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Regional Framework for the Conservation of Himalayan Biodiversity

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Abstract:- Given the vastness of the Himalayan eco-region and its problem, it would be very difficult and even risky to generalize the challenges that the region is facing. Yet, the following discussion indubitably depicts some disturbing trends. The region — a repository of rich biodiversity and associated knowledge — is today mired in a multitude of nature and human induced difficulties, for example, quickened woodland misfortune, soil disintegration, asset corruption and loss of living space, biodiversity and conventional information. The serious absence of individuals' viewpoint, non-contribution of the nearby individuals in public arrangement making, the absence of comprehension of the mountain environment and chaperon difficulties among the approach creators at the neighborhood, public, provincial and worldwide level have additionally confounded the endeavors to achieve feasible advancement of the Himalayan framework and pull-out individuals from endless loop of neediness.

I. INTRODUCTION

The Himalaya is the youngest, highest and longest mountain range in the world with unique geo-morphological configuration[1].It stretches out between scopes 26°20′ and 35°40′ North, and longitudes 74°50′ and 95°40′ East incorporating around 5,94,000 square kilometers from the Indus channel underneath Nanga Parbat in the West to the Yarlungtsangpo-Brahmaputra gorge beneath Namche Barwa in the East. This definition embraces parts of Afghanistan, Pakistan, People's Republic of China (Qinghai-Xizang Autonomous Region), Nepal, Bhutan, India, Bangladesh and Myanmar. Due to its long stretch, vertical dimension and gradient variation[2], the Himalaya comprises of diverse climatic systems, several rivers, each representing a larger microcosm of larger habitat diversity. This eco-region provides livelihood resource base for over 80 million people.

Besides, internal conflicts and wars have also given rise to environmental degradation. Since the age-old practice of communal rangeland and pasture management is weakening, the land and other natural resources are being treated as open-access resources by outsiders. In some regions, huge influx of people for touristic and strategic reasons is causing further strain. In many places the habitat of domesticated and wild animals has been fragmented resulting in serious loss of wildlife and livestock. In some regions extensive damage to the alpine pasture has occurred due to poor management and excessive livestock pressure. And in others extensive destruction of alpine junipers and degradation of higher altitude up to and above tree line in the Himalaya is witnessed, giving rise to desert like conditions in many areas. There is and can be a discourse on the need and rationale, appropriateness and desirability of each of these measures. But it is almost beyond dispute that the life of the local people is much constrained, their direct link with the environment and its biodiversity loosening and their knowledge of the same withering.

II. SPECIAL TREATMENT FOR HIMALAYAN ECO-REGION

The Himalaya is the youngest mountain range with unique geo-morphological features such as tectonically disturbed bedrock, steep slopes, high-altitudinal variation over short horizontal distance, very heavy monsoon precipitation and diversified climate. Owing to its continuous rise, the Himalayan eco-region is undergoing geological and natural changes such as mass wasting and progressive eroding and attendant environmental challenges. In the 1970s and 1980s as researchers, media and even international financial institutions predicted a super-crisis caused by the Himalayan Environmental Degradation accentuated by deforestation, population explosion and poverty. This was, however, dispelled and dismissed as assumption, myth and distortion or over dramatization not supported by desegregated data. Even then, it was accepted that the Himalayan eco-region was witnessing serious resource degradation, population surge and social, economic, institutional and political unrest. It is believed that the scenario remains the same even today[3].

The highest region of Himalayan settlement, the nival and alpine regions, which support nomadic and pastoralist life, display extremely harsh and unpredictable climatic conditions where the winter temperature goes even below –30° Celsius. The people in the region for centuries have forged life based on appraisal of the local conditions. But the long enduring relation between the nature and society has

[1] H. Gurung, *Physical and Cultural Patterns in the Himalaya* (New Era 2002) 13.

