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Biodiversity for Nepal's Development and Poverty Reduction**Min Prasad Lamsal**

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Abstract

Nepal is a small country in the world picture, occupying 0.03 percent of the whole earth and 0.1 percent of the total land area. Despite the small size, there are profound differences in biodiversity and ecosystem due to its unique geographical location, topography and boundaries. The ecosystem is the habitat of living things. There are different ecosystems as per the geographical division of Nepal (mountains, hills and terai) where the biodiversity has been conserved. In this system, many organisms are found to be maintaining special relationships with each other and for their existence. If one or two organisms in the ecosystem are eroded or degraded, the whole system is affected. In the context of the United Nations General Assembly calling for the celebration of May 22, 2010 as the Year of Biodiversity, Nepal also adopted the slogan "Biodiversity is Life, Biodiversity is Our Life". The Convention recognizes the three objectives: conservation of biodiversity, the sustainable use of biodiversity resources, and the fair and equitable distribution of benefits derived from the consumption of biodiversity and heredity. The poorest of the poor, who have no alternative income, seem to be most affected by the depletion of biodiversity and the deteriorating state of environmental services. On top of that, since the negative effects of climate change will affect the same class more, the needs of that poor class should be addressed in all aspects of biodiversity and climate change adaptation. It is the responsibility of the developed countries of the world and the international community to address this problem.

Keywords: Nepal, biodiversity, relationship, protected areas, ecosystem**Introduction**

Nepal is a small country in the world picture, occupying 0.03 percent of the whole earth and 0.1 percent of the total land area. Despite the small size, there are profound differences in biodiversity and ecosystem due to its unique geographical location, topography and boundaries (Bhandari, 2047 BS). The ecosystem is the habitat of living things. There are

different ecosystems as per the geographical division of Nepal (mountains, hills and terai) where the biodiversity has been conserved. In this system, many organisms are found to be maintaining special relationships with each other and for their existence. If one or two organisms in the ecosystem are eroded or degraded, the whole system is affected (Bajracharya 1983).

For example, people living alongside the river (fishermen) have to change their habitat or occupation if the number of fishes decrease in the river. The ecosystem itself deteriorates as an adverse effect on the way of life of those people. Nepal is one of the poorest countries in the world in terms of economic development but one of the richest in terms of biodiversity and ecosystem (Pokharel, 2063 BS). If employment and livelihood opportunities can be created by managing and consolidating the biodiversity here, it seems to be an important support for the development of the country and poverty reduction.

The Importance of Biodiversity

Nepal's terrain extends from the high mountain range to the plains of the Terai, with homes for various ecosystem. Nepal is playing a leading role in the field of biodiversity conservation. Protected areas based on public participation are a model in the world. Therefore, there are ample opportunities in the field of biodiversity. At the same time; climate change, which has emerged as a global problem, has added challenges to our natural resources and biodiversity (Chaudhari, 1998). Climate change in particular, has had a major impact on our mountainous region. Mountain snow (melting) and mountainous environment, biodiversity, wildlife and human civilization are being negatively affected. In this context, even if we can only conserve mountains and forests, we will be able to conserve the world's rare biodiversity, especially wildlife, for centuries.

Biodiversity conservation and poverty reduction have been at the center of international development efforts since the early 1980s. The issue has become even more pronounced since the 1992 World Conference in Rio de Janeiro, Brazil. As a result of this conference, the Convention on Biological Diversity has recognized that eradicating poverty through economic and social development is a top priority for developing countries (Chaudhari, 1998).

In the context of the United Nations General Assembly calling for the celebration of May 22, 2010 as the Year of Biodiversity, Nepal also adopted the slogan "Biodiversity is Life, Biodiversity is Our Life" (Bhatta, 1996). The Convention recognizes the three objectives: conservation of biodiversity, the sustainable use of biodiversity resources, and the fair and equitable distribution of benefits derived from the consumption of biodiversity and heredity.

The Convention on Biological Diversity aims at sustainable management of biodiversity including forests, conservation areas, wetlands, grazing areas and agriculture

(Upreti, 1979). It has contributed to the economic and social sectors by enhancing the benefits and strengthening the capacity of farmers and indigenous communities, integrating management policies into appropriate biodiversity in nations' poverty alleviation strategies, creating employment and livelihood opportunities through the establishment and management of conservation network (Khatrī, 2068 BS).

The Millennium Development Goals can be seen as another important effort made by the world community in favor of poverty reduction. The goal is to include the principle of sustainable development in the program of the state and to mention the process of depletion of environmental resources and biodiversity. Similarly, the task of ensuring environmental sustainability has been put forward as an important goal of the millennium development (DFRS, 1999).

