

# **Indigenous Knowledge for Sustainable Livelihoods and Resources Governance in MMSEA Region**

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## **Does Indigenous Knowledge Matter?**

When I graduated from University and decided to come to Yunnan in 1986, my parents and even university professors thought of the Yunnan, the remote mountain region as a mystery dungeon. This erroneous idea permeated literature, as the famous Chinese novel "The Three Kingdom"(220-280AC), described the wildness, jungle, python, malaria, and primitive people. Many dynasties, the criminals and ousted officials had been deported to mountain frontiers of Yunnan as punishment. That is why until today many Chinese in the remote mountain areas of Yunnan said that they are originally from Nanjing of Jiangsu Province. After half-century man physically conquered the highest peak, Everest, in 1953, our knowledge about mountain is still far from perfect understanding about relationship between people and nature in the our mountain region. How we are going to celebrate the International Year of Mountain (2002)? its fascinating? Its exotic? its complexity? or its mystery as what a beautiful part of our planet?

The MMSEA including uplands of Yunnan of Southwest China, Myanmar, Thailand, Laos, Vietnam and part of Cambodia shares the most common cultural and biophysical features if ignored political boundaries. Common characteristics include its history, settlement patterns, land use, biodiversity and ecological landscapes, economy and livelihood activities. The distinctive regional identity also includes transboundary indigenous peoples with common problems, challenges and opportunities. Thanks to our indigenous people, our brothers and sisters, who live in the mountain habitats for generations, they demonstrated their intimate relationship and "secrets" knowledge between the human and their ambient mountain environment, plants, wildlife, vegetation and ecosystems, the knowledge-practice-belief complexity, the system view about human as part of ecosystem. The Mountain Festivals organized by indigenous communities during this III MMSEA conference in Lijiang has enlightened our scientific society together with our brothers and sisters from mountain region, to think, to learn, to discover, to act and to better govern our resources for sustainable livelihoods in the changing environment and globalization. Despite the dynamics indigenous people, the indigenous knowledge systems (cultural beliefs, linguistic knowledge, practices and customary institutions) are rapidly fading away (Cox, 1999, Sutherland, 2003). Besides the threats to biodiversity, the human languages and knowledge linked to maintain and sustainably use of biodiversity have also become extinct. The MMSEA festival manifests that there is a correlation between biological and cultural diversity. The mountain region in the world with most variability of landscapes, animal and plant species are

geographically those where peoples have shaped and conserved the environment due to their great collective accomplishment and applying their cultural principles, knowledge and practices.

Indigenous knowledge refers to how indigenous people use their knowledge for their relationship with local environment. Indigenous knowledge is a pluralistic approach to conservation and management of resources in the mountain region. It is a subjective understanding and social construction process, which consists of cosmos (world views), corpus, praxis and institution to guide human action by adaptive process. Indigenous knowledge is composite but holistic, which is from different sources, their parents, indigenous experts, empirical trials and even scientific information. Both indigenous and scientific knowledge is always imperfect; therefore using one does not necessarily reject another. It needs mutual respect and involves an iterative learning process. Indigenous knowledge system is a cognitive diversity in the scientific learning process. Just as biodiversity is invaluable for human being, so, too, is cognitive diversity (Harding, 1998). What we learned from indigenous knowledge and indigenous people is to shift from reductionism to a system view of world, to include ourselves, as human being, in the ecosystem, from expert-based to participatory based ecosystem management.

The great majority of the world's population, including most of both lowland and upland people in Southeast Asia and China, depends on mountain ecosystems for environmental goods and services. MMSEA region as water tower services as vital role for lowland people, such as rice bowls in low Mekong areas of Vietnam, Cambodia, Laos for rice cultivation, fishing, irrigation and transportation. Mountains are however still primarily seen as exploitable sources of environmental goods and services that benefit the global community rather than as sources of livelihoods for local mountain people. Mountain people are often not adequately integrated in decision-making processes. Political discourse on the management of upland ecosystems has often been dominated by either the government or lowland peoples, who may perceive the management practices of mountain peoples as harmful to mountain environments.

As we enter new millennium and information time, however, the globalization and digital divide have polarized the old, rich Affluence "global people" in the North and young and poor Poverty "local people" in the South, as well as indigenous people with traditional knowledge in the mountain periphery or rural and middle class with high technological knowledge in urban in the developing countries (Kates, et al, 2001). The commercialization and market economy has divided old and young generations of indigenous communities due to off-farm and migration opportunities in the cities. The rapid divorcement of indigenous people from dependence upon their immediate environment for the livelihoods has been set in motion. One of the first aspects of indigenous culture to fall before the onslaught of outside civilization is knowledge, its use of biological resources for medicine, food and shelters, land use practices and customary institutions for governing access to natural resources.

