans (*halu*). Larger clans are divided into sub-clans or *tulu* (Blackburn 2010).The Apatanis follow the animistic and shamanic Tani religion of Donyi-Polo (Sun-Moon) as the absolute female-male divinities (Blackburn 2010). The Apatani society is patriarchal, patrilocal and

patrilineal (Hazarika 2011); primogeniture is the fundamental rule of inheritance for the ancestral property. Monogamy is a rule and polygamy is rare (Kani 2012). They govern themselves effectively by means of their tribal council (*buliang*) constituted by the elder male members of the clan (Elwin 1988). Like most of the other tribes of India's North-east, the Apatani culture is now poised at the crossroads of tradition and modernity. This paper briefly explores this traditional micro-culture of North-east India with the focus on some of the key aspects of its intangible cultural heritage that functions as a linking factor for their environmental prudence and sustainable livelihood.

Methodology

The purpose of this study is to examine the intangible cultural heritage of the Apatanis by tracing their history and delineating their oral traditions, beliefs and customs and traditional ecological knowledge. Two field trips in the Ziro Valley (in May and October 2014) and a review of the secondary sources gave us the material for the basis of this paper. Specific primary methods included personal interviews, community discussions and general observations during the field works in the Ziro Valley (Hong, Hari, Hapoli and Old Ziro). The interviews were conducted with the members of the tribe, both young and old, to collect the perspectives of the cultural landscape. The interviews were documented with hand written notes that were later processed with analysis. During the interviews the local guide performed the role of the interpreter. The field trip also included a visit to the district museum and craft centre. A major challenge faced during this research work was that the Apatani people have no permanent religious structures, imagery, written literature or historical records. So the dependence on secondary source material was vital to this study.

Origin and History

North-east India is an amazing assortment of ethnic groups due to migrations throughout the long span of history. The indigenous Australoids were partially or fully absorbed by the waves of Mongoloids from the north and the east (Das 1970). The Apatani lore narrates their descent from Abotani ('father of humankind'), the legendary ancestor of all the Tani tribes (Blackburn 2012). The forbearers of the Tani group may have migrated across the Himalayas from Central Asia at the end of the Neolithic period (Kani 1993). The history of the human colonization of the secluded Ziro valley could date back to the arrival of the Apatanis. In the absence of any written record, the exact period and events are uncertain. The oral history of the Apatani people speaks of their origin in terms of cosmogony and genealogy, rather than geography (Blackburn 2012). It can trace back at least 20 generations after their legendary exodus. Their ritual chants describe their odyssey involving several generations from Wi (spirit) Supung (habitation), through Iipyo (ancient) Supung, Nyime (Tibet) Supung, Hiising Supung, Shango Supung and Mudo Supung (along the Tsangpo valley), to Siilo (Ziro) Supung (Blackburn 2004). Tibetan and Ahom sources indicate that the tribes of central Arunachal Pradesh inhabited the area from as early as the fifteenth century (Blackburn and Tarr 2008). The earliest reference to these tribes is in a geographical text probably dating back to twelfth-century. Thirteenth-century references are also mentioned in the later historical

works (Blackburn 2004). According to their oral tradition, the Apatanis settled down for sometime in Talley Valley before shifting their base to the Ziro valley. This area was a swampy wasteland inhabited by a mythical beast called *buru*, the last of which was killed before the swamp was drained (*Izzard 1951*). The subsequent transformation of the valley testifies to the hard work and human struggle against the natural odds.

British rule was established in North-East India in 1825. During the colonial period, the hill tribes of this region were drawn into armed conflicts throughout the nineteenth century. The first colonial contact with the isolated Apatanis was established in 1897 when British officials reached the Ziro valley, followed by six more similar brief visits during the 1920s (Blackburn 2003). Earlier, in 1914, the tribal-dominated hill areas of the North-East frontiers of British India were administratively separated from the Assam Province to form the North-East Frontier Tracts. The Lakhimpur Frontier Tract (with the Ziro valley) was expanded into the Balipara Frontier Tract in 1919. The Apatanis, who consider themselves (*tanii*) in opposition to their tribal neighbours (*misan*) — the Nyishis and Hill Miris — were hostile to the outsiders (*halyang*). In 1944 a temporary government outpost was setup in the valley with an anthropologist-administrator. A second permanent outpost was constructed in 1946 at Kure, a nearby hilltop, with the Assam Rifles garrisoned to protect it. This generated fear and resentment. In 1948 the Apatanis attacked Kure, which was followed by a swift and brutal retaliation; an incident officially unrecorded but remembered as the *Kure chambyo* ('the Raid on Kure') in the Apatani oral history (Blackburn 2003). This first and only incident of armed resistance to external authority signalled the end of the tribal autonomy with the mounting presence of the government apparatus. The Subansiri area (named after a tributary of the Brahmaputra) was carved out in 1946. The bazaar called Ziro (now Old Ziro), at the base of a hill, became its headquarters in 1952. The region was renamed Subansiri frontier division in 1954 and Subansiri district in 1965. The headquarters shifted to Hapoli in 1960 and the government renamed Hapoli as (New) Ziro.