[2] J.D. Ives, *Himalayan Perceptions: Environmental Change and the Well Being of Mountain Peoples* (Routledge 2004)29, 31; H. Gurung, *Physical and Cultural Patterns in the Himalaya* (New Era 2002) 13.

[3] B.H. Desai, *Implementation of the Convention on Biological Diversity: A Retrospective Analysis in the Hindu Kush Himalayan Countries* (ICIMOD 2010).

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begun to change in a much-exacerbated pace in recent times[4]. The pastoral life has been disturbed by activities such as fencing, land reclamation, forceful establishment of communes, creation of parks and natural reserves imposing severe restriction on human and livestock movement, mining excavations, nationalization of pasture lands and imposition of other restrictions, construction of roads and other infrastructures, population transfer and forceful resettlements of nomads in government built houses in the name of modernization and restriction on cross-border movement of people and livestock.

The lower belt, the temperature and subtropical middle mountains, is affected by surging population throughout the region from Northern Pakistan to Assam. The most notable effect of population surge is the per capita shrinkage in the availability of land leading to lowering of income. To accommodate the loss and also to meet extra-regional demands, the people have evolved a characteristically adaptive strategy of intensive cultivation of cash crops such as tea, coffee, orchard farming, large cardamom besides the traditional farming of rice, wheat, barley, maze, millet and other cereal crops. It is even said that better grounds are utilized for money yields and staple nourishment crops are pushed to sub-negligible place where there is low profitability.

Wrong policies adopted in land use such as faulty land ownership, unplanned urbanization and inappropriate tenure policies have given rise to unsuitable agricultural practices and uses. The grip of local people is weakening in this sector as well. Much desirable changes in land related laws in terms of checking fragmentation, conversion, conserving fertility or promoting good land use practices, and securing or protecting use rights on common property resources such as village pastures, river stripes, more specifically, the rights against expropriation and requisition of the land resource in individual or communal use are yet to take place in India, Nepal or Bhutan. The laws and policies are also not turned to social transition and livelihood change in urban and semi-urban areas. People friendly laws are absent in other sectors such as water resource development where the locals virtually have no say regarding hydropower development or effluent discharge by industries in water.

One also witnesses pervasive discrimination, exploitation, exclusion, displacement, marginalization and repression of the mountain people especially the minority community resulting from the erosion of their authority on the use local resources. These are exacerbated by administrative mismanagement, corruption, greed and oppression resulting in unequal access to resource use and poverty. Over time the Himalayan eco-region has become a victim of conflict and other exogenous environmental challenges such as pollution and climate change.

In the present course of work, it is seminal whether Himalayan eco-region deserves a special treatment. The vast expanse of the Himalaya, the population inhibiting in and around the eco-region, and the geo-physical and environmental challenges or socio-economic problems that it is facing, discrete and focused treatment is required on all these issues. But the subjects which deserve immediate treatment are its critical bio and livelihood issues. The biodiversity in many parts of the Himalaya is in the process of irreversible decline due to exacerbated human intervention and exogenous factors such as climate change. Therefore, specific focus is made on conservation and sustainable use.

It is pertinent to mention here that the Himalaya is a one-of-a-kind characteristic fortune of incredible excellence and natural worth and home of the headwaters of the extraordinary streams that stream right now. The two mega-diverse countries of Asia, China and India, and many other bio-rich countries such as Bhutan, Nepal and Bangladesh share the biological hotspots of the Himalaya[5]. Due to its long stretch, vertical dimension and gradient variation, the Himalayan eco-locale incorporates a few differing climatic frameworks, for example, tropical, subtropical, calm and elevated — every one of these zones speaking to a microcosm of bigger environment biodiversity and other challenges.

