



Access and Benefit Sharing from Genetic Resources

The Convention on Biological Diversity (CBD) is an international treaty that provides national governments with sovereign rights over genetic resources and associated traditional knowledge. The aim of the CBD is to ensure that countries receive a fair share of the benefits from their biological resources and traditional knowledge in return for conserving and allowing access to these resources. The Bonn Guidelines provide a framework for the implementation of the access and benefit sharing components of the CBD.

All the countries in the Hindu Kush-Himalayas are party to the CBD. However, only a few of them have ABS policies and laws, and these are at different stages of implementation. Central to the delay is a lack of awareness and understanding of ABS and the key components of an effective ABS regime. This paper is designed to raise awareness among policy makers of the key components of an effective ABS regime and thus enable development of a better ABS policy framework in the countries in the region.

Introduction

Himalayan countries are at different stages of developing and implementing national 'Access and Benefit Sharing' (ABS) policies and laws. Several challenges are emerging in the process. Developing and implementing ABS regimes requires a closer examination of ABS issues in the region. There is also a need to raise awareness of ABS at all levels in order to develop and implement effective ABS regimes in the region.

The main challenge for sustainable development in the 21st Century is poverty reduction. Millions of people in the Hindu Kush-Himalayan region depend on biological (genetic) resources and traditional knowledge for their livelihoods. While the concept of an access and benefit sharing (ABS) regime in the Hindu Kush-Himalayan region is new, access to biological resources and transfer of associated traditional knowledge is centuries old. ABS regimes facilitate access, thereby increasing the use of biological resources and associated traditional knowledge, while ensuring that the benefits are shared with the traditional owners. There are no formal estimates of the economic benefits of biological resources and traditional knowledge in the region, but they are likely to be substantial. Given the abundant biological resources found in the Hindu Kush-Himalayan region, ABS can be an effective tool for poverty reduction.

International instruments

Access to genetic resources and benefit sharing became an international issue in the early 1980s, leading to the adoption of the Convention on Biological Diversity (CBD) in 1992. The CBD seeks to establish a comprehensive international regime for the sustainable management of biological resources. It requires parties (193 as of 2008) to facilitate access to genetic resources for environmentally sound uses and to take legislative, administrative, and policy measures to ensure the equitable sharing of benefits arising from such uses. Similarly, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), which came into force in 2004, requires signatories to take legal or other measures to ensure the provision of access to plant genetic resources for food and agriculture and to share the benefits arising from their use.

Objectives of the Convention on Biological Diversity

- Conservation of biological diversity
- Sustainable utilisation of biological diversity
- Fair and equitable sharing of benefits

In 2002, the World Summit on Sustainable Development (WSSD) committed to take national and international action on ABS. In 2004, the CBD Conference of Parties 7 (COP 7) mandated a Working Group to negotiate and develop an international ABS regime. COP 8 continued to develop this regime and an outline of the proposed international regime and its major components were discussed in 2008 at COP 9. It is anticipated that the regime will be finalised at COP 10.

The 'Bonn Guidelines on Access to Biological Resources and Fair and Equitable Sharing of Benefits Arising out of their Utilization' facilitated national governments to establish legislative, administrative, and policy measures on ABS by detailing the procedures for its implementation.

Key components of an effective ABS regime

As signatories to the CBD, Himalayan countries are developing national ABS regimes. Some of the key components of an effective ABS regime are (i) sovereignty of the state over genetic resources, (ii) prior informed consent (PIC) from the party providing access to biological resources, (iii) mutually agreed terms (MATs) for access and use of biological resources and benefit sharing, and (iv) benefit sharing from access to and use of genetic resources and associated traditional knowledge.

In the context of an ABS regime, **access** means the acquisition of biological resources, their derivatives, traditional knowledge, innovations, technologies, or practices and refers to the granting of permission to enter an area for the purpose of sampling, collecting, surveying, and acquiring genetic resources for general exploration for scientific or commercial purposes.

Sovereignty is the power of a state to independently regulate its own affairs. Sovereignty is not ownership, but the power to regulate ownership. The CBD vests sovereignty over biological resources and traditional knowledge in nation states. The ownership of biological resources is determined by the state through national law.

