

## Chapter IX : Creating the legal environment for implementing the multilateral system in Nepal

Chiranjibi Bhattarai, Madan Raj Bhatta, Krishna Prasad Pant, Devendra Gauchan, Pratap Kumar Shrestha, Rachana Devkota, Krishna Hari Ghimire, Bidya Pandey, Deepak Upadhyaya and Bal Krishna Joshi



### Key messages

- Nepal has limited enabling policy environment for implementing provisions of the ITPGRFA.
- Nepal's Agro-biodiversity Policy of 2007 has been revised in accordance with the provisions of the ITPGRFA.
- The National Biodiversity Strategy and Action Plan 2014–2020 has considered strategic implementation of the ITPGRFA in harmony with the Convention on Biological Diversity.
- New instruments, such as an agro-biodiversity conservation and utilization act, including regulations, are necessary to implement the ITPGRFA. Such an act and regulations have now been drafted.

Nepal is an agricultural country rich in biodiversity, including agro-biodiversity. Like other countries, Nepal is an active member of the international community and party to various conventions and treaties of international importance. The Convention on Biological Diversity (CBD), the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), and agreements related to membership in the World Trade Organization are the most relevant ones. In terms of food security and sustainable agriculture, the ITPGRFA is particularly important. Approved by the United Nations Food and Agriculture Organization Conference in November 2001, it came into effect on 29 June 2004, and Nepal became a signatory on 19 October 2009.

For a least-developed, agriculture-based country, such as Nepal, the ITPGRFA offers a number of benefits in terms of ensuring national food security and supporting agricultural research

and development. However, so far Nepal has not received many benefits, in particular from the treaty's multilateral system (MLS) of access and benefit-sharing.

One of the reasons for this has been the still poorly developed national policy and legal framework needed to adopt the main components of the ITPGRFA and the MLS. The Interim Constitution and Nepal Treaty Act provide a policy and implementation framework for international treaties and conventions, but have not been operationalized in the case of the ITPGRFA. Regulations have been formulated for implementation of the Seed Act, Plant Protection Act, National Parks and Wildlife Conservation Act, Protection of Environment Act, and Forest Act, but they do not explicitly deal with ITPGRFA/MLS implementation.

In practice, various people and organizations in Nepal have been obtaining plant genetic resources (PGRs) from various sources and through a variety of mechanisms, and have facilitated access to Nepalese genetic resources by other countries. A large number of Nepal's PGRs, especially seeds, have been deposited at various seed banks abroad. Nepal's agricultural research institutions and some NGOs have access to various genetic resources from the CGIAR seed banks and research centres. They have been developing new varieties of crops, fruits, forage species, and livestock with the use of these genetic materials.

Such activities are carried out using the Standard Material Transfer Agreement (SMTA) of the ITPGRFA or through informal channels and on an ad hoc basis. No formal regulatory mechanism has been developed, and no institution has been mandated to keep records of Nepal's PGRs sent abroad or foreign PGRs accessed from Nepal. To be able to implement the ITPGRFA and other international agreements more effectively and efficiently, a coherent and strong national institutional framework must be developed for access and benefit-sharing of genetic resources, and PGRs in particular.

Although the National Agriculture Genetic Resources Centre (NAGRC) has been designated as a depository of genetic materials, it is still not clear whether the institution will be responsible for facilitating MLS implementation as envisioned in the ITPGRFA. This chapter focuses on how best to deal with these institutional gaps. It includes the identification of a competent authority for the implementation of the ITPGRFA/MLS, an analysis of the environment, and suggestions for the revision of the relevant policies and laws to make proper implementation possible.

This chapter is based on a literature review and input from policy meetings, consultations with stakeholders, and interviews with the relevant ministers and CBD and ITPGRFA focal points. The project team members also participated in revision of the National Biodiversity Strategy and Action Plan and were directly involved in the amendment of the Agro-biodiversity Policy 2007.

## Nepal's legal environment

It is clear that the purpose, scope, and jurisdiction of the CBD and ITPGRFA are different from each other. Adequate legal enactment, institutional arrangements, and administrative set up should be introduced to implement both international agreements properly and in a harmonious way in the Nepalese context. A large number of existing policies and acts have some bearing on both international agreements. We review them briefly below.

## Interim Constitution of Nepal 2007

The constitution is the supreme law of the land and the policy document that provides the general framework of governance and guidance on national and international affairs of the state. It confers the power and functions of the executive, legislature, and judiciary; it stipulates the rights of the citizens and the power and functions of the administration and oversight agencies (NLC 2007a). With respect to biodiversity, agriculture, and technology, the Interim Constitution includes the following provisions:

The State shall make arrangements for the protection of forest, vegetation, and biodiversity, their sustainable use and for equitable distribution of the benefits derived from them (Article 35 (5)).

The State shall develop the agriculture sector as an industry by creating conditions for economic progress of the majority of the people who are dependent on agriculture and raising productivity in the agriculture sector through encouragement to the farmers (Article 35 (6)). The State shall, for the progress of the country, pursue a policy of giving priority to the development of science and technology and also pursue a policy of developing local technology (Article 35 (11)).

Article 35 has special significance for the conservation of biological resources and for issues concerning access and benefit-sharing. According to the Interim Constitution, equitable distribution of benefits from the use of natural resources is a responsibility of the state, rather than a fundamental right of all citizens. Furthermore, if the state fails to fulfill these responsibilities, the matter cannot be taken to court by private citizens.

Although the Interim Constitution does not mention PGR exchange, the MLS, or related provisions, it does mention equitable distribution of benefits arising from the use of forests, vegetation, and biodiversity, which also includes PGRs for food and agriculture. It is clear that the constitution has accorded high priority to implementation of the international treaty provisions by making necessary the amendment of existing laws and policies or mandating the enactment of new laws, if required, to fulfill the obligations of the state.

