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Chapter

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Bikash Paudel and Sajal Sthapita

1. Introduction

Nepal has ratified both the Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). As such, it has accepted its role as a duty-bearer to its people, including the duty to uphold farmers' rights to plant genetic resources for food and agriculture and their associated traditional knowledge. Nepal opted to develop a *sui generis* system for plant variety protection in the process of accession to the World Trade Organization, which constitutes the nation's normative commitment to safeguarding farmers' rights. However, governments of developing countries like Nepal often are weak in the capacity to develop and implement mechanisms to ensure these rights are realised in practice.

A rights-based approach can empower rights-holders to claim or protect their rights from duty-bearers. While a focus on rights-holders is essential, it is arguably equally important to build the capacity of duty-bearers as well. This is especially true for developing countries, where the government as a duty-bearer may not have the capacity to ensure these rights despite having agreed to be legally bound to do so. This chapter focuses on experiences from the village of Tamaphok in the Sankhuwasabha district of Eastern Nepal, where a community-based biodiversity management (CBM) approach was undertaken with added emphasis on ensuring farmers' rights.

¹ The authors would like to acknowledge the contributions of Pitambar Shrestha, Bir Bahadur Tamang, Laxmi Rai, Pashupati Chaudhary, and Abishkar Subedi.

² Adhikari, K., 2008. *Intellectual Property Rights in Agriculture: Legal Mechanisms to Protect Farmers' Rights in Nepal*. Forum for Protection of Public Interest and South Asia Watch on Trade, Economics and Environment: Kathmandu, Nepal.

2. Internationally Recognised Rights

Adopted in 1992, the CBD recognizes the rights of holders of traditional knowledge, innovations and practices. Specifically, Article 8(j) states that:



[E]ach Contracting Party shall...respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities...and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.



Similarly, the ITPGRFA encourages contracting Parties to adopt an international multilateral system of access to and sharing of benefits of plant genetic resources for food and agriculture. Notably, it also calls on Parties to realise Farmers' Rights (Article 9, among others), including rights to the protection of relevant traditional knowledge, to the equitable sharing of benefits arising from the use of genetic resources for food and agriculture and associated traditional knowledge, and to participate in decision-making on relevant matters.

Nepal ratified the CBD in 1993 and the ITPGRFA in 2009. In doing so, it committed to a) ensuring the right to seeds, b) protecting traditional knowledge associated with genetic resources, c) ensuring fair and equitable sharing of the benefits accruing from the use of such genetic resources and traditional knowledge, and d) ensuring participation of farmers in decision-making.

Provisions that recognise community rights over genetic resources are included in Nepal's National Seed Policy 2000, Biodiversity Strategy 2002, and Agrobiodiversity Policy 2007. These policies have already been adopted, although they have been poorly implemented. The Ministry of Forest and Soil Conservation, the national focal point for the CBD, has prepared a draft law on access to genetic resources and sharing of benefits from their use. However, the draft has been pending since 2003 due to some disagreements among stakeholders, especially representatives of Indigenous communities.³ In addition, the Ministry of Agricultural Development has prepared a draft law on Plant Variety Protection and Farmers' Rights. Despite these efforts, neither of these laws has been adopted yet.

Two major obstacles prevent the realisation of farmers' rights over genetic resources and associated traditional knowledge in Nepal. First, as the rights-holders, farming communities lack information and knowledge about their rights and hence either do not demand them or do not seek to develop capacity to do so. Second, as the duty-bearer, the state also lacks capacity to respect, protect, and fulfil their rights. This is evident by the fact that, despite recognising these rights in national strategies and policies, the state has not yet enacted legal frameworks

³ The draft proposed a village-level public hearing as a means to gaining prior informed consent of the holders of genetic resources and traditional knowledge in cases of access by a third party.

and other mechanisms to realise them in practice. As a developing country embroiled in political challenges and a stalled peace process, the government has been largely unable to secure its people's economic, social, and cultural rights. There is a lack of conviction among other stakeholders such as researchers, development workers, and civil society organisations that such legal frameworks will be in place in the near future, as illustrated by the little work and few public discussions on the subject in recent years.



Figure 1: Potato is one of the major crops of the Tamaphok Village Development Committee in the Sankhuwasabha district of Nepal. © Pitambar Shrestha, LI-BIRD

3. Building Capacity of Rights-holders

Although the legal framework for farmers' rights is not yet in place, the building of farmers' capacity on these issues will prepare them to claim their rights when the framework is ready. Importantly, it will also enable the farmers to demand for and participate in the making of the legal framework itself.