Oral Tradition

North-east India is acknowledged for its tribal communities possessing rich oral genres (Verrier 1958, 1970). The predominant oral tradition of the Apatanis is called the *miji-migung*, a paired noun (Blackburn 2008).They also make no distinction between factual and fictive stories. The *miji* and *migung* differ only in texture, context and teller, but not always in content. Stories told in ordinary speech are *migung*, but when the same story (as an episode of an elaborate ritual text) is chanted in a special ritual speech (*nyibu agung*) they are *miji*. *Miji* are chanted during rituals for communicating with the world of spirits for prosperity and health, but *migung* are spoken outside these occasions without any intention to invoke spirits. *Migung* can be narrated by any male elder, but *miji* are chanted almost exclusively by the male shaman priest (*nyibu*). *Miji* is at the core of the Apatani oral tradition. Formal chanting of ritual texts (as *miji*) uses special vocabulary, allusions and metaphors to build a dense cluster of meanings and associations. There are three types of ritual texts: *wi barnii* invoke benevolent spirits (*tiigo*) during ceremonies and festivals for prosperity and

health; *wi benii* summon specific benevolent spirits to guard against illness or malevolent spirits (*cicing*) to placate it (and the Abotani legends are the basis for all of these healing chants); and *ayu* call upon benevolent spirits during festivals, other than the occasions of animal sacrifice. The funeral chant is the only ritual text performed by a woman. This oral tradition also includes tales, myths and histories which are informally narrated (as *migung*) by means of conversational prose. These stories are not told in sessions, but often as a part of everyday conversation and by mothers to children. Some of these tales resemble folktales. They are fabulous accounts of animal-husbands, man-eating monsters, magic trees and mistreated heroines with the focus always on the family drama (Blackburn 2008). The other stories resemble myths and histories explaining origins and describing happenings. These are heterogeneous but roughly arranged in a chronological order starting with the beginnings of the world, ancestral migration and settlement, followed by origin myths about crops, livestock and human society; then goes onto colonial contacts and trading adventures and ending with the Sun-Moon myth (Blackburn 2008).Origins are perhaps the most common subject of oral literature. Beginnings of the world, migration from homelands and descent from ancestors are among the Apatani origin stories. The Abotani myths describe the establishment of the religious beliefs and social practices of the Apatanis. The origin of material possessions is a less grand but equally popular topic and the Apatanis locate the source of most valuable things within the Abo Tani cycle of stories. *Oryza sativa*, the (Asian) rice (*pyapin*), their staple food, also used to make the rice-beer (*apong*) which is used in rituals, was given to the Apatanis by him in the migration story. The Apatanis, when they migrated and settled in the Ziro valley, must have brought with them the rice, a pan-Asian crop that was probably first domesticated in China (Higham and Lu, 1998). Interestingly, one valuable possession not linked to Abo Tani is *Bos frontalis*, the semi-domesticated bovine (*mithun*) that is indispensable in sacrificial rituals and confers social status. Therefore, the domestication of the *mithun*, a livestock unique to the Eastern Himalayas, was probably a much later local innovation after reaching this region. Field songs (*biisi*), ballads (*daminda*) and lullabies (*iingya myadu*) sung by young women, and riddles (*kansii nii*) and proverbs (*niting horming*) popular among elderly men, are not recognised as *miji-migung* (Blackburn 2008). Most indigenous people have oral tradition as well as customs and rituals as means of transmitting specific human elements of traditional knowledge. Oral tradition involves the transmission of cultural material through vocal utterance. The Apatani language is still alive on account of these diverse oral traditions and expressions.The chants, songs, proverbs, riddles, myths, legends, nursery rhymes not only play a key role in perpetuating this vibrant cultural heritage, but are also used to pass on their collective memory, socio-cultural values and traditional understanding of their environment.The linkage between their oral genres and their traditional values, practices and ecological wisdom is obvious. The *miji*, chanted by the priests during the major agrarian festivals as well as other rituals, and the *migung* and other genres, narrated by men and women in more informal settings, are cultural means of passing on their traditional beliefs, customs and knowledge, and therefore, these people who know these stories are the custodians of their rich cultural legacy.