## Nepal Treaty Act 1990

The objective of this act is to make legal provisions for signing, ratification, accession, acceptance, or approval of treaties or agreements to which Nepal is a party, as well as their implementation (NLB 1990).

The act defines “treaty” as an agreement concluded in writing between two or more states, or between any state and any intergovernmental organization and this term also includes any document of this nature, irrespective of how it is designated.

The act gives treaty provisions the force of national laws (Section 9). Where a matter covered by a treaty conflicts with any law in force, the provisions of the treaty are to prevail over national legislation to the extent of the inconsistency (Section 9.1). This principle has been upheld by the Supreme Court with respect to the Convention on the Rights of the Child (*Paudel v. Ministry of Home Affairs* (2058) 43 NKP 423 (1989)).

It is clear that this act gives supremacy to international treaties over national legislation; in the case of a conflict between an international treaty that Nepal has ratified and a national law, the treaty provisions prevail (Belbase and Thapa 2007). Moreover, this law acts as a bridge between national laws and international laws. The act also obliges Nepal to enact necessary legal and policy instruments to implement the provisions of the ITPGRFA.

### Protection of Environment Act 2053 (1997)

The objective of this act is to “make legal provisions in order to maintain clean and healthy environment by minimizing, as far as possible, adverse impacts likely to be caused from environmental degradation on human beings, wildlife, plants, nature and physical objects, and to protect environment with proper use and management of natural resources, taking into consideration that sustainable development could be achieved from the inseparable interrelationship between the economic development and environment protection” (MoPE 1997: preamble).

The act defines “biological diversity” as ecosystem diversity, species diversity, and genetic diversity, and “national heritage” as any such object, site, plant, and animal related to the environment in Nepal that is likely to be important to humans from a natural, cultural, historical, archaeological, scientific, spiritual, esthetic, or social point of view (Section 2(j) and (k)).

The government of Nepal is empowered by this act to delineate as an environment protection area, any area that contains biological diversity, rare wildlife, or plants and places of cultural and historical significance that are considered extremely important from the point of view of environment protection (Section 10) (Belbase 1998).

Thus, this act seems to attempt to cover most aspects of the environment, but it fails to provide a framework for conservation and use of biological resources and does not include provisions related to ITPGRFA.

### Environment Protection Rules 2054 (1997)

The Environment Protection Rules (NLC 1997) framed under the Protection of Environment Act prohibit research without permission. Rule 31 prohibits foreign organizations or associations, or any affiliated person or institution from collecting samples of any living being, bacteria, and plant, or undertake any activity relating to research in biodiversity without obtaining prior approval from the concerned body. (“Concerned body” is defined as any ministry of the government of Nepal connected with the functions set forth in the environmental protection act or rules.)

Thus, Rule 32 describes how to obtain permission. Any foreign organization or person wishing to collect samples for biodiversity research must submit an application to the concerned body, mentioning the objectives of the research. The concerned body must “conduct necessary investigations” before granting permission to collect samples of any living being, bacteria, or plant, or to take any action relating to research in biodiversity. It may also stipulate

conditions. The concerned body is obliged to inform the Ministry of Science, Technology and Environment about any permission granted. These regulations are also relevant to the ITPGRFA and should be used to regulate access to PGRs and benefit-sharing.

### National Parks and Wildlife Conservation Act 2029 (1973)

The National Parks and Wildlife Conservation Act (NPWCA) is one of oldest laws of Nepal in terms of biodiversity conservation. It focuses on habitat conservation. Under it, various regulations, such as the National Parks and Wildlife Conservation Regulations, the Chitwan National Park Regulations, the Bardiya National Park Regulations, Wildlife Reserve Regulations, Elephant Management Regulations, Mountain Protected Areas Regulations, Conservation Area Management Regulations, Conservation Area Government Management Regulations, Khaptad National Park Regulations, Kanchenjunga Conservation Area Regulations, and Buffer Zone Management Regulations have been promulgated and applied to the management of protected areas especially to conserve wilderness, biodiversity, and the landscape (National Panchayat 1973).

Although this act is focused on wildlife conservation and related uses, it also includes provisions regarding the collection of samples of biological resources for scientific research other than the protected wildlife listed in its Schedule 1. Samples can only be collected after obtaining permission from the appropriate official (Section 15).

### National Parks and Wildlife Conservation Regulations 2030 (1974)

These regulations constitute the major tool for implementing the NPWCA, and include various provisions related to conservation and use of biological resources under in-situ conditions.

Rule 22 relates to the collection of samples of wildlife, birds, insects, fish, or any other natural products for scientific research (except the wildlife listed in Schedule 1 of the act); fees are charged for such collection, as listed in Annex 2 of the regulations (NLC 1974). However, Annex 2 does not include fees for the collection of samples of plants and their products. Thus, the regulations do not consider the conservation of PGRs or access and benefit-sharing through the MLS.

It is important to note that the provisions, procedures, and institutional arrangements established under the NPWCA and its regulations are more focused on protecting extinct, rare, threatened, and vulnerable species of wild fauna and flora, as envisaged in the Convention on International Trade in Endangered Species, the World Heritage Convention, the Ramsar Convention, and the CBD.

### Seeds Act 2045 (1988) and the 2008 amendment

The objectives of the Seeds Act include making standard-quality seeds available in a well-planned system of production, processing, and testing to increase production and productivity of various crops (National Panchayat 1988).