Article 15(5) of the CBD requires the '**prior informed consent**' (PIC) of the contracting party providing genetic resources. Parties to the CBD are also required to respect, preserve, and maintain traditional knowledge (Article 8(j)) and to protect and encourage customary use (Article 10(c)). The accessing party must inform the resource provider of such things as the intended use of the genetic resources/traditional knowledge, the monetary and non-monetary benefits, whether or not the genetic resources/traditional knowledge will be used by a third party, and what the benefit sharing arrangements will be. All of this information must be imparted to the contracting party before permission to access/use genetic resources and associated traditional knowledge is granted. The Bonn Guidelines further define PIC and set out the procedures for obtaining it. While there is a growing awareness of PIC in mountain countries, ABS laws on PIC are unclear (the Indian Biodiversity Act 2002, for example, is silent on PIC) and difficult to follow, involving complex legal procedures. According to the CBD and evolving national laws in the region, any bioprospector wishing to access biological resources needs to acquire PIC from the concerned government authority. After the government gives consent, the accessing party must obtain the PIC of the community/individual owner of the biological resources/knowledge. In addition, depending on the status of the resource to be accessed, an environmental impact assessment may be needed. If the biological resources are under the jurisdiction of a protected area, access procedures and PIC procedures may be different again. How PIC procedures will evolve in the region remains to be seen. Article 15(7) of the CBD stipulates that the results of scientific research and development, and any other benefit arising from the sustainable use of genetic resources accessed by a party, shall be shared with the contracting party providing the resource in a fair and equitable way based on '**mutually agreed terms (MATs)**'.

Article 15(4) establishes mutually agreed terms for granting access. Mutually agreed terms are terms and conditions on which both parties agree and which make the ABS process effective, transparent, and legally binding. Mutually

agreed terms stipulate the way in which users can obtain access or permission to collect, study, or commercially use genetic resources and may vary on a case-by-case basis. A comprehensive checklist of what should be part of the MATs is provided in the Bonn Guidelines. Article 8(j) encourages the equitable sharing of benefits arising from the utilisation of knowledge, innovations, and practices of indigenous and local communities that embody traditional lifestyles relevant to the conservation and sustainable use of biological diversity.

Benefit sharing is the sharing of whatever accrues from the utilisation of biological resources and community/individual knowledge, technologies, innovations, or practices and all forms of compensation for the use of genetic resources, whether monetary or non-monetary. Mutually agreed terms may cover the way in which benefits are shared, which may vary in terms of what is fair and equitable. Monetary benefits may include upfront payments, access fees, milestone payments, research funding, licence fees, salaries, infrastructure, joint ventures, or joint ownership of intellectual property rights. Non-monetary benefits may include participation in scientific research and development of genetic resources, and sharing the findings of any benefits of such research and development. Extensive lists of the types of benefits, timing of sharing of benefits, and mechanisms for benefit sharing are given in the Bonn Guidelines.

Cost of benefit sharing from traditional knowledge

While working as a missionary in the Pacific Island of Samoa, Paul Cox fell ill and was cured by a women traditional healer who treated him with the root of a local tree. After returning to the USA, his mother died of breast cancer, motivating Paul to return to Samoa to find a drug to treat breast cancer.

In 1985, Paul came in contact with the US National Cancer Institute (NCI), which had recently isolated HIV. The NCI enquired about any traditional drug that could be used to treat HIV. Paul consulted the traditional healers and sent various samples to NCI, including a sample of the mamala tree (*Homalanthus nutans*), from which the villagers make a medicinal tea used to treat hepatitis.

The NCI carried out a chemical analysis of the mamala tree and isolated the active ingredient Prostratin; it conducted a successful drug trial and applied for a patent, agreeing to give 30% of the royalties to the village in Samoa. In addition, the AIDS Research Alliance has agreed to give back 20% of any profits to the government and community, and to source the drug from plants grown in Samoa. Now, the University of California in Berkley is trying to clone Prostratin and has agreed to give 50% of its proceeds to the island. These agreements have helped to reduce poverty in Samoa.

New Scientist, 28 October 2006

ABS regimes in Himalayan countries: Issues and challenges

ABS regimes can bring important benefits to communities if implemented appropriately (see example of Samoa in box). In the Hindu Kush-Himalayan region, the development and implementation of national ABS policies and laws is still in the initial stages. Only Bhutan and India have biodiversity laws in place (India being the most advanced). Other countries, such as Bangladesh and Nepal, are currently drafting biodiversity laws, while Myanmar and Afghanistan have not yet begun. Countries that have enacted and enforced ABS legislation have not gone far enough. All the laws (enacted and draft) of the Eastern Himalayan countries favour genetic resource providers, giving little incentive to bioprospectors.

Furthermore, trade in biological resources is not prohibited in the region. In addition, there is no clear distinction made between 'genetic resources' and 'biological resources' in the legislation. Hence, the collection, sale, or purchase of a single biological specimen constitutes access to genetic resources.

