
Chapter 39

Addressing Broader Issues of Biodiversity/Agrobiodiversity Conservation within the Framework of National Policy: A Case from Nepal

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"Affirming that the conservation of biological diversity is a common concern of humankind, Reaffirming also that States have sovereign right over their own biological resources, Reaffirming also that States are responsible for conserving their biological diversity and for using their biological resources in a sustained manner,..... .."

The Preamble to the Convention on Biological Diversity, 1992, has brought about a major shift in the international perception of claims over biological resources. Where earlier these resources were referred to as 'the common heritage of mankind', the Convention on Biological Diversity has brought these resources back under national sovereignty. The former implied that anyone had the right to collect bioresources from anywhere in the world and process them. The industrialised world, with a poor genetic resources base, had easy access to the rich genetic resources and indigenous knowledge systems of their colonies. This contributed largely to profiteering of companies from the North. A UNDP study has found that if agriculture in the North paid royalties on the plant varieties and knowledge it has used to developing countries and indigenous people, then these royalties would amount to \$5.4 billion a year. Some of the products and technologies that are results of common knowledge of the people in a region, such as the Hindu Kush-Himalayas, are sold back to the region at higher prices. Patenting of such products by industrialised countries is often a violation of the intellectual property rights of the people of culturally and resource-rich nations. Hitherto, there was no obligation for industrialised nations to share the technologies developed by them from resources collected from resource-rich but economically underdeveloped nations. Nor were the research scientists required to pay anything for their access to genetic resources.

The Convention on Biological Diversity, which came into force on 29 December 1993, intends to put an end to this free flow of resources and knowledge. Article 15 of the Convention on Biological Diversity provides specific clauses with regard to access to genetic resources that must be subject to the prior informed consent of the contracting party and on mutually agreed terms. It further places a duty upon the contracting parties to take appropriate legislative and policy measures aimed at sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other use of genetic resources with the contracting party providing such resources.

Biodiversity is essential to the world's ability to maintain its current level of food supplies, and, according to the FAO, a 60 per cent increase in food output will be necessary in the next 25 years. Crops need to be made more productive – able to yield more, to resist pests and disease, to tolerate difficult environments, and to cope with climatic changes. These characteristics might be found in the range of existing varieties of plants, both cultivated and wild. Research shows that plant biodiversity is primarily the resource of the South – over 90 per cent of plant species are located in Africa, Asia, and Latin America (Panos Briefing, 1995).

The notion of Trade Related Intellectual Property Rights (TRIPs), introduced in the Uruguay Round of GATT negotiations, is an attempt to direct the developing countries to introduce patents on plant varieties by either passing their own legislation or by joining one of the existing Union for the Protection of New Varieties of Plants (UPOV) conventions. TRIPs has conveniently excluded patenting of diagnostic, therapeutic, and surgical methods for the treatment of humans and animals; and plants and animals other than micro-organisms (essentially biological processes for the production of plants or animals other than non-biological and microbiological processes).

Most of the countries of the Hindu Kush-Himalayan (HKH) region do not allow patenting of plant varieties. For example, the Indian Patents' Act 1970, does not allow patents for inventions relating to agricultural processes. The Indian Parliament recently rejected an amendment to the act on the grounds that it sought to curtail farmers' traditional rights to innovate and adapt their own varieties and could have wiped out centuries of biodiversity material and skill (Panos Media Briefing, 1995). Exemption to agriculture under patents has to a great extent helped the public sector research infrastructure to develop and release more than 2,000 improved varieties in India itself. (The share of the private sector in this field in India is less than one per cent.) This has aided the increase of food grain production since breeders have been able to develop high-yielding and disease-resistant varieties without any hindrance through payments of royalties, and seed could be made available to farmers at low prices. Times are changing and multinational corporations have entered the markets of the developing nations seeking stringent

laws to do away with exemptions granted to farmers' as breeders (FAO meeting 1985) and subsidies in this sector (IMF Structural Adjustments' Programme).

Patent laws vary from country to country. US law, for example, allows patenting of plants. Many multinational companies involved in drug research and biotechnological projects have sought patents to monopolise entire varieties. For example, in 1992 Agracetus Inc, a subsidiary of W.R. Grace, received a European patent on all transgenic soybean varieties. Instead of receiving patents for the characteristics of genetically improved genes, they have been granted exclusive rights over the varieties. Similar patents have been sought by biotechnology companies for rice, coffee, cabbage, cauliflower, melon, peas, and cotton. The number of such industrial patents being issued in the US and in European countries has risen over the years. Numerous other examples of bio-piracy in the form of germplasm being taken from developing countries, especially from the HKH region, and patented in the west have been documented (Bija - The Seed, Issues No. 19 & 20).