Numerous regions in the Himalayan eco-locale are still out of the compass of present day modern cultivating framework, as are not will be not impacted by the utilization of cross breed and transgenic yields or pesticides and insect poisons. The ranchers actually crop assorted conventional harvest assortments. An early intercession might save these species which are under danger by present day farming yield assortments. An early intervention may save those species which are under threat by modern agricultural practices. The protection of biodiversity in the Himalaya will have a will strongly affect China, South Asia and South East Asia. Additionally, what happens in the Himalaya influences worldwide biodiversity and the life of the individuals all through the world[6]. The protection of Himalayan biodiversity means protection of the resource base of over 80 million people. Around 80 percent of them are subsistence farmers and pastoralists marginalized by the mainstream economy[7]. The lives of these subsistence farmers are intricately woven around the richness of bio-resources. They have economically used the hostile local environment such as pasture lands, river inclusions and slopping terraces ingenuously, and in the course, acquired and accumulated wealth of experience and knowledge on the use of local biodiversity. Most of this knowledge is still in oral tradition and under serious threat.

[4] B.H. Desai, *Implementation of the Convention on Biological Diversity: A Retrospective Analysis in the Hindu Kush Himalayan Countries* (ICIMOD 2010).
[5] P. Kindlmann, *Himalayan Biodiversity in a Changing World* (Springer 2011).
[6] J.M. Church, *Environmental Regionalism: The Challenge of the Alpine Convention and the "Strange Case" of the Andean Community* (Harvard University 2010).
[7] J.M. Church, *Environmental Regionalism: The Challenge of the Alpine Convention and the "Strange Case" of the Andean Community* (Harvard University 2010).

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Any system, which recognizes the knowledge and contribution of the people, involves them in decision making, and benefit sharing helps to conserve resources and make the livelihood better. The success of community forestry programme in Nepal, joint forest management in India or social forestry programme in Bhutan, Pakistan and Bangladesh owes more to the involvement of the people[8]. Similarly, the propagation of eco-tourism and buffer zone concept in Nepal and Bhutan illustrates the advantage of empowering local people in the management of natural resources and knowledge system. It is against this concept that the Convention on Biological Diversity is looked upon as an instrument of hope because it opens up possibility of people's participation in the conservation of nature and generation of income through sustainable use of the component of biological diversity and associated knowledge. This is supposed to be one way out for breaking the vicious cycle of poverty, resource-degradation and scarcity in the Himalayan eco-region.

The Himalayan eco-area is the home of two of the world's rich frameworks of customary medication, in particular Ayurveda and Tibetan/Chinese meds. Exchanging both these drugs every year creates a great many dollars. Yet, no part of this is furrowed back to the networks which have been saving the conventional asset and information framework. The stewards of the resources and associated knowledge are neglected by their own governments. There is a genuine fear among the people in the Himalaya that even if the contemporary impasse between the North and the South on the Convention on Biological Diversity *vis-à-vis* the TRIPS is resolved and the Convention on Biological Diversity begins to work with full enthusiasm, benefits will not percolate to them. They will still be at the margin of sustainable development discourse. Owing to neglect and lack of appropriate policies of the respective governments, traditional medicinal system is slowly and gradually going out of the reach of the common people of the region[9]. This is another area which cries for immediate intervention for stopping exploitation of the people's biological resources and associated knowledge, for the benefit of the present and future generations.

- *Viability of Regional Framework*

One of the important points in this research was to determine the question as to the viability of such regional arrangement. The best way to look at it is to see similar legal frameworks that have been adopted in the past around the globe for conservation of biodiversity including mountains and however they have been successful in achieving the desired result. Here it becomes necessary to mention some of the notable Conventions and Declarations.

- *Alpine Convention before the UNFCC COP21 in Paris, 2013-14*

The Alps qualified as an optimal domain for developing a base methodology for nearby transformation, since mountains are known to define limits separating nations, where various strategies are applied. In the drafting stage nearby, great practices have been gathered from across the Alps, expecting to recognize the worth added that might get from them for the entire area. To this end these Guidelines allude to the neighborhood level however check worldwide partners: we want to believe that they might fortify, harmonize and advance nearby transformation practice in mountain locales, and past out.