Several factors at the community level can help ensure farmers can claim their rights, including awareness of the biodiversity in their communities and how they maintain and use it, and

⁴ Human Rights Watch, 2012. "Nepal", pages 347-355 in Human Rights Watch, World Report 2012: Events of 2011. Human Rights Watch: USA.

understanding of the concept of farmers' rights and the relation of these rights to biodiversity. Also of use are various forms of documentation that can help prevent knowledge loss and foster its use, and act as a legal basis to combat biopiracy and engage in access and benefit sharing arrangements. Finally, farmers' institutions are needed to manage documentation, develop and implement on-farm conservation plans, facilitate an agreed process in situations that seek the prior informed consent of the farming community, and build the capacity of the community to participate in decision-making processes and, where necessary, negotiate the fair and equitable sharing of benefits.

Experiences from a project entitled "Promoting innovative mechanisms for ensuring farmers' rights through implementation of access to and benefit sharing regime" suggest that the CBM approach can help strengthen farming communities and their institutions and prepare them to safeguard their farmers' rights. The following sections provide more detail about the CBM approach and explore the experiences with the same in the Tamaphok Village Development Committee (VDC).⁵

3.1. Community-based Biodiversity Management Approach

The CBM approach was developed by the Nepalese non-governmental organisation Local Initiatives for Biodiversity, Research and Development (LI-BIRD) in collaboration with the Nepal Agricultural Research Council, Bioversity International, and farmers from Begnas (Kaski district) and Kachorwa (Bara district) through participatory action research projects undertaken from 1998 to 2006. It has emerged as a participatory approach instrumental to empowering farmers, farming communities, and local institutions to take control over and manage biodiversity for social, economic, and environmental benefits. The capacity building process inherent in this approach provides the foundations for ensuring farmers' rights in Nepal. With greater awareness and understanding of biodiversity, it has also enabled communities to claim their rights over genetic resources and associated traditional knowledge.

The sustainable livelihood framework of a farming community consists of natural, social, human, physical, and financial capital assets. In Nepal, rural farming communities tend to be endowed with natural and social capital but have limited access to physical and financial capital. The core intervention of the CBM approach is to leverage and build upon existing forms of capital in farming communities to enable them to better organise themselves to generate other forms of capital that are missing or lacking but also necessary for their development. This is an alternative development model where, in the case of Nepal, financial and physical capitals are built in synergy with natural capital rather than by exploiting it unsustainably.

Social learning and multiple benefits of the CBM approach have contributed to its up-scaling from just a few communities to national- and international-level implementation. District

⁵ A Village Development Committee is the smallest administrative unit of local government in Nepal.

⁶ Carloni, A.S., and E. Crowley, 2005. *Rapid Guide for Missions: Analysing Local Institutions and Livelihoods.* Food and Agriculture Organization of the United Nations: Rome.

Agriculture and Development Offices of the government of Nepal are now working with communities in 10 districts and LI-BIRD to promote this approach to endogenous development. With the support of LI-BIRD, more than 30 communities in 18 districts have utilised the CBM approach through at least four different projects in Nepal; other NGOs in the region are also adopting it through a dedicated CBM-South Asia programme.⁷

In the Nepali experience, the CBM process includes eight steps (see Box 1),⁸ which can also be understood as components of CBM that can be undertaken in different sequences or even simultaneous to others, depending on the context and community.

After site selection and validation for its appropriateness for community-led on-farm conservation, the CBM approach has been found to pass through the following 8 steps:

- i. Enhancing community awareness;
- ii. Understanding local biodiversity, social networks and institutions;
- iii. Building capacity of community institutions;
- iv. Setting up institutional working modalities;
- v. Consolidating community roles in planning and implementation;
- vi. Establishing a CBM trust fund;
- vii. Community monitoring and evaluation; and
- viii. Social learning and scaling up of community collective action.

These steps can also be understood as components of the approach and, depending on the community's context, the process may begin at different steps and multiple steps may also be undertaken simultaneously. That is, this community-based approach can take non-linear and context-specific trajectories.

Box 1: The community-based biodiversity management approach, as it is applied in Nepal

3.2. Empowering Rights-holders in Tamaphok

The Tamaphok VDC lies in the southern part of the Sankhuwasabha district in the eastern hills of Nepal at around 27°19′ North and 87°40′ East (see Figure 2). Tamaphok has a hilly ecosystem ranging from mid to high hills with about 2000 millimetres of annual rainfall. The total area of the Tamaphok VDC is 6200 hectares, 3272 of which are covered by temperate highland forest. More than 1425 households with a total population of 7096 reside in Tamaphok, with a literacy rate of about 56 percent. Yakkha, Chhetri, Brahmins, and Rai are the dominant ethnic groups.