Efforts are now going on to have these patents revoked. *"The long list of biopiracy cases is an indication that the US patent system has its own weaknesses which allows biopiracy to be practised as a rule. The withdrawal of the turmeric patent is only a first step in reversing biopiracy"* (Shiva 1997).

Nepal: A Case Study

It is imperative to look at policy developments in the countries of the South against the backdrop of the broad international canvas of biodiversity conservation. Nepal, although a gene rich country, is far behind in understanding the ramifications of the international league it seeks to join. The country owes its Genetic Diversity to the varied agroclimatic environments existing there. In order to fulfill its international obligations towards the conservation of this rich Genetic Diversity, Nepal has become a party to several international agreements and conventions and has been actively involved in the discussions leading to them in various preparatory meetings. The agreements and conventions include the following.

- Plant Protection Agreement for the South-East Asia and Pacific Region, Rome, 1956
- International Union for the Protection of New Varieties of Plants, 1961 (UPOV)
- Convention on Wetlands of Importance Especially as Waterfowl Habitat, Ramsar, 1971

- Convention Concerning the Protection of the World's Cultural and Natural Heritage, Paris, 1972
- Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington D.C., 1973
- Convention on Biological Diversity, Rio De Janeiro, 1992
- International Technical Conference on Plant Genetic Resources' Global Action Plan on Plant Genetic Resources, Leipzig, June 1996.
- World Food Summit, Rome, November 1996
- General Agreements on Trade and Tariffs - Observer status
- World Trade Organization - Observer status

The World Trade Organization was created under the GATT and came into existence in 1995. This agreement has far-reaching implications for developing countries. Although Nepal is not yet a member of the WTO, it has expressed its desire to become a member and is in the process of filing its draft memorandum on the foreign trade regime. WTO extends beyond the purview of the GATT, which was restricted to trade in goods only. WTO deals with the trade in services, trade related intellectual property rights, trade related investment measures, agriculture, and textiles. The provisions of the WTO are not in favour of farmers of the developing countries. The implications are discussed later in this paper.

Policy Developments

A cursory glance at these conventions shows that the thrust of most of the agreements is towards biological diversity. This fact is further evident following perusal of the (Nepal) national laws and policies on the conservation of genetic resources. The concept of protectionism followed by the developing nations is one that has been thrust upon them by the North. The entire notion of formal *in situ* conservation, which ignores people and their wisdom, is alien to the developing nations. Fortunately, Nepal realised this at an early stage and made the relevant amendments and additions to the prevailing laws. The Forest Act, 1993, and the Buffer Zone Regulations, 1996, drafted under the National Parks and Wildlife Conservation Act, 1973, have recognised the role of people and communities in conservation.

The objective of the National Conservation Strategy (NCS) 1988, is to preserve biological diversity and maintain essential ecological and life support systems.

The NCS also states that the single sector approach of government departments to resource conservation is not conducive to maintaining biodiversity, which requires a comprehensive approach that integrates the management of all resource sectors. The NCS indicates that Nepal lacks both a comprehensive programme for the collection of inventory data related to ecosystems and a scientific catalogue of flora and fauna occurring within the Kingdom.

The National Environment Policy and Action Plan (NEPAP), 1993, chapter on biodiversity conservation recommends, among other things, (i) to identify and take action to protect wetlands significant to biodiversity conservation; (ii) to develop management plans to conserve biodiversity; (iii) to mount a study to assess the status of biodiversity of endemic plants and animals, both terrestrial and aquatic, occurring outside of protected areas; and (iv) to establish a national biodiversity database and identify and strengthen institutions responsible for research, education, and training in biological resource management.

His Majesty's Government (HMG)/Nepal has not yet formulated a policy relating to agricultural biodiversity and its conservation. The country is in no hurry to take the necessary steps and is taking its time to come up with a policy on the matter. Nepal expects to take advantage of its status as a Least Developed Country, as a result of which it has been accorded certain exemptions until 2005 A.D. The feeling in the administration is that there is no institutional pillar to support and follow up such an effort. Hence the first step should be the creation of the infrastructure and an institution, policy-making shall follow.

The Constitution of the Kingdom of Nepal, 1990, requires ratification by the members of Parliament of all International Agreements entered into by the country.

According to Article 126,

"(1) The ratification, accession, acceptance and approval of treaties or agreements to which the Kingdom of Nepal or His Majesty's Government, is a party shall be done in the manner specified by law.

- I. *The making of law under Clause (1) shall, among other things, contain a condition that ratification, accession, acceptance and approval of the following treaties or agreements be done by a two-thirds majority of the members present in the Joint Session of the Parliament:*
 - a. *Peace and Friendship*
 - b. *Defence and Strategic Alliance*
 - c. *Boundaries of Nepal, and*
 - d. *Natural Resources and Distribution in their Utilisation.*

Among the treaties or agreements relating to the matters mentioned in Sub-clauses (a) and (d), treaties or agreements which have no wide, grave, or long-term effect on the country may be ratified, acceded to, accepted or approved by the House of Representatives by a simple majority vote of the members present.