The act includes provision for establishment of a National Seed Board (NSB), subcommittees under the board, a seed certification organization, and a central seed-testing laboratory. It gives the NSB

the power to “notify” types and varieties of seeds appropriate for various regions (by publishing a notification in the *Nepal Gazette*), and prescribe the minimum level of purity and germination for these seeds. The act requires truthful labeling of notified types and varieties. In terms of regulation and technical back up, provisions for seed analysts and inspectors have been included. Permission is required for import and export of notified seeds. In addition, the act also includes a provision for recognizing national and international organizations for seed testing and certification.

The NSB formulates and implements seed-related policies and advises the government on seed-related matters. The role of the NSB includes seed program planning and coordination; policy formulation and support; variety approval, release, and registration; preparation of balance sheets based on national seed demand and supply; guidance, coordination, and leadership of all seed-related programs; ensuring the availability of breeder, foundation/source seeds to all seed growers; support for seed-related agencies in developing infrastructure and human resources; breeders’ rights (incentives to breeders); and regular monitoring of the impact of seed-related regulations.

In 2008, the act was amended to bring it into line with international practices in the context of the World Trade Organization. Major amendments were provisions for mandatory inclusion of women on the NSB; establishment of the Seed Quality Control Centre (SQCC) in place of a seed certification organization (with the head of SQCC as an ex officio member of the NSB and the SQCC acting as secretariat to the NSB); licensing of private and public seed-testing laboratories; establishment of crop inspectors; a licensing system for seed traders/businesses; and involvement of the private sector in seed testing (NLC 2008).

The act recognizes the ownership rights of breeders to varieties, but does not specify what such rights entail. It is surprising that the government is prepared to protect breeders’ rights, but completely ignores farmers’ rights to the seed they have been improving, modifying, and conserving for generations. To strike a balance between plant breeders’ rights and farmers’ rights, the government must either make appropriate changes to the Seeds Act or enact new legislation protecting farmers’ rights.

Further, in relation to the MLS, the Seeds Act views seeds as a market commodity rather than a genetic resource. It tries to regulate the import, export, production, certification, release, and supply of seeds that are ready to sow on farms and in nurseries, but does not look at such issues as breeding, conservation, and safeguard of PGRs for the future.

## Seed Regulations 1997

The Seed Regulations were formulated to define rules and regulate the production and marketing of quality seeds (MoAC 1997). They include provisions for institutional arrangements, such as formation of subcommittees under the NSB. They also establish processes for the approval, release, and registration of new plant varieties and provisions for documentation and certification of released varieties by the concerned authority. Ownership of new plant varieties is a key provision that promotes and encourages individual breeders.



## Forest Act 2049 (1993)

Under the Forest Act, the government is empowered to impose restrictions on the collection, cutting, use, transport, sale, and distribution or export of forest products. The objective of these restrictions is to protect biodiversity and conserve the environment. It may do so by publishing a notice in the *Nepal Gazette* (Section 70A). However, this act does not mention access to genetic material or resources (NLB 1992).

## Forest Regulation 2051 (1995)

The regulations include provisions related to timber and non-timber forest products, including herbs, herbicides, and fodder but do not contain provisions relating to PGRs (HMGN 1995).

## Plant Protection Act 2064 (2007)

The objectives of this act are to prevent the introduction, establishment, prevalence, and spread of pests during the import and export of plants and plant products (HMGN 2007). Note: “plant product” is defined in Section 2(b) of the act.

The act empowers the government to designate any central-level office related to plant protection as the National Plant Protection Organization (NPPO) (Section, 6(1)). The powers and functions of the NPPO include

- preparing standards related to the sanitation of plants or plant products to be imported or exported.
- developing manual and enforcing rules covering the examination, testing, inspection, and treatment of plants, plant products, biological control agents, beneficial organisms, and other articles.
- identifying endangered areas and protecting plants and plant products in such areas through quarantine.
- prescribing terms and restrictions related to the trafficking and use of plants and plant products, biological control agents, and beneficial organisms.
- enforcing approved standards regarding the sanitation of plants or plant products to be imported or exported.
- coordinating with phyto-sanitary bodies in other countries and working to recognize each other’s permits and phyto-sanitary certificates.

Any person or organization who wishes to import plants, plant products, biological control agents, beneficial organisms, or means of growing plants such as soil, moss, etc., is required to obtain an entry permit (Section 7(1)). Those who wish to import such materials for their personal use or for research must also obtain an entry permit (Section 7 (3)). The Ministry of Agricultural Development (MoAD) may designate any employee with the appropriate qualifications as inspector of plants, plant products, biological control agents, beneficial organisms, or other articles.

The act requires the NPPO to undertake pest risk analysis and identify “controlled pests” (Section 17 (1); see Section 2(e) for definition of controlled pest). On recommendation from the NPPO, the MoAD must publish a notice of controlled pests in the *Nepal Gazette*.

Any infected material to be imported or transported pursuant to this act must be treated. Those found to be still infected after treatment must be seized and destroyed (Section 24). However, the act is silent about who is responsible for destroying infected plants, plants products, etc. The act requires approval by the government to import, among others, any plant or plant products for the purpose of personal use or research.

### Plant Protection Rules 2031 (1975)

The regulations regarding plant protection require a licence to import plants or plant products and payment of a fee (HMGN 1975: Rule 3). Applications are made to the Plant Quarantine Officer.

The export of plant and plant products requires a certificate (Rule 7). Applications are submitted to the Plant Quarantine Officer along with a detailed description of the products. The officer is empowered to issue a phytosanitary certificate, if he/she does not see any obstacle.

### Draft bills

The existing laws do not provide for access to PGRs through the MLS. They allow for export of PGRs through an import permit from the receiving country or CGIAR centres and provide for phytosanitary certification.