⁷ This includes Anthra and the GREEN Foundation in South India, Unnayan Bikalper Nitinirdharoni Gobeshona (Policy Research for Development Alternatives) in Bangladesh, and the Green Movement of Sri Lanka.

⁸ Sthapit, B., P. Shrestha, A. Subedi, P. Shrestha, M. Upadhyay, and P. Eyzaguirre, 2008. "Mobilizing and empowering communities in biodiversity management", pages 160-165 in Thijssen, M. H., Z. Bishaw, A. Beshir, and W. S. de Boef (eds.), *Farmers, Seeds and Varieties: Supporting Informal Seed Supply in Ethiopia*. Wageningen International: Wageningen.

Tamaphok's rich agricultural and biological diversity forms the backbone of the community's livelihoods. About 72 percent of people are dependent upon agriculture as the primary source of livelihood and seasonal agricultural labour as the second major source. Maize and rice are the main cereal crops and potato and cardamom are the main income-generating crops. About 35 varieties of maize, rice, wheat, and finger millet, 83 varieties of 49 vegetables, 29 varieties of 19 fruits, and 33 varieties of 18 other food species are found in Tamaphok. Non-timber forest products also play a crucial role in the community's subsistence, including at least 9 edible uncultivated foods, 10 medicinal plants, and 3 other non-timber forest products. At least 10 species of medicinal plants have been used for treatment of various ailments for generations. 10



Figure 2: Location of Tamaphok VDC in Sankhuwasabha district, Nepal. © Sajal Sthapit, LI-BIRD

⁹ Information from the 2008 version of the Community Biodiversity Register of Tamaphok Village Development Committee of Sankhuwasabha district, maintained by the Biodiversity Conservation and Development Committee of Tamaphok.

¹⁰ Paudel, B., B. B. Tamang, B. R. Regmi, and P. Shrestha, 2008. *Site Selection Report: Promoting Innovative Mechanisms for Implementing Farmers' Rights through Fair Access to Genetic Resources and Benefit Sharing Regime in Nepal*. LI-BIRD: Pokhara.

The communities of Tamaphok have traditional knowledge, practices, and skills regarding the importance, cultivation, extraction, and use of these resources. However, due to various factors such as illiteracy and lack of market intelligence, they are largely unaware of the high commercial value of these resources; this is evidenced by the fact that at least 639 patents have been granted by the Japanese patent office alone over genetic resources found and used (not exclusively) in Tamaphok (see Table 1).¹¹

Table 1: Medicinal and non-timber forest species found in Tamaphok (and similar ecological zones of Nepal) and patents granted over them by the Japanese patent office as of June 2011

Local and scientific names of medicinal and non-timber forest species	Number of patents
Argheli (<i>Edgeworthia gardener</i>)*	22
Aswaganda (<i>Withimia somnifera</i>)	13
Bis (Aconitum spicatum)	44
Bojho (Acorus calamus)	25
Charpate (Anisomeles indica)	240
Chiraito (Swertia chirata)	182
Lokta (Daphne bhoula or D. papyracea)*	18
Padmachal (Rheum austral)	60
Pakhanbed (<i>Berginia ciliata</i>)	18
Thulo Okhati (Astilbe rivularis)	13
Timur (Xanthozylum armatum)	4
TOTAL	639

^{*} Non-timber forest species

The source of farmers' rights lies in their role as guardians of plant genetic resources for food and agriculture, embodied in sophisticated systems of traditional knowledge and practices that are cultivated and used over generations. Through the CBM project, an analysis was conducted of existing gaps in knowledge and information among farming communities, including the Tamaphok VDC, about their rights over genetic resources and traditional knowledge. It was found that despite the existence of their rights at the international level, the farming communities themselves were largely unaware of them. The following major gaps to realising farmers' rights were identified:

1. Lack of awareness about the extent of richness of biodiversity in the region and its potential for commercial use.

¹¹ Industrial Property Digital Library, 2011. Last accessed 20 June, 2012, at: http://www.ipdl.inpit.go.jp/homepg e.ipdl.