Beliefs and Customs

North-east India is recognized for its myriad tribal communities as the sentinels of timeless beliefs and customs (Roy 1991). The traditional dress of the Apatanis is elaborate and colourful, yet simple in style. The women have tattoos from their forehead to tip of the nose. They also tattoo their chin with five vertical lines and a horizontal bar joins the five lines at the top, near the lower lip. Their most striking facial decoration is a pair of massive nose plugs (*yaping hullo*) on either side of the nose (Fig. 1e). They perforate their ears to wear hollow bamboo earrings. Above the ear holes, two to three smaller perforations (*rutting*) are made for wearing *rutting yarangs* made of flat brass rings (Kani 2012). The men decorate their face with a tattoo at the middle of their chin (Fig. 1f). They tie their hair in a knot just above the forehead (*piiding*) using a knitting needle-like brass rod (*dingko*) made of pieces of cane. They also perforate their ear lobes and wear big pieces of hollowed bamboo ear plug (*yaru hukho*). To an Apatani the world is full of *wi,* a generic term for spirit beings. There are *gyunyang wi* who causes harm to humans without warning, *yalu wuhi* who brings war and hostility and *tiigo wi* who bring life and prosperity (Kani 2012). They also venerate Abotani as the primal ancestral spirit. It is a belief that the chants, rituals and sacrifices propitiate the spirits, thus granting them boons throughout the year (Blackburn 2010). Taboos known as *anyodu* follow each of the festivals or rituals, with restrictions in the form of not consuming certain foods or not entering certain places. The animistic rites are conducted by male shaman priests (*nyibu*) (Fig. 1d) who communicate with the spirits through the ritual chants as *miji* (Blackburn 2008). According to the oral tradition, Kolyung Bumya Nyikang was the original priest (Kani 2012). The chief shaman is called *ura nyibu* or *lapang nyibu,* who is assisted by *ago nyibu* or *liipa*; all wear the traditional *jilan.* These priests are vital links between the material and spiritual worlds and occupy the core of social life as the highest religious authority of the village (Kani 2012). All the rituals are performed in sacred structures present only in the *lemba* villages, which are closely-knit and congested and each has three ritual structures as the focal point of social life, viz., the *babo* (an elaborately structured wooden pole), *lapang* (a wooden platform) and *nago* (a bamboo hut) (Fig. 1b). These are closely located and are reconstructed every fourth year during the Myoko festival. Festivities are also sacred to every Apatani and are crucial to their social life. In March-April, the tribe celebrates Myoko, the feast of kinship and thanksgiving, cyclically hosted by one of three groups of villages. In July, at Hapoli, the tribe celebrates its main agricultural festival known as Dree. For five days after the festival no one is allowed to work in the fields or enter the plantations and forests. Another major festival, Murung, celebrated in January, is a private, voluntary fertility rite whose centrepiece is the chanting of the most elaborate ritual text called Subu Heniin on the *lapang* (Blackburn 2010). Offerings of food, wine, and sacrifice of birds and animals, including large ones such as pigs, *mithuns*, take place during the festivals. *Mithuns* are killed at major festivals, and their meat is distributed according to local practices of exchange, after which their skulls are displayed as trophies. Besides these major festivals, several rituals are also performed by the individuals. In case of a natural death, *tazer hulii* is performed wherein a chicken is sacrificed. In case of an