Thus, a new piece of legislation is needed to implement the ITPGRFA. In this regard, the following bills must also be reviewed to determine whether they meet the requirements. Although, the current plant quarantine law does not mention the ITPGRFA or MLS, the existing system does allow the import and export of PGRs to contracting parties and CGIAR centres through an SMTA.

### Access to Genetic Resources and Benefit Sharing Bill 2002

The Ministry of Forest and Soil Conservation (MoFSC), the focal ministry for the CBD, drafted a bill on Access to Genetic Resources and Benefit Sharing in 2002 (MoFSC 2002a). This bill has gone through a series of reviews and revisions, but has yet to be tabled in parliament.

The bill includes provisions related to access and benefit-sharing as stipulated in the CBD:

- *Ownership of genetic resources and genetic material*: There are three categories of owners: individual persons or organizations, local communities, and the government of Nepal if the material does not belong to anyone in the first two categories.
- *Rights to traditional knowledge*: Local communities have rights to their traditional knowledge.



- *Biodiversity register to claim ownership:* Any individual, local community, organization, local government body, or the government of Nepal can separately or jointly register genetic resources and associated knowledge. However, this will require obtaining prior informed consent from the owners of such genetic resources and associated knowledge.
- *Access provisions and conditions:* To obtain access to genetic resources and materials, two procedures must be followed: first, application for preliminary and scientific research and sample collection; second, submission of a proposal for obtaining a licence for access, use, and export.
- *National Genetic Resource Coordination Council (NGRCC):* This council has been proposed to coordinate issues related to access and benefit-sharing.
- *Consent:* Prior informed consent will be provided through a public hearing. Village development committees and municipalities have been given authority to organize such public hearings, make decisions, and submit them for approval to the NGRCC.
- *Benefit-sharing:* Benefits arising from the access to and use of genetic resources and materials are proposed to be shared among four parties: (i) the local community, individual, or organization; (ii) the NGRCC; (iii) the government of Nepal; and (iv) local bodies.

Although the bill addresses bioprospecting, commercialization of products, and sharing of benefits from the outcomes, it does not provide for food security and conservation of PGRs for the common good, especially to meet the food demands of current and future generations as envisaged in the ITPGRFA.

## Plant Variety Protection and Farmers' Rights Bill

The major objectives of this bill are to develop agriculture, promote food security and biodiversity, conserve plant varieties, and secure the rights of breeders and farmers (MoAD 2008). It defines seeds, plants, plant species, farmers, local varieties, local communities, and traditional knowledge and provides for registration of new varieties and breeders' rights over new varieties.

## The policy environment

### Agro-biodiversity Policy 2007

The National Agro-biodiversity Policy aims to promote conservation and sustainable use of agricultural genetic resources, traditional knowledge, skills, and practices and fair and equitable sharing of benefits to ensure food security and reduce poverty (NLC 2007b). The objectives of the policy are to:

- Strengthen food and nutrition security, as well as support agricultural development through conservation, management, and sustainable use of agro-biodiversity.
- Protect and promote farmers' traditional knowledge, skills, innovations, technology, and practices.

- Establish an equitable and judicious distribution system of opportunities and benefits arising from access to and use of agricultural genetic resources and materials.
- Contribute to enhancing ecological balance by protecting and promoting agro-biodiversity in the long term.

The policy provides for undertaking research and studies, supporting the traditional seed supply system, developing diversity-based links with markets and industry, and incorporating traditional knowledge and skills into the generation of scientific knowledge and technology for conservation, management, and sustainable use of agro-biodiversity. It also mentions ways and means to protect traditional knowledge, skills, and innovations and maintain biodiversity registers. The policy supports the principle of prior informed consent in accessing genetic resources and benefit-sharing under mutually agreed terms. It also emphasizes the need for a one-window system for access and benefit-sharing. A gene bank has been established in line with the objectives of the agro-biodiversity policy.

This is a major policy in terms of implementing the ITPGRFA. However, it was adopted before Nepal became a signatory of the treaty, and it must be amended to incorporate some of the key provisions of the treaty. If that were done, the government could move forward with implementation of those provisions.

### National Agriculture Policy 2004

The National Agriculture Policy aims to improve livelihoods by transforming subsistence agriculture into a commercialized and competitive system (NLC 2004). The major objectives of the policy are to:

- Enhance overall agricultural production and productivity.
- Transform Nepalese subsistence agriculture into competitive agriculture.
- Conserve, promote, and sustainably use natural and environmental resources and biological diversity.

It encourages the conservation and sustainable use of natural resources and biological diversity. It also identifies the role of in-situ and ex-situ conservation in the agriculture sector to promote the sustainable use of genetic resources.

### Nepal Agriculture Extension Strategy 2007

The Ministry of Agriculture and Cooperatives approved this strategy in 2007 to set up participatory, cost-effective, and results-oriented agricultural extension services (MoAC 2007). The goal of the Nepalese agricultural extension service is to contribute to the overriding national poverty reduction goal by increasing the efficiency and productivity of agriculture and competitiveness in the agricultural system's value chain (from production to marketing) within the sustainable livelihoods framework. This strategy is consistent with the goal of the National Agriculture Policy. It assigns high priority to food and nutrition security, income generation, environmental conservation, biodiversity, equity and inclusion, value addition and quality products, commercialization, and sustainable livelihoods.

## Agriculture Perspective Plan

This plan is an accounting framework for generating agricultural growth in the country (NPC 1995). It focuses on agriculture-led economic growth for food security, poverty reduction, and economic development. The plan is technology driven and based on priority inputs such as fertilizer, irrigation, roads, electrification, and technology. It does not directly address seeds, PGRs, or germplasm exchange.