It is realized that the experience on strategies for reasonable improvement in the Alps has been valued a long way past the extent of the Alpine region and other world locales have been appearing for a long time an extraordinary interest for such an encounter. Information, experience and great practices created in the Alps motivated other global mountain arrangements and courses of action, including the Carpathian Convention that was upheld by the Alpine Convention starting from the start and the Mountain Partnership. The Alps - as other mountain locales of the world - are noticeably impacted by environmental change. During the most recent 150 years, the Alpine locale has encountered an all-out yearly mean temperature increment of almost two times as much as the normal in the northern half of the globe. Temperature increment and change in the atmospheric conditions will affect the entire range of life in bumpy districts. Allow me to show this with only one figure: by on-going patterns, 95 % of the Alpine ice sheet mass is probably going to have vanished toward the finish of 100 years.

- *Guidelines for local adaptation in the Alps* –

Adjustment methodologies at subnational level must be created with a participative methodology at all stages, from the drafting to the execution procedure. A compelling investment achieves a few advantages: it permits to more readily spread-out logical data about environmental change; better distinguish the most critical effects and vulnerabilities and results at the nearby level; encourage the coordination of adjustment issues in sectorial approaches and administration activities; and it as a rule prompts a more noteworthy comprehension and acknowledgment of the general adjustment procedure.

Cross-outskirt collaboration, particularly when dependent for enormous scope exercises and including a few entertainers, can assist with limiting the expenses of adjustment and augment its advantages by creating cooperative energies in adjustment measures and incorporating consequences for neighborhood locales. Numerous Alpine foundations as of now have understanding of cross-fringe exercises tending to environmental change

[8] J. Basnet, *Land Reform and Exclusion of Poor People' in K.N. Pyakuryal et al. (eds), Nepal: Transition to Transformation* (Human and Natural Resource Study Centre of Kathmandu University and South Asia 2008).

[9] J. Basnet, *Land Reform and Exclusion of Poor People' in K.N. Pyakuryal et al. (eds), Nepal: Transition to Transformation* (Human and Natural Resource Study Centre of Kathmandu University and South Asia 2008).

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mutually creating adjustment reactions (for example Snow-capped Space Program)[10].

- *Framework Convention on the Protection and Sustainable development of the Carpathians*

ACKNOWLEDGING the significance of sub-provincial collaboration for the assurance and maintainable improvement of the Carpathians with regards to 'The earth for Europe' process; the commitment of the nearby individuals to practical social, social and monetary advancement, and to saving customary information in the Carpathians;
REALIZING the significance and environmental, social and financial estimation of mountain locales, which provoked the United Nations General Assembly to announce 2002 the International Year of Mountains;
PERCEIVING the meaning of Mountain districts, as loved in Chapter 13 (Sustainable Mountain Development) of the Declaration on Environment and Development ("Agenda 21", Rio de Janeiro, 1992), and in the Plan of Implementation of the World Summit on Sustainable Development

➢ *Critical issues that such a framework should address*

For each system to work appropriately it must address certain issues. The United Nations Conventions and Frameworks might be alluded to comprehend the basic issues to be tended to.

➢ *United Nations Convention on Biological Diversity 1992*[11]

The Convention has three principle objectives:

1. Conservation of natural assorted variety (or biodiversity);
2. Sustainable utilization of its segments; and
3. Fair and evenhanded sharing of advantages emerging from hereditary assets

As it were, its goal is to create national procedures for the protection and supportable utilization of organic assorted variety. It is frequently observed as the key report with respect to supportable improvement. The Convention was opened for signature at the Earth Summit in Rio de Janeiro on 5 June 1992 and went into power on 29 December 1993.

➢ *United Nations Framework Convention on Climate Change 1992*[12]

The UNFCCC objective is to "balance out ozone depleting substance fixations in the environment at a level that would forestall risky anthropogenic impedance with the atmosphere framework". The structure plots how explicit worldwide arrangements (called "conventions" or "Understandings") might be haggled to set restricting cutoff points on ozone depleting substances.