- 2. The above led to lack of documentation, validation, and clarification of legal status and ownership of local biodiversity and associated traditional knowledge.
- Limited awareness about rights, responsibilities, and possible costs and benefits
 associated with bio-prospecting of their genetic resources and traditional knowledge.
 Most farmers were also unaware of the national policies and strategies and
 international laws governing these issues.
- 4. The traditional arrangements for ensuring sustainable harvesting had become increasingly weak due to social changes and the nationalisation of forests by national policies of 1970s that removed communities' ownership of forests. To fulfil this gap, there is a need for community institutions to manage sustainable harvests of genetic resources and use of associated traditional knowledge.
- 5. Lack of methods, techniques, and institutional structures to act on the community's behalf to grant or deny prior informed consent and distribute any benefits.
- 6. Lack of access or means to participate in legislative, decision-making, and planning processes relating to genetic resources and traditional knowledge.

Several awareness-raising activities were undertaken to begin to address these gaps. For example, village-level workshops were used to inform stakeholders and achieve consensus about the field activities. Biodiversity fairs were held to mobilise farmers to document and then share the genetic resources and associated traditional knowledge at the VDC level for awareness, planning, and developing a sense of joint ownership. The information and materials collected in preparation for and during the biodiversity fairs contributed to documentation in the form of a Community Biodiversity Register (CBR). Locally appropriate materials such as posters, comic books, and radio dramas were developed and used to communicate difficult concepts such as intellectual property rights and how they relate to genetic resources, traditional knowledge, and farmers' rights. Alongside these localised activities, the project also promoted CBRs among policy-makers as legally recognised documents conveying farmers' ownership of local genetic resources and traditional knowledge.

These project activities were built on previous initiatives of community forest user groups that focused on conservation and use of traditional knowledge for sustainable management of resources. Overall, they increased the awareness of farmers on the importance of their existing customary and traditional practices and the wealth of their knowledge. For example, the community's norms restrict harvesting of Lokta shrubs (*Daphne bhoula* or *D. papyracea*) less than seven years old and Argheli shrubs (*Edgeworthia gardener*) less than five years old. Medicinal plants like Chiraito (*Swertia chirata*) are harvested only after the ripening season and the harvesting practices of Thulo Okhati (*Astilbe rivularis*) leave behind parts of the rhizome in the soil for vegetative propagation the following year. Although it was acknowledged that such traditional practices are threatened by strong market forces, the awareness-raising activities helped the farmers understand the importance of understanding, documenting, and sustainably using their genetic resources and associated traditional knowledge.



Figure 3: Preparing traditional handmade lokta paper in Tamaphok. © Pitambar Shrestha, LI-BIRD



Figure 4: Traditional handmade Lokta paper being dried. © Pitambar Shrestha, LI-BIRD

Prior to undertaking the CBM approach, the farmers already had a community processing centre to make handmade papers of the Lokta and Argheli shrubs harvested from community-owned forests. Through the project, the village began to express the need for a mechanism to equitably share benefits arising from community-owned resources as well as the need to reinvest in the conservation and further development of these resources.

A Biodiversity Conservation and Development Committee (BCDC) was established in each of Tamaphok's nine wards¹² by engaging farmers' groups, women's groups, youth clubs, and other pre-existing organisations. These ward-level committees were intended to manage activities such as documentation of genetic resources and associated traditional knowledge and to implement conservation plans for threatened or uniquely important resources. The project continuously worked with the committees to improve their capacity to prepare and implement the CBM approach, with particular emphasis on activities relating to sustainable management and use of local genetic resources and traditional knowledge, including farmer-to-farmer exchanges, and understanding the multiple values of local genetic resources.

A BCDC was also established at the VDC level in Tamaphok, which is comprised of one representative from each ward-level BCDC, the VDC Secretary, ¹³ one advisory member, and one representative of women. There is provision for including more representatives from minority groups (such as women or *dalit* castes) to improve its inclusiveness. The VDC-level committee is responsible for generating and mobilising funds, planning, delegation (to ward-level BCDCs and farmers' groups), and monitoring of conservation and income-generating activities, and managing resources and services such as community seed banks.

Formed this way, the BCDC is unique compared to other farmers' groups because it is not restricted to a specific commodity (such as milk, coffee, or a particular vegetable), but represents all issues of farmers. Since it is inclusive, represents all wards, and remains politically neutral, it enjoys wide support from local farmers as well as the local government. Through the project, trainings and orientations were provided to BCDCs on relevant national and international laws and policies regarding farmers' rights and access to and sharing of benefits from the use of genetic resources and traditional knowledge.