The Interrelationship between Biodiversity and Poverty Reduction

It is a well-known fact that many of the world's poorest people depend on biological resources for their daily livelihood. The recently published report of the Convention states that the environmental goods and services obtained by conserving biodiversity have played an important role in alleviating poverty. Major programs of the Millennium Development Goals, such as eradicating extreme hunger, achieving primary education globally, and empowering women through gender equality, are also believed to be helpful in conserving biodiversity .

About 1.3 billion people worldwide depend on agriculture, forestry, fisheries and tourism for their daily livelihood. Of the 52,000 medicinal plants identified so far, 8 percent are endangered. The daily loss of biological resources is making it difficult for the poor to make a living. At the same time, the utilization rate is increasing as the availability of resources decreases. Even if human needs are met in the short term, there is a growing danger that the entire ecosystem will be disturbed in the long run as the pressure on resources increases. Due to climate change, this threat is increasing rapidly and there is a global concern that the livelihood of every community will be destroyed (BTBM, 2067 BS).

The Challenges

Studies on biodiversity conservation and poverty reduction have shown that over-exploitation of resources, habitat destruction, deforestation and degradation, other forest purposes, unwanted vegetation growth, legal regulatory and institutional problems, unequal distribution of resources, weak implementation of forest environment and biodiversity laws, poor governance of forest area, etc. are international, national and local level challenges regarding biodiversity (Khatrī, 2068 BS & Neupane, 2050 BS). These issues are also considered relevant in the context of Nepal. In addition, the vicious cycle between climate

change, depletion of biodiversity and poverty poses an additional challenge for less developed countries to integrate conservation and development.

Looking at the world map, there is an abundance of biodiversity in the areas inhabited by people from the poorest communities. There is a need for everyone's attention to run the program by creating a common perception among different sectors and bodies without allowing the loss of biodiversity. It is also the essence and concept of the Millennium Development Goals.

Reference to Nepal

Efforts to conserve biodiversity in Nepal have long been confined to the National Parks and Conservation Areas. Various studies have shown that in the past, some programs like forest-based community management, intermediate zone and land-perimeter programs have helped the humanitarian community.

Nepal has been a party to international treaties on biodiversity, climate change and desertification, and has developed a national strategy in line with their objectives.

In addition, Millennium Development Goals, poverty alleviation strategies, Sustainable development programs and development of policy infrastructure and national goals have been set and programs have been implemented accordingly. Despite these efforts, there are complaints that the programs have not been able to complement each other in reality (Khatri, 2068 BS).

Nepal's Constitution guarantees the natural right of the people to live in a clean environment. In addition, the protection of natural resources and biodiversity has been taken as the responsibility of the state. The Tenth Plan, a three-year internal plan and poverty alleviation strategy, aims to support the livelihood of the people through conservation and sustainable management of forests, natural environment and biodiversity.

At the regional level, the documents such as Forest Development Master Plan, Biodiversity Strategy and Implementation seem to complement each other in line with the long-term thinking of conservation and sustainable development. In addition, conservation of forest and biodiversity has been given priority in the policies and programs of agriculture, water resources and environment sector.

A recent review of progress on the implementation of the Millennium Development Goals in Nepal reveals that the biodiversity conservation on regional and inter-sectoral strategies and community-based conservation programs have not received the desired priority. Further, there is lack of legal framework on access to genetic resources and fair distribution of benefits, and lack of researches regarding the impact of climate change on biodiversity. In order to address these facts, it has been suggested that at least 40 percent of Nepal's forest area should be maintained keeping in view the above-mentioned facts.

Conclusion

The poorest of the poor, who have no alternative income, seem to be most affected by the depletion of biodiversity and the deteriorating state of environmental services. On top of that, since the negative effects of climate change will affect the same class more, the needs of that poor class should be addressed in all aspects of biodiversity and climate change adaptation.

Lack of religious and technical resources is a common problem faced by the least developed countries of the world including Nepal in the process of conserving biodiversity, combating the negative effects of climate change and reducing poverty through appropriate programs. It is the responsibility of the developed countries of the world and the international community to address this problem.

Conservation of biodiversity resources, sustainable use and equitable distribution of benefits can be a prerequisite for achieving the Millennium Development Goals, while conservation of biodiversity builds a credible basis for poverty reduction. Conservation and sustainable development are possible only if there is an identity between the poverty alleviation strategy and the Millennium Development Goals. Therefore, it is necessary to integrate all aspects of biodiversity with the Millennium Development Goals. The benefits of the conservation can be fully reaped by the underprivileged people only if the multi-faceted interrelationship between biodiversity conservation and poverty reduction can be assimilated even at the political and administrative grassroots level.

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