“Nepal Treaties Act, 1990” [sic]

The Nepal Treaties Act, 1990, prescribes the procedure for the implementation of International Conventions. Reading Section 9 of this Act, we can gauge that it is not imperative for HMG/Nepal to enact a new law or to amend an existing law for the implementation of the provisions of all International Agreements. Once a treaty has been ratified by Parliament, it becomes legally binding upon the nation unless the treaty creates an additional obligation upon the state to enact legislation.

Article 9 (1): If a treaty in which the Kingdom of Nepal or HMG is a state party and which was ratified, acceded, accepted or approved by Parliament is inconsistent with the existing law, the law shall be declared void to that extent and the provisions of the treaty will be implemented as the law of the land.

Article 9(2): A treaty which is not required to be ratified, acceded, accepted or approved by the Parliament but that the Kingdom of Nepal or HMG is a state party to it and if it creates additional obligation or burden and if it requires the enactment of a legislation for its enforcement then HMG must take appropriate measures for the enactment of such implementing legislation at the earliest. [sic]

The following provision of the Constitution of the Kingdom of Nepal, 1990, directs the laws and policies of His Majesty’s Government of Nepal in conservation of its natural resources.

“The state will adopt the policy to utilise the natural resources in a beneficial way in favour of the national welfare. The state will give priority to protect the environment from the adverse effects of physical development activities by providing public awareness of conservation. The state will also provide special care for the conservation of scarce wildlife, forest and plants.” [sic]

To fulfill these objectives set in the Constitution, the Parliament of Nepal has enacted the following laws.

1. Plant Protection Act, 2029 B.S. (1972 A.D.) This Act was legislated with the objective of preventing exported and imported plants and plant products

from spreading epidemic diseases. So far the government has not enacted any specific law on safeguarding the international transfer of plant genetic material, but the provisions of this law can be applied. The act authorises the government to prohibit the importation of any plant, plant material, soil attached to plant or plant product, or soil only, or any other medium on which a plant can grow from any country. The government can specify necessary prohibitions or restrictions regarding the transport from one district to another of any plant or plant product. Entry points for the import and export of plant products are to be specified.

2. Seed Act, 2045 B.S. (1988 A.D.) This deals with the quality of seed production and its distribution to help maintain crop diversity.
3. National Park and Wildlife Conservation Act, 2030 B.S. (1973 A.D.) This act provides for the *in situ* protection of wild animals and their habitats. Besides *in situ* protection, it also provides protection to all species of animals mentioned in the schedule. Habitat protection takes care of protection of all plant species existing in the protected area. The National Park and Wildlife Conservation Act in its amendment in 1996 has incorporated the concept of a buffer zone to facilitate public participation in conservation, design, and management of any area in and around national parks and protected areas. The Buffer Zone Regulations promulgated in April 1996 empower wardens to constitute a users' committee in coordination with local agencies for the protection of wildlife, natural environment, biodiversity, and forest; development work; community development; and balanced use of forest products.
4. King Mahendra Trust for Nature Conservation, 2039 B.S. (1982 A.D.)
5. Forest Act, 2049 B.S. (1993 A.D.) This act relates to community forest user groups. The user group is entitled to develop, conserve, use, and manage the forest; and sell and distribute forest products by fixing their prices. The user group is also responsible for reforestation or rehabilitation of its community forest. Extraction activities, such as harvesting of timber and collection of fuelwood, fodder, and other non-timber forest products, from the forest is done in accordance with a work plan. The act accords sufficient incentive to the people to conserve the forest resources. The forest act also incorporates a major disincentive to unsustainable use of forest resources. The community forest can be taken back by the government.

Rules gazetted under the Forest Act and notified on Manseer 10, 2053 B.S. (25th November 1996 A.D.) These rules regulate the extraction of and trade in different species of plants. The notification prohibits the international transfer of

the species mentioned below unless they are processed in Nepal and have obtained a certificate to that effect.

Jatamasi, *Nardostachys grandiflora*
 Sarpa gandha, *Rauwolfia serpentina*
 Sugandha kokila, *Cinnamomum glaucescens*
 Sugandha bal, *Valeriana wallichii*
 Jhyau, Lichens
 Shilajeet, rock extract
 Taalis Patra, *Abies spectabilis*
 Lauth Salla, *Taxus baccata*

The collection of *Cordyceps* (a fungus variety), known as *Yersagumba* in Tibetan and used as an aphrodisiac, and of *Panch angula* (*Gymnadaenia orchidis*) is completely prohibited.