unnatural death, *talii gontii* is performed during which the priests and family members use *Cyclosorus glandulosus*, a common fern (*millo tarih),* as a protective talisman. It is also used in rituals associated with ceremonial hunting of the tiger (*pattii roppi*) or the leopard (*hogya roppi*). *Angiopteris evecta,* a tree fern (*Chanyu*), is used for performing rituals during extreme conditions such as outbreak of epidemics. Each house, with thatched roof, bamboo floor and walls and raised hardwood pillars, has a protective altar (*tamu)* at the entrance to prevent the entry of the powerful spirits called *uhis* (Kani 2004). The interior of the traditional Apatani house is divided into front and rear, each with a hearth and each with gender and ritual associations. The front hearth (*ago*) is where women cook and aggregate. The rear hearth (*ura*) (Fig. 1c) is where men sit, talk and where most household rituals are performed (Blackburn 2010). Many rites are related to their agriculture by invoking the spirits with chants and sacrificial offerings. *Danyi* is performed mainly for the wellbeing of human beings, crops and livestock. *Myokung* is performed for the fertility of soil in the month of March after seeds are sown in the nursery. *Tamu* is performed when crops are transplanted from nurseries to field in the month of April-May to prevent disease. *Yapung* is done in September to ensure sufficient rain to enhance good growth of the paddy. Several local plants are also used during the major festivals as well as other rituals to make the sacrificial altar(*agyang*) where ritual chanting is performed (Bamin and Gajurel, 2015). The most widely used plant for the rituals is *Phyllostachys bambusoides*, the runner bamboo (*bije*) grown as monocultures in groves, also called *bije*, located adjacent to the villages. Other species of bamboos like *Dendrocalamus hamiltonii,* the tufted *bamboo* (*yayii*) and canes such as *Calamus acanthospathus,* the *rattan palm*(*tisser*) are also used. A local bamboo, *Pleioblastus simonii (tapyu),* is used to make a flute that is played at funeral of a well-known person or priest or elder. *Saccharum arundinaceum*, the hardy sugarcane (*peji-pelo*), is an important plant that is used for all the agriculture related festivals and rituals to ward off harmful pests from the crops. For the Apatani people, rituals, taboos, social practices and festive events involve an incredible variety of forms and are closely linked to the community's perception of its own history and memory as well as their oral tradition as well as traditional knowledge. As a community, the Apatanis use and conserve selected plant species which are closely associated with their religious beliefs and social practices. They have customary laws (Singh 1993) administered by the *buliang* to enforce their social practices whose underlying belief system is based on respect, reciprocity and interconnectedness with the natural environment. Taboos, self-enforced through the idea that the violator's action carries its own penalty (Colding and Folk 2001), also play a key role in their local resource management and biological conservation.

Traditional Ecological Knowledge

North-east India harbours indigenous communities who are still engaged in either hunting-gathering or subsistence agriculture whose farming practices range from shifting to sedentary cultivation (Majumder et al.2011). Unlike most of the other tribes in North-East India who practice the notorious shifting or slash-and-burn (*jhum*) cultivation (Ninan 1992), the

Apatanis are settled agriculturists(Fig. 2a-f). The need for natural resource conservation is an integral part of the socio-cultural belief systems in indigenous societies. Based on their traditional ecological knowledge, evolved from centuries of collective experience, they have built up sustainable methods of natural resource use and management. The Apatanis are renowned for their ingenious utilization of their limited territorial space, with the functional integration of the areas allocated for human settlement, farming, burial grounds, plantations and forests. Their highly-evolved eco-cultural landscape consists of productive community-managed forests and complex yet productive agro-ecosystems (Rai 2007).The forests of the surrounding hills are rich in flora and fauna. Entrenched spiritual values and strong customary laws (including social taboos) of the Apatanis have fortified their traditional practices for sustainable harvesting, optimal management and effective conservation of their local forest resources. Natural woodlands are supplemented by private groves of pine and bamboo (*bije*) (Fig. 2d) which function as local resource base and also prevent soil erosion (Rechlin and Varuni 2006). The Apatani men practice fishing and hunting. The Apatani women collect firewood, vegetables and fruits from the forest. However, the most distinguished traditional practice of the Apatanis is their environmentally-sustainable sedentary agriculture in the form of the unique paddy-cum-fish cultivation (which is also linked with animal husbandry and forestry), an example of a highly evolved indigenous farming system (Rai 2005, Nimachow et al. 2010). According to their oral tradition, the practice of wet rice cultivation in the terraces began with Abo Tani (Blackburn 2010). In spite of limited water resources, the entire expanse of the terraced farming areas in the valley is well watered by a network of meticulously engineered irrigation channels (Fig. 2a-c). Their community-based *jebi-aji* agriculture is an amalgamation of the cultivation of local rice cultivars (*amo, mypia* and *pyapee*) and the introduced *Cyprinus carpio*, the common carp (*aji ngiyi*) in the plots, together with *Eleusine coracana*, the finger millet (*sarse*), on the bunds separating them. In this system a small pit is dug in each terrace where paddy is grown. Fingerlings are put in the water in these pits. In the monsoons, when the paddy field is submerged, the fishes come out of the pits and move in the flooded field. Again, when there is a scarcity of water, the fishes go back to the pits. In this way the fishes get better nutrition from the manure in the paddy fields. Thus both rice and fish are produced together by proper management of the rain water. Fertility of the soil is also maintained by organic means. The paddy fields receive the nutrient wash from the surrounding hill slopes. The house and granary sites are located on higher grounds so that decayed and decomposed matter can be drained out to the field. The Apatanis recycle their crop residues and organic wastes of the villages. Throughout winter and spring, from the end of harvest until the time for transplanting men and women carry baskets of rice chaff, pig and chicken droppings, and kitchen wastes to spread them in the fields (Rai 2005). The agricultural operation is carried out by human labour using traditional tools and implements, without any animal traction (Fig. 2e-f).Their collective labour involves men and women as members of voluntary farming groups with specific responsibilities that have also evolved over the years, and these activities are coordinated by the *buliang*. With highly developed wet rice cultivation,

