

The Potential for a Transboundary Protected Area in the Kanchanjungha Region of the Eastern Himalayas

Krishna Prasad Oli

Abstract

The present international borders are political boundaries. Ecosystems existed long before the political boundaries. Political boundaries and landscapes do not limit species and communities of plants and animals. Hence, many countries in the Asian region share common biological and natural resources across their borders. The rationale for Transboundary protected area are very important and consists of maintaining ecology and improving its management, economic opportunity, bringing isolated people together and provide the basis for peace and collaboration reducing hostilities among people and nations.

Nepal has long felt the need for conservation of Trans-border biological resources. Most of the PA'S in Nepal are either adjacent to the international border with China or India. For example, Four contiguous protected areas around Mt. Everest – Qomolangma Nature Preserve (QNP) in Tibetan Autonomous Region (TAR), China and Sagarmatha (SNP), Makalu-Barun (MBLP), and Langtang National Parks (LNP) in Nepal - conserve a large, continuous ecosystem and rich cultural and natural heritages on both sides of the Himalayas. Similarly Kanchanjungha Conservation area (KCA) is situated along the Transboundary border between Nepal the TAR and Kanchanjungha Nature Reserve (KNP) in Sikkim State of India. The area jointly covers large tracts of the Himalayas to maintain species, communities, and ecological processes for the services of mankind. The isolated communities in these Transboundary parks and reserves are home to large number of people who share a common cultural heritage. However, due to remote mountainous landscape and high-altitude environments, these people are some of the poorest in the world. Reconciling the needs of these local communities while conserving ecosystems has become a major challenge in these PA'S.

The Kanchanjungha Mountain Ecosystem contains one of the richest biological diversities in the Eastern Himalayas. Realizing the need to protect this unique ecosystem, bordering nations (viz. India and Nepal) have declared Kanchanjungha Nature reserve and KCA respectively as protected areas in the Kanchanjungha region.

Poor socio-economic conditions and isolated geographic location have impoverished the local communities in the Kanchanjungha region. Unaware of the potential economic values of surrounding bio-diversity, the economic necessities have compelled the local communities to engage in illegal hunting and trade of valuable plants and animal species. The problems are exacerbated due to lack of a viable livelihood for the local people and surveillance from the concerned government authorities.

In recent years, Transboundary conservation is receiving greater attention due to nations recognising their environment security. Transboundary protected area is important in this region

due to many areas of high biodiversity located along the border where illegal harvest is also acute in such areas. In the Himalayan region recent efforts have been initiated for the conservation of unique biodiversity.

Transboundary Conservation efforts have been initiated in the region from 1992 and from 1994 And from 1995 continuous positive efforts have been made in this direction.

The paper brings a brief background of the Transboundary region of Kanchanjungha and discusses in detail critical conservation and social issues in an outstanding part of the planet. There are many social, political and reality matters that are important for the establishment of TBPA in the region. The paper focuses on the main Transboundary issues and problems and potential solutions pertaining to each issue. It also makes some suggestions for future development of Kanchanjungha as Transboundary Protected area.

.'O' Goddess! Wife of lord Vishnu, Living deep in the Ocean, the Mountains are your breasts Pardon me as I tread upon you with my feet''.

—*Arayanna Puran*

A. 1. Introduction

International borders between countries are political, not ecological, boundaries. Because of this, key ecological systems and components occurring in two or more nations are often subject to a range of opposing management and land-use practices.¹ To manage such resources, cooperation is needed between different groups, institutions, and the communities living there. In South Asia, the most common way of approaching biodiversity conservation to date has been through *in situ* conservation in national park systems. Ecosystems crossing national boundaries in South Asia face a variety of threats, including illicit harvest of and trade in wildlife and species losses. For this reason, there is a growing realization that creating networks of protected areas can serve the well being of both humans and wildlife. An interconnected network of natural conservation areas that supports species, maintains natural ecological processes, and protects landscapes where people work has been suggested.² The network, functioning as an integrated Trans-boundary protected area (TBPA) would provide a framework for the growth of tourism and ecosystem functions across the multiple jurisdictions.³

This paper briefly highlights the biological resources of Kanchanjungha region of eastern Himalayas a potential site for a TBPA, reviews some Transboundary issues facing the region, and discusses on the efforts and need to create a TBPA. It also brings forth the historical linkages of the area as well as the challenges pertaining to the development of a TBPA. The paper also highlights the livelihoods of the people living within the region, focusing on their sustainable use of natural resources, and makes some suggestions for conservation of the Kanchanjungha area.