## Three Year Plan (13<sup>th</sup> Plan)

The 13th plan is a long-term vision to upgrade Nepal, which is still a least-developed country, to a developing country by 2022 (NPC 2013). The objective of the plan is to bring a feeling of direct positive change in the living standards of common people by reducing economic and human poverty. One of the priority areas of the plan is increasing productivity, diversification, and commercialization of the agricultural sector.

In the approach paper, the objectives for the agriculture sector include developing and expanding environment-friendly agricultural technologies that mitigate the negative effects of climate change; and conserving, promoting, and using agro-biodiversity. The plan clearly emphasizes the conservation of agro-biodiversity in the country. Detailed programs to implement the provisions described in the approach paper are expected to be laid out in the 13th plan document.

## Agriculture Development Strategy 2014

This strategy, developed by the government, envisions a self-reliant, sustainable, competitive, and inclusive agricultural sector that drives economic growth and contributes to improved livelihoods and food and nutrition security. It has four components: governance, productivity, commercialization, and competitiveness (MoAD 2015). Through inclusiveness, sustainability, private sector engagement and cooperative development, and market infrastructure, the plan is to achieve food and nutrition security, poverty reduction, agricultural trade competitiveness, higher and more equitable income for rural households, and strengthened farmers' rights.

Promoting community-based seed production and agro-biodiversity in remote areas is a way to implement Seed Vision 2025 and increase agricultural productivity. The Agricultural Development Strategy (ADS) emphasizes strengthening the gene bank and animal genetic resource program to allow establishment of intellectual property rights. To implement a biodiversity policy, the ADS proposes strengthening the collection, classification, and assessment of diversified bio-resources relevant to agriculture; initiating a system of registration of agro-biodiversity; developing regulations for the research and experimentation with respect to biodiversity and genetic resources; and developing regulations to prevent genetically modified organisms from having a negative impact on biodiversity, genetic resources, and human health. However, the ADS does not address the exchange of genetic materials.

The ADS impact framework proposes strengthening farmers' rights, and these are not limited to rights over their PGRs. In the ADS, farmers' rights include ensuring farmers' participation in policy formulation, planning, decision-making, implementation, and monitoring of the strategy. In addition, the ADS also proposes formulating legislation related to food rights and

food sovereignty consistent with the principles of the Interim Constitution. Although the ADS recommends a farmers' commission to help advance farmers' rights, its mandate, composition, and regulation are not clearly laid out. The rights of farmers over genetic resources may be included in the mandate of the commission.

## National Seed Policy 1999

The National Seed Policy focuses on seven areas of the seed sector (NLC 1999): variety development and maintenance, seed multiplication, quality control, increased involvement of the private sector, seed supply, institutional strengthening, and biotechnology. Its main objective is to provide a policy framework and guidelines to ensure production and distribution of good-quality seeds, promote the export of such seeds, make seed commerce effective in terms of existing world trade, and conserve and protect rights over seeds of local crop varieties with distinctive genetic traits.

## Climate Change Policy 2011

One of the goals of this policy is to improve livelihoods by mitigating and adapting to the adverse impacts of climate change (MoE 2011). In the technology development, transfer, and utilization section, it includes a provision for identifying, developing, and using agricultural species and varieties that tolerate drought and flooding. This provision is relevant to PGRs and can be taken as a realization of the need that the ITPGRFA has tried to address and meet.

## Institutions dealing with PGRs in Nepal

Nepal has several institutions working in the field of genetic materials and resources (see chapter 1). The major ones are listed here.

### Ministry of Agricultural Development and its agencies

The MoAD is responsible for agricultural development and has various wings for this purpose.

- Department of Agriculture is the largest user of modern plant varieties released by the NARC and also through the import of seeds. This department has a network all over the country to assist farmers in the adoption of modern varieties. However, it has limited programs for in-situ and on-farm conservation of PGRs.
- SQCC is responsible for controlling the quality of seed. It has the capacity to test the quality of seeds and to identify living modified organisms.
- NARC is the major user of PGRs in the country. Its plant breeding programs use domestically available PGRs as well as those received from the CGIAR system. In addition to several research programs related to the conservation of PGRs in situ, it also conserves endangered PGRs through ex-situ collection via the NAGRC, which has more than 10000 accessions.
- National Agro-biodiversity Conservation Committee is an apex body formed under the MoAD and chaired by the secretary of MoAD with multistakeholder and multisectoral representation to implement the Agro-biodiversity Policy 2007.

## Ministry of Forest and Soil Conservation and its agencies

The MoFSC is the national focal point for implementing the CBD, the Cartagena Protocol on Biosafety, the National Clearing House Mechanism for CBD, and the National Biosafety Clearing House for the Cartagena Protocol. The government has recently endorsed the Nepal Biodiversity Strategy and Action Plan 2014, and the MoFSC has overall responsibility for formulating and implementing policies and programs related to the conservation, sustainable use of biological diversity, and equitable sharing of the benefits arising out of their use, keeping records of relevant activities, and communicating with the CBD Secretariat and other conventions related to biodiversity. The MoFSC implements its plans and programs through five departments, but the following are relevant to PGRs.