The United Nations Framework Convention on Climate Change (UNFCCC) was opened for signature at the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro (known by its renowned title, the Earth Summit). On 12 June 1992, 154 nations denoted the UNFCCC, which shows the accomplishment of the idea and how well it was gotten by the overall organization.

III. CONCLUSION

The Himalaya is a region predominantly inhabited by poor, small and marginal farmers with more or less uniform class structure. These people today face challenges such as eroding base of agriculture, limited scope for specialization and mechanization, and limited capacity to take risk of crop failure, and other social factors such as physical, social and market inaccessibility. Development interventions should take these factors into account and build upon local knowledge, innovation and practices and emphasize the establishment of equitable land relations, value addition at the local level, and checking revenue leakage from enterprises that use local niches. Besides, farmers in the Himalaya need to be protected against incidents and situations created by hostile weather conditions resulting in destruction and loss of crop, agricultural land/pastures due to hailstorm, landslide, flood, animal grazing/havoc, draught, forest fire and so on. Measures that help people to diversify farming, creating new opportunities of income generation through activities such as farming of medicinal herbs, adding value to agricultural produce by introducing labeling and using geographical indications, creating off-farm opportunities, introducing new management tools such as microcredit and micro-insurance and creating mechanism for payment for the ecosystem services are important. The Himalaya is witnessing great social transformations. However, static development approach aiming to maintain subsistence is still the focus of the State as well as donors in the Himalayan region. Therefore, consolidating and building upon the best practices evolved in different countries are some of the other measures that one envisages for the Himalayan region. Such as community forestry programme in Nepal; mechanisms to prevent and control forest fire, creation of forest fund and insect pest prevention in China; farmers' rights in India; micro-hydro projects in Nepal, India and China. Besides investment on health, population and quality education for creating a technology savvy outward looking population is crucial. Since microclimates are more important that microclimate in mountains and hills, developing micro approach on development is a concomitant obligation.

In this milieu, the regional legal framework could envisage the creation of a Himalaya Biodiversity Fund, which aims at creation of a fund through benefit-sharing arrangement made at the country and regional level. This is an indeterminate source. But funds may be funneled also by levying charges on the sale and export of *Ayurvedic* and Tibetan/Chinese medicine that use medicinal herbs of the Himalaya. Taxes and royalties retrieved from other resources such as NTFPs and value addition of the same, eco-tourism and expeditions, carbon trading ad hydro-power projects could also go to the fund. Besides, services provided by the

[10] P. Kindlmann, *Himalayan Biodiversity in a Changing World* (Springer 2011).

[11] The text of the Convention was adopted on 22 May 1992 in Nairobi

[12] effective 21 March, 1994

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Himalayan watershed to the downstream users, once accounted and mechanism created for payment, will generate funds. Contribution from member states and other states through GEF and the recently established Forest Carbon Partnership Facility (FCPF) could be used for saving the Himalaya and its biodiversity. The present discourse is intended to spiral out the larger issues impacting the Himalayan region. It also endorses the views of Ives and Messerli, who in the context of Himalaya beaconed to seek 'plural problem definitions and enumeration of plural solutions.'

At long last, the Himalaya is substantially more undermined today in the entirety of its perspectives than at any other time. Assuming that its geo-biological system, its biodiversity and the social variety of its kin are to be rationed and success of the bigger locale is to be guaranteed, a provincial cooperation is the main street ahead for us that lead to meeting yearnings of the current age and getting for any kind of future family a similarly solid climate. All the countries of the region and their federated units, intelligentsia, civil society and other actors should join hand in the mission to save the Himalaya. National, regional and international legal scholars and policy makers should utilize existing legal knowledge and wherewithal towards achieving the goal. It is a common concern of all the countries and the people but an added responsibility of the two emerging giants — India and China. They should take up more responsibility and lead others. Perhaps, this is the operational meaning of common but differentiated responsibility for the Himalayan region.