2. Biological and Cultural Diversity in the Eastern Himalayas

The Kanchanjungha region contains one of the world's richest ecosystems in terms of biodiversity. It encompasses the northeastern part of Nepal, the western part of the Indian State of Sikkim, and the southeastern part of the Tibet Autonomous Region (TAR) in China. (**Map 1**).

The altitude ranges from over 1,000 m to 8,585 m. The total area is estimated to be over 2,000 sq. km in Nepal and 1,784 sq. km in India. After the creation of a nature reserve in Sikkim, and with the addition of some forthcoming areas, it is expected that the TBPA will exceed 5,000 sq. km in area.⁴ Areas on the Chinese side have not been identified for inclusion in the TBPA, and there are no plans to assign any special status to the Kanchanjungha area in Tibet because its remoteness and inaccessibility naturally protect it.⁵

Forest, shrubland, grassland, rock and ice, and lakes are the dominant landforms. Only an estimated 1.6% of the land is under intensive agriculture. Extreme altitudinal and climatic variations are characteristic features of the area. Due to steepness and poor gradients, the soil is also poor. The vegetation varies from humid tropics to high cold desert. The area is physically more stable, and many primitive and relict species are found in the area.

The area is globally significant in terms of biodiversity.⁶ The flora of eastern Nepal includes 3,500 species of higher plants, 400 pteridophytes, and 1,000 bryophytes. Due to high rainfall and humidity, the Kanchanjungha area is floristically rich, exhibiting an enormous diversity in plant life with at least 2,500 species of flowering plants.⁷ At one location over 24 species of rhododendron have been reported.⁸ Snow leopard, gray wolf, black bear, and a wide range of endemic and migratory avi-fauna are also found in the area. Tibetan Buddhism, Hinduism, Animism, and traditional religious faiths are the dominant aspects of culture within the area. All the faiths consider the mountain to be very important. Ancient Aryan culture believes in the worship of nature, and mountains are considered important and fragile, like the breast of a mother, as can be observed from the stanza of *Arrayanna Puran*⁹ quoted above.

The Kanchanjungha Himalayas links TAR and Sikkim. Though this natural barrier of the highest mountains on Earth may seem formidable, its passes, rivers, and skies are corridors through which people have traded, cultures have mingled, and plants and animals have migrated for thousands of years. It is a region of high mountain peaks, deep gorges, thick forests, glaciers, rivers and alpine passes and valleys in which the life of large number of species of different kinds is dependent.

3. Major Issues within the Area

Transboundary issues within the Kanchanjungha region have been described by Sharma¹⁰ Shenjgi and Sharma¹¹ and others.¹² The major problems are briefly explained below.

3.1 Poaching and trade in endangered species

For millennia, people in the border areas of the Himalayas have traded mountain products. With the opening of modern forms of infrastructure, economic activity such as logging and harvest of non-timber forest products is increasing. This has also increased illegal trade of wild species (including orchids) and animal parts. The incentive for such illegal acts generally comes from outside of the area. Culturally, local people respect the wild fauna and flora of their surroundings but they have neither the capacity nor authority to control the illegal harvest and trade being done by people intruding from elsewhere. Law enforcement agencies are based far away and so the intruders always have the upper hand. Thus, at present it is impossible to control the illegal

hunting and trade of species, which were traditionally protected by the local communities. This is a major issue.

3.2 Cross-border spread of forest fires

Forest fire is another problem frequently occurring within the proposed TBPA. Farmers, hunters, and herders have deliberately used fire to clear old grass and promote new growth for their animals, clear sites for new crops and slash-and-burn agriculture, and to hunt or drive away wildlife. Fires that accidentally spread from camps are also common. Fire suppression strategies on both sides of the border depend on law enforcement and education to the community. Because the physical capacities of authorities and villagers to put out a raging forest fire is limited by the topographic difficulties of mountains, as well as by lack of fire-fighting techniques and equipment, manpower, training, and funding every year cross border spread of fire commences¹³.

3.3 Improving local livelihoods

People living along the border are economically and politically disadvantaged due to the poor soils and terrain of the area. Historically, they were attracted to these areas to take advantage of cross-border business opportunities of various kinds.