- Department of Plant Resources is responsible for research, exploration, identification, and providing technical inputs to the ministry on plant resources in the country. It operates botanical gardens, maintains tissue cultures, and uses other traditional technologies.
- Department of National Parks and Wildlife Conservation conserves animal and plant resources in in-situ conditions and is the regulating authority for PGRs in protected areas, which amount to a significant share of biodiversity in Nepal.
- Department of Forest is responsible for regulating and conserving PGRs in forest areas.
- National Biodiversity Coordination Committee has been formed under the MoFSC to mainstream biodiversity in development programs, projects, and policies. This committee is a multisectoral apex body in terms of biodiversity conservation. It has established five thematic subcommittees — Forests and Protected Areas, Agro-biodiversity, Biosecurity, Genetic Resources, and Sustainable Use of Biodiversity — to provide scientific and technical input. The work of the thematic subcommittees on Agro-biodiversity, Genetic Resources, and Sustainable Use of Biodiversity is similar and may overlap. In relation to the ITPGRFA, these three subcommittees may be mutually relevant.

## Agriculture and Forestry University

This newly established university has a Department of Plant Breeding and a Biotechnology Centre, which both use PGRs for breeding.

## Tribhuvan University

Three departments of this university — Botany, Biotechnology, and Microbiology — deal with PGRs. The Institute of Agriculture and Animal Sciences, a major institute of the university, is particularly engaged in research and teaching of PGRs.

## Nepal Academy of Science and Technology

This academy conducts research, including work in biotechnology and plant-based products.

## Ministry of Science, Technology and Environment

This ministry deals with environment, and biodiversity is one of its areas.

## Policy amendments, strategy, and action plan

### Agro-biodiversity Policy

In terms of implementing the ITPGRFA, the Agro-biodiversity Policy of 2007 is an important document, but it had to be amended to incorporate some of the ITPGRFA's key provisions. We drafted such content. The revised Policy (20014) was widely circulated and discussed, comments and suggestions were incorporated, and the draft was approved by parliament.

Major achievements of the revision are the incorporation of MLS-related provisions and a commitment to an implementation mechanism, including the need for a separate law to comply with the ITPGRFA and implement its provisions. Specific issues related to ITPGRFA that are addressed in the Agro-biodiversity Policy 2014 are:

The policy focuses on identification, conservation, promotion, development, and sustainable use of agricultural biological diversity.

- The MLS, the national gene bank, and “on-farm” are defined.
- Necessary arrangements for the registration of agricultural biodiversity and traditional knowledge are to be made at the national and local levels after such traditional knowledge is documented, recorded, or registered.
- Access to genetic materials and resources in the custody of international gene banks will be through the NAGRC.
- In-situ conservation, restoration, research, and development related to Nepal's genetic material and resources conserved at the international level will be promoted, and partnerships among the NAGRC, semen bank, community seed bank, agriculture, horticulture, and livestock farms, and other research institutions will be strengthened.
- Farmers involved in agricultural biodiversity conservation will be identified and encouraged to conserve, promote, and use agro-biodiversity.
- Technical and financial support at the national and international levels will be mobilized or generated to strengthen institutions and expand the network of the NAGRC by including the conservation of livestock, aquatic life, and bird genetic resources.
- Arrangements will be made to make proper use of the MLS under the ITPGRFA.
- Necessary arrangements will be made to ensure that farmers receive their share of the benefits from access to agriculture genetic materials and resources including associated traditional knowledge.
- Nepal's Annex I PGRs and resources will be developed in accordance with the ITPGRFA to implement, coordinate, and operate the MLS and to obtain maximum benefits from the system. In this connection, competent national authorities will be designated through legal arrangements, and the authorities will have a clear mandate and be well equipped with resources.



- A one-window system will be adopted to regulate various aspects of the ITPGRFA.
- Necessary arrangements will be made so that laws and policies related to intellectual property rights will not have an adverse impact on farmers' rights.
- To enforce and monitor the policy, necessary laws, rules, and guidelines and procedures will be formulated and essential institutional arrangements will be made.

## National Biodiversity Strategy and Action Plan

In 2014, Nepal's Biodiversity Strategy (MoFSC 2002b) was revised and renamed National Biodiversity Strategy and Action Plan (NBSAP) 2014–2020 (MoFSC 2014). The new version includes strategies and plans related to agro-biodiversity conservation and use, particularly with respect to the ITPGRFA, including the following.

- Identification of the gaps in policy, legislation, and institutional mechanisms required for implementation of the ITPGRFA.
- The need for coherent guidelines to promote synergy among biodiversity-related multilateral environmental agreements, such as the CBD, the Convention on International Trade in Endangered Species, Ramsar, World Heritage Convention, and the ITPGRFA, to ensure ease of implementation.
- Designation of the Food Security and Environment Division of MoAD as a focal point and implementing agency for the ITPGRFA.
- Establishment of an efficient system for the exchange of information on all types of agricultural genetic resources and implementation of the ITPGRFA and MLS.
- The need to facilitate access to genetic resources and materials and associated traditional knowledge with prior informed consent and on mutually agreed terms.
- Establishment of a one-window system for regulating the provisions of international treaties related to genetic resources (both plant and animal).
- Establishment and strengthening of the functional link between the NAGRC (gene bank) and community-based seed or gene banks.
- Development and implementation of incentives for on-farm conservation of agro-biodiversity and elimination of perverse incentives (if any).
- Development and implementation of a plan for effective collaboration among national and international research organizations, the private sector, and academic institutions for conservation of agro-genetic resources.

## A new instrument

Considering the current uncertain national scenario, a separate legal instrument is essential to regulate and facilitate adoption of the MLS in Nepal. A competent authority with legal power and capabilities to initiate the necessary legal and administrative steps is essential. Executive orders, guidelines, or rules are not sufficient to introduce, operate, and regulate the MLS in Nepal; therefore, a new law is needed to implement the treaty nationally and to regulate and facilitate the MLS process. In accordance with the conclusions of various level meetings, an agro-biodiversity conservation and utilization act has been drafted to implement the ITPGRFA. This draft document was discussed at several meetings and in other consultation forums.