as much as 40 percent of the rice and 80 percent of the fish produced is traded with the neighbouring Nishis and the Hill Miris(Nimachow et al., 2010). Thus the Apatani agro ecosystem is a good example of economic self-sufficiency of a traditional agricultural society that practices ecologically and economically sound agriculture. Many ecologically valued species are culturally protected (Bamin and Gajurel, 2015). The wetlands, plantations and forests next to the paddy fields of the Apatanis are the habitats of sacred species with immense keystone value in the ecosystem function, including a bamboo (*Phyllostachys bambusoides),* the banyan (*Ficus benghalensis*), pines (*Pinus* spp.), chinkapins (*Castanopsis* spp.) and a fish (*Schizothoraxmolesworthii*). These are all examples of species taboos (Colding and Folk 2001). Small patches of virgin pine forests (*ranthii*) situated near the villages are protected as sacred groves and only used for ritual purpose. This is an example of a habitat taboo (Colding and Folk 2001). It was noticed that the two plant families, Poaceae (including the bamboos) and Arecaceae (including the canes), have shaped the material culture of the Apatani people. They are also used for construction, fencing, making irrigation pipes, indigenous farm implements, traditional hunting gears, baskets, mats and household products. Another remarkable feature of the Apatani indigenous knowledge is their indigenous system of medicine based on local medicinal herbs which are collected from the local forests (Kala 2005). Traditional knowledge system, which is entrenched in the customary way of life of the less technologically advanced, often rural or indigenous, communities who directly depend on their local natural resources, is profoundly reflected in their language, culture, society and religion.The traditional knowledge of the Apatanis, shaped by their natural environment, has a strong influence on their culture, practices and skills, as well as the lore and beliefs that underlie them.

Conclusion

No insight into the environment can be complete without understanding the cultural values of indigenous communities who are inseparable from their natural surroundings (Gadgil et al. 1993). Their traditional respect and reverence for the local eco systems is founded on their time-honoured belief that respecting the inherent resilience of the environment is crucial for ensuring its sustainability. The Apatani are a self-reliant community of the Eastern Himalayas whose prolonged intimacy with nature has resulted in the development of indigenous understanding of their environment that is reflected in their cultural heritage. This unique agrarian community practice integrated agriculture-pisciculture, one of the most sophisticated in the world, supplemented with animal husbandry and social forestry. They depend on local natural resources but at the same time venerate the natural world. This respect and reciprocity is copiously manifested in their folk lore, traditional values and social practices. Their indigenous worldview, myths, legends, rituals and festivals are inseparable and are a celebration of nature. Such a holistic system is designed for nature and culture to mutually support each other. Their oral literature, spiritual values, social customs and traditional wisdom are crucial for maintaining the amazingly sustainable system that exists today. Their established system of approaching all social activities through voluntary groups administered by the tribal council ensures the participation of each member

of the community, fostering a strong sense of shared ownership. At a time when the policy-makers across the globe are struggling to develop effective means of mobilising local communities in environmental conservation and sustainable development, the inclusive social organization of the Apatanis and their rich cultural heritage has immense significance for the rest of humanity. Their unique eco-cultural landscape functions as a linking factor for protecting the fragile mountain environment and its rich biodiversity alongside providing a means for a sustainable livelihood.

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Fig.1:

Fig.2:

Figure Legends:

Fig.1 : The Apatanis of Ziro valley, Arunachal Pradesh. **(*a*)** The northern end of the Ziro valley, near Old Ziro. **(*b*)** Apatani houses and ceremonial structures (*babo* and *lapang*) in Hong village. **(*c*)** The rear hearth (*ura*) of an Apatani dwelling. **(*d*)** An Apatani shaman (*nyibu*) preparing for a ritual. **(*e*)** An Apatani woman displaying facial tattoos and nose plugs (*yaping hullo*). **(*f*)** An Apatani man with facial tattoos.

Fig. 2 : The agro-ecosystem of the Apatani people.(***a***) Terraced paddy fields for rice, fish and millet cultivation.(***b***) Submerged paddy field in the transplantation season during the monsoon. (***c***) Ripe paddy field in the harvesting season after the monsoon. (***d***) A bamboo grove near Hong village. (***e***) A young Apatani woman planting rice seedlings. (***f***) An elderly Apatani woman reaping the rice crop.

NB : All images are original photographs taken by KNC during May and October, 2014.

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