In the past, the population of these mountain regions was low, so the resources per capita may have been more plentiful. In recent years, the population has increased, but cross-border trading opportunities have diminished. Employment opportunities are rare. Although tourism has brought some economic benefits, tourist travel is restricted to limited areas. Further, the benefit has been centralised to the elite in urban centres and trickles down to the community in the form of labour. There are, therefore, issues of benefit sharing.

With the introduction of a protected area system, the local people are of the opinion that the numbers of wildlife have increased, causing livestock depredation and crop damage. This has to some extent impacted on the livelihood of local people. New ways and means of earning a living, such as through game farming and other attractive options, should be tested in these remote hills and mountains. This demands legislation and improvements in the business capacity of the local people.

There is a growing realisation that conservation measures must include improvements to the livelihoods of the people living in and around protected areas. An integrated approach for resource management is evolving that needs further encouragement. In terms of benefit sharing, Nepal is pioneering innovative policy and legislation in which 30–50% of park revenue will be reinvested in the development of affected communities. The concept of encouraging game farming of prolific, wild animal species has been emerging, and a propose amendment of the Act that would allow such activity is waiting to be tabled in Nepal. The TAR government provides subsidies and village development programmes in Qomolangma Nature Preserve, and Sikkim has started to compensate similarly through community development projects. Resolving wildlife–people conflicts is an essential part of protected area management to help improve local livelihoods. Policies that help support livelihoods and compensate affected people are needed,

but this is still an issue at the national government level where legal measures still largely protect the interests of the governments rather than of community.

Sustainable agro-pastoral development, research, and experimentation related to the livelihood of the people are required. The livelihood of the local people can be strengthened by the promotion of forestry, livestock, agriculture, and trade in the region. Further, new opportunities are needed to sustain mountain economies, and cross-border ecotourism holds immense potential. Capacity-building of the people, including training in tourism-related services, developing micro-credit systems and special tourism sites, raising large-scale awareness, and promoting Trans-boundary tourism with improved security for the trekkers is required. These options have not been properly attended to.

3.4 Improving agro-pastoral livelihoods

Livestock rearing is the main livelihood option in the mountain areas in the eastern Himalayas. Almost all the agriculture activities are carried out by the use of animal power. High animal grazing intensity suppresses grass biodiversity and generates noxious weeds in the pasturelands. A reciprocal grazing arrangement in the Transboundary area needs to be established in which proper stock density and methods to control the spread of animal disease are monitored. Compensation to individual farmers for predation and crop raids by wild animals needs to be established, along with sharing information and techniques related to improved livestock and agriculture technology. Policy and legislation to overcome these problems are not in place, and this has been a long-standing issue.

4. Why Transboundary National Parks in the Kanchanjungha area?

4.1 An extension to existing protected area system

The Trans-boundary region of the Kanchanjungha Himalayas shares common heritage and links along the border of Nepal, TAR, and Sikkim. Over the last few decades, four contiguous protected areas around Mt. Everest — Qomolangma Nature Preserve in TAR, and Sagarmatha, Makalu-Barun), and Langtang national parks in Nepal — conserve a large, continuous ecosystem and rich cultural and natural heritage on both sides of the Himalayas.¹⁴ They jointly cover nearly 40,000 sq. km, an area large enough to maintain species, communities, and ecological processes.¹⁵ The isolated communities in these Transboundary parks and reserves are home to more than 110,000 people who share a common cultural heritage in the Himalayas. Extension to this system of protected areas to the entire eastern Himalayas, including Kanchanjungha region, would establish wildlife corridors and conserve a large area.

4.2 Trust building and co-operation

Transboundary conservation efforts in the Himalayan region started in 1992 with facilitation by the Wildlife Institute of India with support from the MacArthur Foundation's World Environment and Resource Programme. Several sites were identified for Trans-national parks, including some in the eastern Himalayas in Sikkim. Following this, a meeting of MacArthur Foundation grantees was held in Kathmandu in which participants from all the countries from the eastern Himalayas took part. This was the first regional exchange on Transboundary