## Problems

The Interim Constitution of Nepal, 2007 obligates the state to implement international treaties. Along the same lines, the Nepal Treaty Act, 1990 provides an opportunity for implementation of international treaties of which Nepal is a party. It obliges Nepal to enact national legislation and provides supremacy of treaty provisions over national laws in case of contradictions. Some sectoral laws and policies related to these treaties and conventions exist and are in force, but they do not cover all aspects. Approval of some bills, such as the Access to Genetic Resources and Benefit Sharing Bill and the Plant Variety Protection and Farmers' Rights Bill, has been pending for years. No legislation has been enacted to implement the ITPGRFA. A national focal point has been designated to implement the provisions of the treaty, but institutional mechanisms to enforce such provisions are lacking. Likewise, not a single policy related to agriculture and biodiversity mention the treaty or address its provisions.

## Institutional framework

Various institutions and organizations have been working in the field of PGRs for food and agriculture. Some are oriented toward research and development, others toward service and extension, and others toward regulating, policymaking, and decision-making.

Two ministries, i.e., MoAD and MoFSC, are relevant in terms of implementing the ITPGRFA. According to the government's Allocation of Business Regulations, responsibility for implementing the ITPGRFA rests with the MoAD, which has been made the national focal point for the treaty. The MoFSC is the national focal point for the CBD, which also has provisions regarding access to genetic resources and benefit-sharing. Legislation, such as the Protection of Environment Act, National Parks and Wildlife Conservation Act, Forest Act, Seed Act, and Plant Protection Act, are also relevant to biodiversity conservation and use, but none of these includes institutional provisions or a mandate to deal with the MLS.

The NAGRC has established a safety duplication process for some accessions of PGRs at various CGIAR centres, but the accessions have not yet been deposited in the seed vault in Norway (the global facility where many countries and organizations have deposited duplicates). The issue of ownership of these genetic materials collected from farmers' fields is an emerging policy issue. Until now, these materials have been exchanged with international gene banks and researchers on the basis of the SMTA, assuming them to be the property of the state. Without institutional arrangements at the national and local levels, identifying both the concerned government and community institutions, it will be complicated to maintain or enhance access to PGRs and benefit-sharing (Gautam 2008).

Strong and useful local institutions, such as the biodiversity conservation and development committees and community seed banks (CSBs) have emerged and are operating in Nepal. Since the establishment of the national gene bank, CSBs have been asking for their share of credit through proper links and coordination of material transfers between the national gene bank and CSBs. In principle, such links provide benefits to the communities and link ex-situ conservation with in-situ on-farm conservation, but, in practice, the details have not been worked out and a strong research base and stakeholder agreement are lacking.

## Legal framework

Nepal began to draft legislation on access to genetic resources and benefit-sharing in 2001, but it has not yet been enacted. If such legislation were enacted, the situation would have been different with respect to the ITPGRFA, despite the fact that the scope of the access legislation under the CBD and ITPGRFA is different. Under the CBD, legislation must cover issues related to access to genetic resources for bioprospecting, commercialization of products, and sharing of benefits arising thereof, mostly of a bilateral nature and having monetary benefits. Laws implementing the ITPGRFA must cover facilitated access to PGRs for the sake of food security and agriculture to meet present and future needs.

The Protection of Environment Act, National Parks and Wildlife Conservation Act, Forest Act, Seed Act, Plant Protection Act are some of the sectoral laws that are relevant to biodiversity conservation and use, but none includes provisions to deal with access to genetic resources and benefit-sharing. The ITPGRFA obliges Nepal to designate a competent authority to facilitate these processes, administer requests, grant permissions, and keep records of the flow of PGRs. However, no existing institution can do that without a legal mandate. A law is required to explicitly create environment for the establishment, composition, powers, functions, and duties of an institution to discharge the nation's commitments and responsibilities under the ITPGRFA.

## Conclusion

Nepal ratified the ITPGRFA on 2 January 2007 and became party to it on 19 October 2009. The MoAD is the focal ministry for the treaty responsible for taking the initiatives required to fulfill commitments under it. Nepal is also a party to the CBD, which has been in force since 1993. The MoFSC serves as the focal ministry for the CBD. The ITPGRFA and CBD both include provisions related to access to genetic resources and benefit-sharing, and both multilateral environmental agreements oblige the national parties to enact necessary laws to facilitate implementation of their provisions.

Currently, there is no formally designated competent national authority to make decisions or coordinate implementation of the ITPGRFA in Nepal. A competent national authority can only be designated by law, and there is no legal basis in Nepal's current regulatory framework to make such an appointment, because there is no law regarding access and benefit-sharing.

In the absence of national legislation, access to PGRs conserved and managed under in-situ and on-farm condition by farmers and farming communities, as well as those held in ex-situ conditions in the national gene bank remain unregulated. The NAGRC has been, ad facto, providing access to PGRs held in its gene bank as well as new plant varieties and PGRs under development.

In the political system and legal culture of Nepal (and other countries), there is a tradition of confirming rights and obligations through explicit enactment of laws, including executive

orders, regulations, and legislation. In the absence of such legal confirmation, actors can feel uncertain about what they can and cannot do and vulnerable to accusations that they have done the wrong thing. As soon as possible, Nepal must enact two laws addressing the ITPGRFA and CBD to facilitate use of the MLS in PGR flow from and to the country, provide access to genetic resources for the purpose of bioprospecting, and fulfill its obligations under the treaties.

In summary, implementing the ITPGRFA is urgent, as the country can benefit enormously from the MLS, can secure ownership of the genetic resources deposited in international gene banks, and can make accessing parties accountable for sharing both ownership and benefits.