Cross and reading landscape of MMSEA region, we often find that land use practices are a product of a long history of creative adaptation to local environments and ecological

conditions such as climate, terrain, soil, water, air, plants, and animals. These adaptive practices have given rise to the knowledge that enables these people to live well and with confidence in diverse and sometimes harsh environments, as well as develop their livelihoods, such as fishing, hunting and gathering, shifting cultivation, nomadic pastoralism and terraced agriculture, as well as trade of natural and cultural products through social networks. In the contrast, our decision-makers and “educated” land use planners pay the cost for their learning process, mono-culture plantation and large-scale logging operation in the mountain region, which often caused landslides, soil and water erosion as well as biodiversity loss. This phenomenon has been defined as ‘state simplifications’ (Scott, 1998). The key point of this concept is that states, in dealing with diverse natural and social environments, attempt to make these environments comprehensible by creating ‘thin simplifications’. These are generalizations that ignore specific local circumstances, local knowledge and indigenous practices and therefore frequently lead to problems such as a lack of acceptance for new land use policies and detrimental environmental and social impacts of implemented land use policies on local livelihood and cultural identity. The interests of the state and farmers regarding land are often different. The knowledge system of the resource managers and indigenous people regarding relationship between human and nature are also different. The mismatch of the government’s land use policies and the farmers’ practices, the clash of different knowledge system are often the source of conflicts in rural communities in the mountain region.

### **Does Indigenous Knowledge Contribute to Sustainable Livelihoods?**

Knowledge is a process for transforming natural landscapes into cultural landscapes (e.g., sacred mountains and lakes), ecological functions and livelihood support systems in the particularly situated socio-economic and biophysical environments. Sustainable livelihood analysis does not pay enough attention to the local placed indigenous knowledge (Scoones, 1998).

In traditional society, knowledgeable persons or indigenous experts such as the Hani (*Akha*) traditional village chief( *zoema*)are well respected by the society, as well as actively participate in the local informal education and decision-making. Moreover, increasing benefits from access to and sustainable use of biological resources, especially non-timber forest products (NTFPs) and local agricultural products, have created a system of **knowledge economy**.

The sustainable livelihood of forest or biodiversity dependent community can be measured as the following:

$$SL=B \times IK \times EP$$

Sustainable livelihoods = Biodiversity (natural capital) x Indigenous Knowledge (social capital) x enabling environment (both policies and marketing forces).

Resources are defined as belonging to two broad categories: **natural resources and cultural resources**. The former refers to forest, rangeland, rivers, lakes and other kinds of natural endowment that human societies’ livelihoods will not sustain without; the latter

refers to traditional livelihood practices, place-and-time specific knowledge about their home land, cultural beliefs and values, such as the sacred lakes and mountains in Buddhist belief, perceptions of factors responsible for good harvest and good rain fall or natural disaster. Often than not, the cultural resources are viewed in public eyes as merely those commercially marketable, that have easy market values for tourism development, such as singing, dancing, costumes and exotic customs. Those resources have been governed by the bundle of **property right regimes**: Some resources are owned by individuals as private property; some are held by a particular group of people (e.g., Tibetan Lama), some are held by communities as common or collective property, some are owned by state as public property, and some are open-access resources. The total of resources together with a range of property right regimes are transformed into **natural assets**, and further regulated by **social capitals** in the form of customary or voluntary organizations or institutions that bound people with shared identity, trust cooperation and rules of when, where, how much to harvest or other dos and don'ts, and varied forms of village sanctions to those fail to follow.

**Resource access** is essential for sustainable livelihood and poverty reduction, such as access to land, access to water and forest, even access to marketing and social networking. Resource access is composed of direct physical access, market access, labor access, access to capital, access to social relations and access to knowledge (Ribot and Peluso, in press). These, in turn, are shaped by and help shape legal and extra-legal mechanisms and processes that are part and parcel of access and access control.

The lessons learned from MMSEA region is that the regions of unfavorable policy environment (such as resource sanction, block access to biodiversity, suppressed or displaced cultural communities) usually often experience the poverty and sometimes also degraded environment. In the other hand, the loss of biodiversity can lead to the loss of cultural diversity, and further deteriorated local livelihoods.

### **Can Indigenous Knowledge link to Good Governance?**

Knowledge is power to orient human action, is therefore social relations within community, social networks between lowland and upland, as well as political relations between periphery and center, even between the West and the East, between the North and the South. Knowledge can be represented as political voices in the local and high-level decision-making. Knowledge is governance, which involves actor, accountability and rights.

What we learned about good governance from indigenous communities is that knowledgeable people combined community consultation for consensus and decision-making. The good governance in the mountain region needs an innovative way of thinking, an accountable knowledge system and governance structure, which should operate within different domains, the state, the academy, the private sector and civil society. These domains are not mutually exclusive. In fact, the greatest challenge for governance is to find out balanced knowledge system, power structure, and participatory processes.