conservation in the Himalayas. As a follow on from this, in 1994 the Chinese Academy of sciences and MacArthur Foundation jointly organised a workshop on Transboundary biological diversity conservation in the eastern Himalayas. The workshop managed to bring more people from governments and non-governmental sectors and raised awareness of the need for a TBPA. At the same time, in 1994, an innovative programme of Transboundary co-operation was undertaken by The Mountain Institute (TMI), the International Centre for Integrated Mountain Development (ICIMOD), and the World Wide Fund for Nature (WWF) Nepal office. These institutions asked the governments of Nepal, China, and India to establish a TBPA in the region. Since 1995, Transboundary co-operation has been occurring in the greater Mt. Everest ecosystem, which comprises large parts of the eastern Himalayan ecosystem of TAR and Nepal. In consideration of the need to manage the Mt. Kanchanjungha landscape as an interconnected and integrated whole, Transboundary conservation efforts between India and Nepal began in 1997 with the hosting of a Transboundary consultative meeting in Kathmandu. This was followed by mid-level meetings in 1999 and 2002 between the countries, and exchange visits of parks wardens, officials, and scientists from adjoining park areas. The process has also raised awareness among the local community in the proposed TBPA.

Transboundary exchanges between all three countries during 1997 and 2003 have further strengthened relationships among professionals and have started to address specific livelihood issues identified at the local level. Ecotourism and improving the livelihood of the people have been the major thrusts among the local border communities within the area. Recognising this, recently ICIMOD implemented a Transboundary Biodiversity Corridor Project in the southern half of the Kanchenjunga landscape, involving Nepal, India, and Bhutan (Sharma Eklabya, pers. comm.) This is an important step towards developing a TBPA.

4.3 A continuous geo-ecosystem

Ecosystems in the forests and rangelands around Kanchanjungha include species from two biogeographical realms, of which the Himalayas is the junction: the Northern Palearctic and the Southern Oriental. The Kanchanjungha region extends from subtropical forests to high-altitude plateau, making the landscape incredibly rich in plant and animal species. The mountain serves as a north–south barrier and as a migration route for plants and animals from east to west.¹⁶ Wildlife in this region — such as snow leopards, wolves, and Thar — cross national boundaries in search of prey or pasture. Migratory birds pass through the open sky and migrate in elevation according to the seasons. Seeds are carried on the wind, in the fleece and guts of livestock, and in bird droppings. The value of this area in terms of biological diversity conservation is immense.

4.4 Sharing a common culture and resources

Many isolated communities in these adjacent Trans-border areas share a common culture and resources. Local communities respect the mountains and forests as the homes of protector gods and the sources of spiritual and cultural ideals. Many old-growth forest stands found in Himalayan valleys are the last remaining forests locally, and are important to maintaining the ecological health of the area. Buddhism, Hinduism, Animism, and Demonism are the common faiths practised by the local communities. Due to the remote mountainous landscape and high-altitude environment, people living in this region are some of the most isolated and poorest in the

world. Reconciling the needs of local communities for their livelihood with conservation of ecosystems and biodiversity has become a major task.¹⁷

The local people continue to cross borders to trade and visit sacred sites, and cross-border marriage is common. Local people share common rangelands for grazing their animals, such yak and sheep, crossing borders to rotate pastures and sale livestock at the annual festivals. Traditional village doctors, para-veterinarians, and herb collectors search the mountain sides for valuable medicinal plants. Criminals also move across the border; poachers of rare or valued species, smugglers of illicit goods, and traders of endangered species. In order to prevent the abuse of mountain resources, it is important to control such illegal activities. For this, the establishment of a TBPA seems vital.

Large tracts of the landscape are covered by rangelands that are important to the diverse cultural groups relying on livestock rearing for their livelihood. As was just noted, these groups often move their herds across national boundaries to rotate the grazing of specific pastures in the Transboundary areas.¹⁸ According to a Chinese proverb, “*Everything is related, but things closest to each other are most related.*” In line with this, the most accessible areas are overgrazed¹⁹. A system for properly managing Transboundary pasture resources is required.

4.5 Historical relationship between the Transboundary countries

Socio-economic interactions across the Himalayas always have been vital for the survival and growth of the region’s unique human culture. The culture in these areas has thrived due to their sustainable use of the unique biological resources of the area. Considering this, beginning in the early 1970s a network of protected areas has been established (Table 1).