The Convention on International Trade in Endangered Species of Fauna and Wild Flora (CITES) imposes restrictions on trade for several species. *Taxus baccata* and the wild species of orchids fall into this category. Nepal allows export of cultivated orchids, but the Department of Plant Resources of HMG/Nepal, which acts as the management authority for CITES in Nepal, has to certify the origin of the cultivated orchids. Nepal, in order to protect its plant resources, is trying to promote the concept of export of plants in processed form only. This will serve as an economic incentive to people to cultivate certain species that have a commercial value, and the people of the country can also benefit from the value-addition through processing.

At this point it is important to note that countries should adopt long-term policies. I would like to highlight the example of a poor and short-sighted policy followed by the Government of India. A farmer, on recognising the value of (wild) *kuth* (*Saussuria costus*) in the world market, started to cultivate it on his farm. The crop brought good returns, and cultivation ensured the species was maintained. When the Indian Government put this plant on the list of endangered plants under the Wildlife Protection Act, 1972 (following the prohibitions imposed by CITES), it was the end of a good on-farm conservation effort. This could be the same as the case of *Yersagumba* in the high mountains of Nepal. This deprived the local community from their initiative of managing conservation with development..

The Export Policy of Nepal stipulates the need for licences for the export of products banned or qualitatively restricted as listed in Annexure 1 of the Trade Policy. This list includes protected wildlife and related articles such as wild animals, bile and any part of wild animals, musk, snake skin, and leopard skin (as per the

provisions of the National Park and Wildlife Conservation Act). The list also includes plant species such as marijuana, opium, and hashish (as defined in the Single Convention on Narcotics 1961).

Nepal has not made any significant progress in the field of biotechnology. Yet the Department obtained a patent on two aromatic plant species ten years ago. The Patent provisions in Nepal are found under the primitive Patents, Design and Trademarks Act, 1965. This act does not distinguish between a product and a process patent. In India, the patent act offers two kinds of patent - process and product. The Indian Patent Act allows only process patents and not product patent in the fields of agriculture, pharmaceuticals, and biotechnology. But, in Nepal, the law is not clear on the subject and no distinction is made between the two types of patent. *Sugandha kokila*, a plant species found in Western Nepal, was patented here 10 years ago for its aromatic properties which can be used in perfumes. The species, *Osmanthus*, was patented for the same property around the same time.

One important aspect that so far remains untouched by legislation in Nepal is Intellectual Property Rights and Farmers' Rights. With the creation of the WTO, it has become imperative for countries to protect their rights over intellectual property. The issue of Farmers' Rights also falls within the arena of Intellectual Property Rights. Farmers' Rights have been defined as "rights arising from past, present, and future contributions of farmers to conserving, improving, and making available plant genetic resources" (Swaminathan 1995). Supporters of Farmers' Rights contend that it is "immoral to allow Plant Breeders' Rights over commercial crop varieties unless the international community also accepts Farmers' Rights over the crop varieties they have bred for their own fields" (IDRC 1994). Breeders' Rights in the West are referred to as Plant Breeders' Rights as plant breeding is mostly done by the private sector. The position and rights of farmers as breeders are ignored. In the West big corporations are involved in plant breeding. This is precisely the reason for the actions and voices in developing countries against the notion of Breeders' Rights, as promoted by the UPOV provisions. The provisions of UPOV 1991 pose a threat to the farmers' right to save seed from one harvest to plant for the next one. Many farmers and NGOs fear that Plant Breeders' Rights granted to crop breeders under UPOV 1991 give a boost to Breeders' Rights at the expense of small and marginal farmers. Plant Breeders' Rights are property rights granted to crop breeders to give them exclusive rights over plant varieties they develop.

Nepal seems to be in no hurry to enact any legislation or formulate any policy regarding protection of Plant Breeders' Rights as HMG/Nepal is of the opinion that there is no threat of competition in the near future from any foreign multinational seed company to the breeders of Nepal; the farmers. The attitude is that the market isn't big enough yet to attract seed giants. However, TRIPs allows

governments to legislate their own plant protection laws to provide the necessary protection to commercial varieties and to safeguard the interests of farmers and indigenous communities.

It is critical that the countries in the HKH region formulate suitable laws and regulations to protect the rights of traditional communities and provide for sharing of benefits with the rural and tribal farming communities. It is also necessary that the neighbouring countries in the region should have uniform laws in this regard – weaker laws in one country or lax enforcement could be detrimental to the conservation of genetic resources in the region.

This examination of Nepal's policies in the field of genetic biodiversity shows that the focus of the country's policies and strategies is on *in situ* wildlife conservation. The country still has to go a long way to frame laws and policies to conserve all its genetic material.

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