The project also supported the establishment of a VDC-level CBM fund, which has increased farmers' access to credit to invest in income-generating activities such as small livestock, beekeeping, and vegetable production. ¹⁴ It also facilitated the investment of US\$700 to the above-mentioned handmade paper factory and processing centre in 2008, which later provided dividend earnings of about US\$100 in each of 2009 and 2010. The dividend has enabled the farmers to cover their operating costs and to support additional initiatives such as the community seed bank, which is managed by the VDC-level BCDC and contains seeds of 63

¹² A Village Development Committee in Nepal has nine wards.

¹³ A VDC Secretary is a government employee. This ensures that the local government is already a part of the process. ¹⁴ For more information on the CBM fund, see Shrestha, P., S. Sthapit, I. Paudel, S. Subedi, A. Subedi, and B. Sthapit, 2012. *A guide to establishing a community biodiversity management fund*. LI-BIRD: Pokhara.

varieties of cereal, pulse, and vegetable crops.¹⁵ Future revenue will be returned to the CBM fund to be distributed as credit for farmers to further improve livelihood options. To ensure the equitable distribution of benefits, those who are poor or from disadvantaged groups and those who conserve local landraces and local biodiversity are given priority to access the fund. This is one example of a localised and sustainable form of payment for conservation services to farmers that was developed based on existing mechanisms and institutions. The effective management of joint savings, credit schemes, and returns on investments through the CBM fund has demonstrated the improved capacity of the BCDC to ensure equitable sharing of benefits arising from internal conservation and use of genetic resources.

All of these experiences, in addition to being comprised of representatives from all nine ward-level committees, suggests that VDC-level BCDCs that are already effectively managing communal funds and community seed banks may also be appropriate bodies for facilitating processes related to bio-prospecting, for example, the provision or denial of prior informed consent for external access to genetic resources or traditional knowledge and the equitable sharing of benefits arising from their use. Such BCDCs should be treated by the relevant national authorities as the representatives of the custodians and should be supported to ensure their rights are realised in practice. ¹⁶

The VDC-level BCDC of Tamaphok has become an active member of the national network of over 30 BCDCs from across the country, which issued "The Pokhara Declaration" in 2010 to demand enforcement of communities' rights over local genetic resources through the establishment of legal structures for access and benefit sharing and farmers' rights. There is currently no legal means to officially register the Tamaphok BCDC as an independent and autonomous organisation of custodian farmers representing all farmers and their issues. ¹⁷ However, it has still been active in pushing their advocacy agenda at the national level through participation in different policy interactions, dialogues, and working group meetings, as well as lobbying legislators, politicians, and media. For example, it has established strong contacts with the members of legislative bodies and officials in the Ministry of Agricultural Development and many other like-minded institutions and civil society organisations.

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¹⁵ Shrestha, P., S. Sthapit, and I. Paudel, 2013. "Community seed banks: a local solution to increase access to quality and diversity of seeds", pages 61-75 in Shrestha, P., R. Vernooy, and P. Chaudhary (eds.), *Community Seed Banks in Nepal: Past, Present, Future. Proceedings of a National Workshop, 14-15 June 2012, Pokhara, Nepal.* LI-BIRD, USC Canada Asia, Oxfam, The Development Fund of Norway, IFAD, and Bioversity International: Pokhara, Nepal. ¹⁶ This has been proposed to the state as a key research output of the project.

¹⁷ The Local Self Governance Act of 1999 allows for seeking the inputs of locals for formulating annual development plans. However, the challenge for local government is that there are many farmers' groups and it is not clear who among them should be considered as representative of all farmers. However, due to its representative structure and political neutrality, the BCDC is emerging as a farmers' committee recognised by local government to provide input on behalf of all farmers for local development. In the Purkot VDC (district of Tanahun), the VDC is formalising this process of seeking inputs from this committee on annual development plans, especially in the sectors of agriculture, forestry, and environment.

Together, these highlights illustrate how the CBM approach was used successfully to build the capacity of the Tamaphok BCDC to understand, advocate for, and realise their farmers' rights in practice even without a clear national legal framework for the same.



Figure 5: A Lokta and Argheli nursery managed by the Tamaphok Biodiversity Conservation and Development Committee. © Pitambar Shrestha, LI-BIRD

4. Building Capacity of Duty-bearers

An assessment conducted in 2007 under the CBM project revealed that almost all of the stakeholders in Tamaphok (including local government, community-based institutions, local leaders, and farmers), about 80% of the district-level stakeholders, and about half of the national-level government authorities were not aware of Nepal being a signatory to the CBD

and ITPGRFA. It was clear that in addition to building capacity of farmers and their institutions, there was an urgent need to build capacity of the government stakeholders and duty-bearers.