Indigenous knowledge particularly the customary institutions play important roles in regulating access to land and natural resources through the social and cultural sanctions. For example, the Hani are basically animistic in their beliefs and place a strong emphasis on worshipping their ancestors as evidenced in their strictly protected cemetery forests. Familiar objects such as trees and animals are often invested with supernatural powers. The Hani believe that disturbances or violence inflicted on the supernatural, including ancestral spirits, will cause illnesses. The village chief (*zoema*), or his shaman (*biemo* and *nipa*), performs the rituals required for the traditional festivals and other activities (Xu et al, 2001). The integrated approach for secured access and rights, revival of indigenous practices, empowerment of local communities, and decentralization of resource governance is the way out for good governance in the indigenous communities. Indigenous people form a “non-dominant” sector of society, they are particularly vulnerable to poor governance. Centralized planning at high level, poor governance and bad development practices at local level have often destroyed the natural and cultural resources on which indigenous peoples have traditionally depended for their livelihoods. The poor governance and poverty in the indigenous communities are often due to lack of citizenship (in case of Thai tribal people), lack of secure tenure for land and property rights for traditional knowledge, forced resettlement, outside extraction of timber, minerals, large-scale commercial plantation, unfair trade arrangement, etc. There is emerging trend that community-based natural resource management (CBNRM) or cultural-based natural resource management, which allows local people take their responsibility, their knowledge, and process for conversation and the sustainable use of natural resources, finally, building competence of “civil scientist” at the village level with accountable knowledge system for indigenous and scientific society (Getz, et al. 1999).

The UN's Draft Declaration on the Rights of Indigenous Peoples provides strong recognition of Indigenous Peoples' rights and could be a useful reference when considering how questions of governance relate to Indigenous Peoples. Article 26 states:

Indigenous Peoples have the right to own, develop, control and use the lands and territories, including the total environment of their land, air waters, coastal seas, sea-ice, flora and fauna and other resources which they have traditionally owned or otherwise occupied or used. This includes the right to the full recognition of the laws, traditions and customs, land tenure systems and institutions for the development and management of resources, and the right to effective measures by States to prevent any interference with, alienation or encroachment on these rights.

The 1992 Convention on Biological Diversity is also key international protocols for not only protection and sharing of biological resources, but also addressing issues of indigenous knowledge. It calls for to respect, to promote wide application of indigenous knowledge, as well as to encourage equitable sharing of benefits from indigenous knowledge. There are emerging indigenous movement both in the developed and developing countries for advocacy of indigenous knowledge and traditional resource rights (Pocey and Dutfield, 1996).

## **The Way Ahead**

Currently, natural resource management in the mountain regions of MMSEA is dominated by 'lowland' patterns of thinking, which serve to channel the benefits derived from mountain resources to lowland economic and political centers. The negative impacts of the marginalization of upland people challenge government agencies to devise policies and institutions that

- 1) are more supportive of indigenous knowledge and innovations, cultural identity and local livelihoods,
- 2) secure access to natural and cultural resources for build-up both accountable knowledge system and good governance structure at local level;
- 3) work as partnership with different stakeholders including public and civil society, government and private sectors for co-management of resources in the mountain region;
- 4) facilitate transferable rights and benefit shared rights of knowledge, resources, products, and eco-and-ethic as well as patent-related trade in the mountain region.

Firstly, the impacts of indigenous practices and traditional land use on biodiversity need to be assessed from a mountain perspective rather than through the simplifications of lowlanders, taking into account the dynamic and holistic relationship between indigenous communities and ecosystems. State simplifications, for instance, the view that shifting agriculture is necessarily unsustainable and destructive, need to be replaced by careful assessments that take into account the diversity of local environmental conditions, traditional land ownership and land use practices, including indigenous understandings of these factors as well as contribution to plant domestication and agricultural biodiversity in the traditional agroecosystems. This needs both scientists and indigenous experts or "civil scientists" to work together for further generations of accountable knowledge system for local communities and mainstream society.

Secondly, access to land and natural resources, on which local people's knowledge and customs are based, needs to be ensured; equally important for access to knowledge and technology transfer for mountain indigenous people, as well as participation in the political discussion and decision-making. Traditional resource rights include not only collective intellectual property rights, but also resource ownership, fair arrangements for allocating management, harvesting, marketing and trade.

Thirdly, the decentralization of local policy formulation, planning and action processes, which eventually increase local autonomy, will require capacity building and empowerment of local communities through village democratic processes such as election. Capacity building among community members, NGOs and government staff should ensure that adequate skills are acquired at the appropriate level. New technologies and resource management processes require effective training, impact assessment, transparent decision-making and follow-up support. Government agencies may have to first develop these skills in order to provide appropriate support for local communities. Such support should aim not simply to transfer modern technologies, but to support local processes of innovation in which indigenous knowledge can play a role alongside external scientific knowledge in devising solutions to contemporary problems

and opportunities in the mountain region.

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