Table 1: Protected areas in the Himalayan ecosystem²⁰

Protected Area	Country	Established	Area (Sq. km.)	Altitude range (m)
Langtang National Park	Nepal	1976	1,710	792 - 7,245 m
Sagarmatha National Park	Nepal	1976	1,148	2,800 – 8,850 m
Makalu-Barun National Park	Nepal	1991	1,500	435 - 8,463 m
Qomolangma Nature Preserve	TAR, China	1989	30,480	2,300 - 8,850 m
Kanchanjungha conservation area	Nepal	1997	2035	1000-8585m
Kanchanjungha National Park	India	1977	1784 (3055 including the biosphere)	1829-8585

Although local people have been gradually empowered and *defacto* management over public resources prevails within the communities, the bringing of such a large area into the conservation/protected area system has had impacts on local livelihoods. Areas that were freely

used in the past are now under some form of government sanctions. This has changed the resource management pattern from sustainable use to exploitative. Remedying this calls for effective support from and participation by local communities in the conservation of natural and cultural resources. Similarly, the role of protected area manager's needs to be transformed from one of protective policing to social mobilising. Establishment of a TBPA will help accomplish this.

4.6 Infrastructure in the Transboundary region

It is imperative that infrastructure be developed. Because of the rugged landscape, border crossings with police and customs check points are few and far apart, and communication is poor. Traditional barter and commercial trade routes across high passes on the border have allowed exchanges of traditional commodities (such as food grains, salt, wool, yak tails, medicinal herbs, and livestock) and continue to do so for modern products. All three governments recognise the importance of these exchanges to sustaining people's livelihoods in these remote border regions.

China is building and strengthening road access to the Kyirong valley, and Nepal is developing a road network that will eventually link to it, as well as eventually join Olanchung gola and Kima thanka Pass in the eastern Himalayas. Similarly, India is building roads along the border with Nepal in the Singalila Range reaching to the Kachanjungha area. This new road network is anticipated to promote tourism, community-based conservation, and modern forms of business on both sides of the border and would transform the traditional way of livelihood.

Since the management objectives and challenges of the region's protected areas are similar, Transboundary co-operation is very important. Contiguous protected areas have the advantage of enlarging the total area under protection and conservation to include larger uninterrupted areas of ecosystems and a greater variety of habitats. By spurring infrastructure development in the area, protected areas help to efforts to fight catastrophic forest fires, provides access for trained personnel to treat animal diseases, prevents illegal trade and hunting of wild flora and fauna, and further enhances friendship between local communities.

5. What are the Challenges for Transboundary Cooperation?

5.1 Political commitments for Transboundary biodiversity conservation

Transboundary co-operation is often confronted by several problems. First and foremost, countries have different political systems and different levels of political commitment to establishing a TBPA. The fundamental for Transboundary co-operation is effective political will of the participating countries and their governments. Transboundary conservation can be promoted both through legal and institutional mechanisms and by community-led conflict resolution.²¹ Because biodiversity and other natural resources of Kanchanjungha area are a common heritage, they demand regional co-operation for protection, management, and sustainable use. To achieve this, strong political commitment and understanding between the participating countries are the starting point.²² Political commitment improves co-ordination in conservation and sustainable use of resources and helps developing appropriate policy and legal

instruments. Common efforts of the countries in raising the livelihood of the Himalayan people are possible through trust building and co-operation, as stated earlier. This also helps settling disputes and tensions and strengthens political relations among the participating countries.²³ This process in Kanchanjungha region has been initiated, but is still inadequate.

5.2 Formal legal arrangements

Each country in the region has its own protected area legislation, and some are more progressive than others are. However, when it comes to the implementation or enforcement the challenge of inaccessibility is the same. At the same time, where important natural resources (such as water) are concerned, they become a potential source of conflict between countries. Therefore, for formal collaboration it is important to establish legal provisions between countries. Who should lead this effort is still a major challenge in the region.

5.3 Institutional set-up

For effective TBPA management, appropriate national and local institutional mechanisms are important. Because of variations in tradition, as well as in political and legal systems, there will not be one single recipe to follow. Rather, this demands that government authorities work in co-operation with their partners in local communities to implement activities such as for joint planning, research, meetings, training, and information exchange. This provides inter and intra-governmental co-ordination for the implementation of treaty and international obligations.