Through the project, a policy gap analysis was conducted by organising a number of participatory discussions and working groups with the majority of the government and civil society stakeholders who are capable of affecting the process of making and implementing the laws and policies, as well as the farmer stakeholders who are expected to be affected by the laws and policies. The analysis identified the following gaps among duty-bearers:

- 1. The policy-makers generally lack awareness and understanding of the issues.
- 2. The 2007 Agrobiodiversity Policy contains many vague and contradictory provisions that require amendment. The most significant contradiction arose because the policy defines the process of access and benefit sharing as under the CBD, whereas most of agricultural biodiversity falls under Annex 1 of ITPGRFA. When the policy came into effect, Nepal was not a signatory to the ITPGRFA; after ratifying the latter in 2009, the policy required amendment to correct new contradictions. Moreover, provisions on access, prior informed consent, and registration of local varieties are not clear.
- 3. The draft laws for providing access to genetic resources and traditional knowledge and protecting plant varieties and farmers' rights are progressing slowly.
- 4. Several provisions in the Seed Policy 2000, Seed Act 1988, and Seed Regulations 1997 were found to be contradictory to the National Biodiversity Strategy 2002 and Action Plan 2006.
- 5. A legal procedure for registering independent and autonomous farmers' organisations is needed to ensure representation of smallholder farmers' interests at the national level.

Capacity building activities for the governmental and non-governmental stakeholders included trainings, workshops, core group meetings, and exposure visits. This process also involved the development of national positions on related issues being deliberated in international fora, as well as facilitating stakeholder agreement on major contentious issues, including reaching consensus on what Nepal's *sui generis* system for plant variety protection should be through broader stakeholder discussions. Key provisions agreed included accepting sale of farm-saved seed without labelling as traditional practice (in order for farmers to continue this practice even after the future adoption of the plant variety protection law), banning seed with terminator technology, including compensation for loss due to bad quality seed, and registering varieties developed by farmers or through participatory breeding, among others.

A number of activities were also undertaken with the relevant government agencies to review and revise existing and draft laws. For example, the Ministry of Agricultural Development reviewed the Agrobiodiversity Policy of 2007 and prepared a draft first amendment of the variety release procedure, which has since been accepted by the National Agrobiodiversity Coordination Committee and is expected to be passed in the near future.

When the laws on plant variety protection and farmers' rights were being drafted, activities were undertaken to implement key draft provisions, for example, registering local plant varieties. Experiences and evidence gathered were used to highlight the implications of the

draft provisions and formed the basis for recommendations, some of which have already been incorporated in amendments. The project also provided research findings regarding processes of prior informed consent and the structure and modality of farmers' institutions, among other things, to improve the draft law on access to genetic resources and sharing of benefits from their use. To address the contradictions in the seed policy, act, and regulations, the project supported the national Seed Quality Control Centre to organise various core group meetings and stakeholder discussion forums and to prepare draft amendments.

Based on the experience with the CBM approach, it was suggested that the government recognise CBRs as the community document of ownership of genetic resources and associated traditional knowledge. The format used for CBRs in the project included two sets of knowledge, so that one list with knowledge that the communities would like to publish for open access separated from another list with knowledge that the communities want to keep secret. Accordingly, the CBR format recommended to the government was designed to enable farmers to prepare two such separate sets of knowledge. The project also supported the idea of compiling CBRs at different administrative levels and preparing a national biodiversity register of all CBRs. Finally, it was recommended that the national genetic resource council be the depository of the CBRs, which could also facilitate processes of access, prior informed consent, and material transfer agreements.

5. Conclusion

The CBM approach enables farming communities to better manage their natural and social capital and to use them in turn to build physical and financial capital for their collective development. The approach includes systems for documenting genetic resources and associated traditional knowledge as well as managing their conservation through a representative and inclusive farmers' institution. Hence, such an institution is also well-suited to represent the community for granting or denying prior informed consent, negotiating access and benefit sharing agreements, and channelling the funds back into the community for necessary conservation and development work.

In addition to building capacity of the rights-holders (the farming communities), there is also a need to build capacity of the duty-bearers (the government), which has yet to enact international commitments into an integrated national regime. Civil society organisations can help facilitate discussion and common understanding, document and communicate evidence, and expedite the enacting and implementation of national laws and policies to ensure that farmers are participating in decision-making processes that affect their lives and farmers' rights are secured in practice.