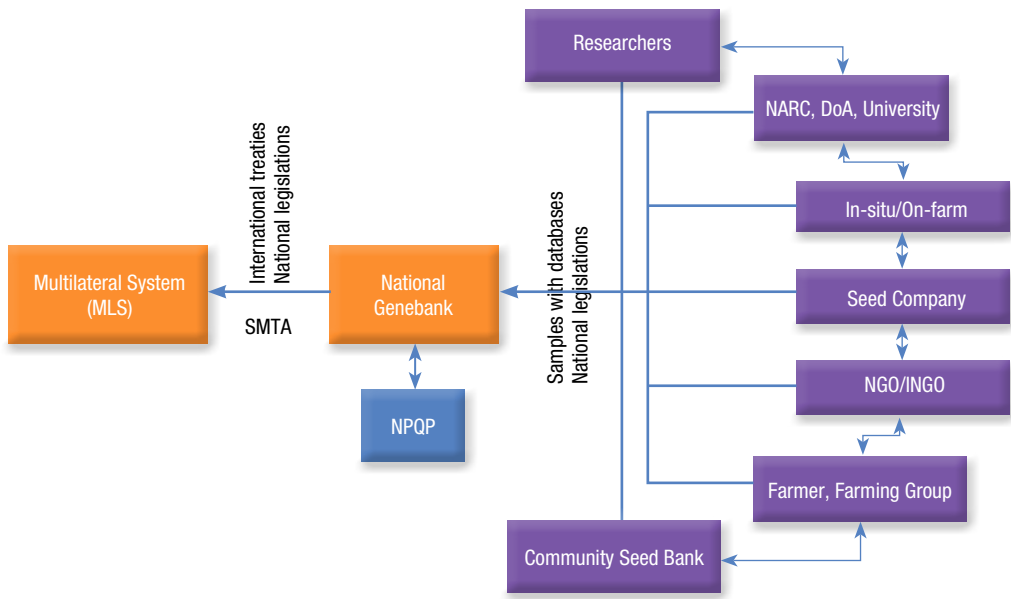
## Recommendations

Based on assessment of Nepal’s national laws and policies and consultations with concerned stakeholders, Nepal must take the following steps to implement the ITPGRFA.

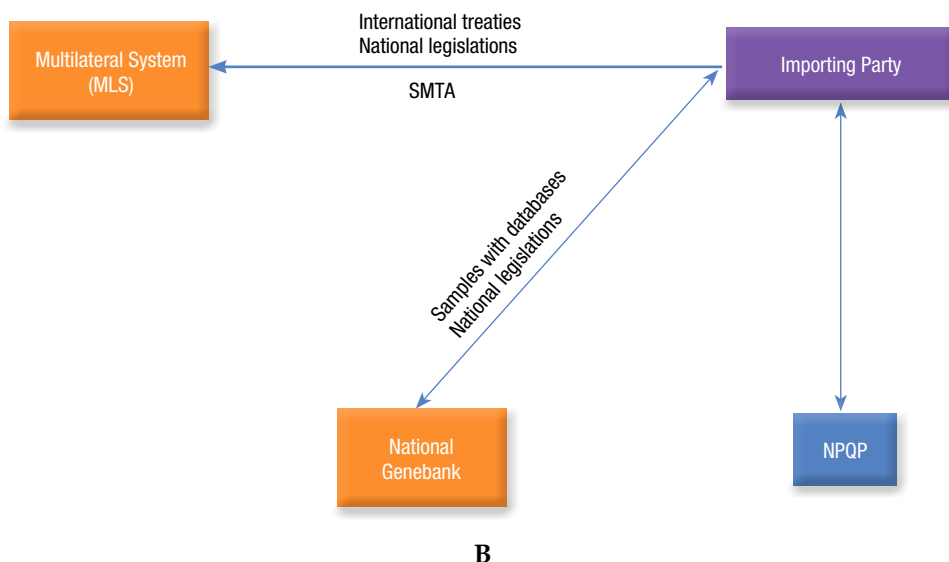
### Institutional/administrative framework

The competent authorities for implementing the ITPGRFA at the national level are the NAGRC and relevant institutions: MoAD, MoFSC, National Biodiversity Coordination Committee, National Agro-biodiversity Conservation Committee, SQCC, and quarantine offices.

A one-window system for exporting PGRs and a multiple-window system for importing PGRs are suggested (Figure 9.1, A and B).



A



**Figure 9.1.** Proposed system for exporting (A) and importing (B) plant genetic resources in Nepal.

## Legal framework

Nepal should enact a new law on PGRs for food and agriculture that is in harmony with other laws. It should also spell out that the PGRs under its scope are not subject to intellectual property rights and not to be used for business or profit, to ensure that the International and Tribal Peoples Convention (ILO 1989) does not conflict with the ITPGRFA.

Likewise, if the pending Access to Genetic Resources and Benefit Sharing Bill is to move ahead, it should exclude PGRs from its scope, in line with the Nagoya Protocol under the CBD, which is yet to be ratified by Nepal.

## Policy framework

- There is a need to develop an ITPGRFA–MLS implementation strategy and action plan to implement the Agro-biodiversity Policy 2014.
- Based on the Agro-biodiversity Policy, an agro-biodiversity conservation and utilization act and regulations must be developed.
- Immediate action to implement the NBSAP is necessary for harmonizing the ITPGRFA.
- Nepal should ratify the Nagoya Protocol, which clearly spells out the ITPGRFA and limits the scope of access to genetic resources and benefit-sharing provisions of the CBD for bioprospecting by excluding PGRs to be used for food and agriculture.

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