5.4 Communication

Communication is a major component for TBPA development and management, both to prevent illegal harvest and trade and for tourism promotion. Further, local people often do not have the capacity to communicate in another language, and therefore that becomes a barrier (although Tibetan and Nepali villagers all speak a similar Tibetan-based dialect and can communicate with each other directly).²⁴

To improve communication at the programme and activity level, a joint study team from Nepal and India located along the border has initiated participatory meetings with local villagers on Transboundary issues. The team has established a system of routine meetings with local people on Transboundary issues, presenting the results to their respective government agencies. In general, the concept of Transboundary co-operation has received strong local interest and support. At the local level, messages on reducing poaching, controlling forest fires, ways of strengthening livelihoods, and rationally using of pasturelands have become important. These successful practices need to be legitimised by the national governments.

A local-level network on the management of Transboundary issues is evolving in the area. Annual herders' meetings take place independently of Transboundary programmes. Park authorities in Nepal and Sikkim have used such existing forums successfully to share information, and they could be used for future training activities. Information sharing has resulted in several poachers being arrested in Makalu-Barun and Langtang national parks.²⁵ This

is encouraging, and such information needs to be spread across the border areas so that cross-border prosecution is promoted. In general, awareness needs to be raised on Transboundary issues. This demands formation at the local level of a Transboundary institutional framework, one which supports local non-governmental organisations (NGOs) and other community-based organisations and legitimises them. Though the process has been initiated, until the system is officially formalised by the national governments, it remains a major challenge.

5.5 Low government priority on establishing a TBPA

Since Kanchanjungha has been proposed as a TBPA, most of the front-line initiative has been taken by large international and national NGOs such as ICIMOD, WWF, the Indian Institute of Wildlife, and the Chinese Academy of Sciences. The three national governments have yet to embrace the proposal, although some individual agencies (such as wildlife and protected areas departments) have shown keen interest and taken an active part in promoting a TBPA at their level. However, the formal process to establish a TBPA must be done through the respective countries' ministry of foreign affairs, and this does not seem to be a priority for them. This is due to insufficient commitment and political will on the part of the national governments.

6. Conclusion

In summary, an effort has been instituted in the eastern Himalayas for the development of a Kanchanjungha TBPA involving India, Nepal, and China. Several institutions are involved and the local communities are aware of the benefits. This need to be consolidated and activities further promoted for the conservation and sustainable use of the unique biodiversity of the area. The fundamental custodians of the biodiversity conservation are the local people, and improvement of their livelihoods is very important. The cultural and biodiversity mosaic of the area needs to be conserved through the promulgation of TBPA legislation, regulations, and guidelines, and by designing activities by the participating countries at the appropriate level.

In South Asia, the most important institutions for conservation of natural resources are government institutions. NGOs can kindle and rekindle efforts, but it is the government institutions, including local ones, that remain over the long term. For the establishment of a TBPA and implementation of any international or bilateral obligations such as, the Convention on International Trade in Endangered Species (CITES) these local-level institutions, which are legitimised by the national government, are important and need to be brought on board. They are the major continuing institutions. Nonetheless, though it is important for TBPA initiatives to start at the governmental level to formalise programmes, it is also equally important to initiate the process at the grassroots, non-government level. From that end, local social and political leaders bring local people's voices to their higher-level political partners. Here is where the NGOs become catalysts.

For the establishment of a Kanchanjungha TBPA, the first important step would be to create a conducive legal and political environment. Better communication and information sharing between the participating governments is important. Follow-up on recommendations for activities both at the national and the community level (especially by using existing institutions)

is required. Progress is slow but steady: some improvements are being made and good will and trust is evolving.

The future programme should evolve into a lasting commitment by the three national governments. Immediate activities should include local-level exchanges and the formalisation of exchanges at a higher level. Future programmes should concentrate on developing specific field of skills and practical training, to report poaching and illegal trade of species.

These initial steps will inspire confidence and start to build partnerships and commitment to a long-term process of collaboration. Finally, efforts need to be made to develop a sustainable funding mechanism to ensure Transboundary co-operation between governments. In general terms, a strategy that consolidates and then expands the present achievements can be followed to strengthen the Transboundary programme.

Notes

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Krishna Prasad Oli, Ph.D., B.L. (mkoe@wlink.com.np) is the Chairman of the Center for Promotion of Law and environment and a member of both the Commission on Environmental, Economic and Social Policy and the Commission on Environmental Law of IUCN. He lives in Katmandu, Nepal.