Genetic resources are accessed by different bioprospectors (collectors, researchers, and others) for different purposes. The ABS law does not differentiate between these uses, although some are clearly more sustainable than others.

The law is not specific in addressing ownership over genetic resources. Because of this, tracking genetic resources and ensuring legal compliance by the users of genetic resources is difficult.

Although the Biodiversity Act is in force in India, only a few bioprospecting proposals have been submitted and approved. Details of negotiation procedures are not yet available, and, hence, the effectiveness of the Act in practice has yet to be seen.

The draft ABS laws of Bangladesh and Nepal, the draft Biodiversity Rules of Bhutan, and the Biodiversity Rules of India, require multiple parties to be consulted in ABS agreements (such as the national biodiversity authority, state biodiversity boards, biodiversity management committees, and holders of traditional knowledge and genetic resources). The complex nature of national ABS agreements and multiple stakeholders has the potential to delay the implementation process. ABS agreements are more likely to be successful if the number of parties involved in the process is reduced.

Most countries in the Himalayan region do not have sufficient scientific data on which to formulate ABS policies. Without comprehensive information on biological resources and associated traditional knowledge, regulating ABS is difficult. It is important to understand the economic

importance and value of genetic resources at different levels. In addition, the collection of information on markets and the demand for genetic resources, including the potential users of genetic resources and associated traditional knowledge, is a major challenge.

Awareness of ABS in government and non-government sectors is extremely low. Awareness raising and capacity building of government, non-government organisations, civil society, and local communities is needed.

The legal procedures in relation to PIC and benefit sharing, as set out in national legislation, are unclear. In addition, some local communities, indigenous groups, and individuals where genetic resources are found seem resistant and want to exert exclusive rights over genetic resources and associated traditional knowledge. Safeguarding their rights is important, but at the same time, the rights of users must also be respected. In the PIC process, multiple parties are involved, thus many users become frustrated before bioprospecting even takes place. The emerging legal arrangements in this aspect are weak.

As many biological resources and associated traditional knowledge are common to the Himalayan region, how benefits are shared among member countries is of major concern. This is a porous area and regional member countries need to work together to develop a regional framework for ABS so that member countries can share the benefits equitably.

Conclusions

Himalayan countries are at different stages of developing and implementing national ABS policies and laws. Several challenges are emerging in the process. Developing and implementing ABS regimes requires the closer examination of ABS issues in the region. There is also a need to raise awareness of ABS at all levels in order to develop and implement effective ABS regimes in the Hindu Kush-Himalayan region.

Further reading

Anuradha, RV (2000) 'Sharing the benefits from biodiversity. Tropical Botanical Garden Research Institute deal in Kerala'. In: Kothari, A; Pathak, N; Vania, F (eds) *Where community cares: Community based wildlife and ecosystem management in South Asia*. London: IIED

CBD (1992) *Convention on Biological Diversity*. www.biodiv.org (accessed 29 December 2007)

CBD (2002) Decision VI/24. *Access and benefit sharing as related to genetic resources*. www.biodiv.org/doc/decisions/cop-06-dec-en.pdf (accessed 29 December 2007)

CBD/UNEP (2001) *Handbook of Convention on Biological Diversity, Part 1*. Montreal: Secretariat of the Convention on Biological Diversity

CBD/UNEP (2002) *Bonn guidelines on access to genetic resources and fair and equitable sharing of the benefits arising out of their utilization*. Montreal: Secretariat of the Convention on Biological Diversity

Gudrun, H; Liebig, K; Drews, A; Plan, T (2003) *Access and benefit sharing (ABS): An instrument for poverty alleviation*, Proposals for an International ABS Regime. Bonn: German Development Institute

Oli, K; Dasgupta, J; Dhakal, TD; Kollmair, M. (comp) (2007) *Glossary of access and benefit sharing terms*. Kathmandu: ICIMOD

IUCN (2004a) *Access to genetic resources and benefit sharing: Key questions for decision makers*. Colombo (Sri Lanka): IUCN Regional Biodiversity Programme, IUCN Regional Office

IUCN (2004b) 'Accessing biodiversity and sharing the benefits: Lessons from implementing the Convention on Biological Diversity'. In Carrizosa, S; Brush, SB; Wright, BD; McGuire, PE (eds), *IUCN Environmental Policy and Law Paper No. 54*. Gland (Switzerland) Cambridge (UK): IUCN

UN (2002) 'Resolution 2, Plan of Implementation of the World Summit on Sustainable Development': Para. 44. In *Report of the World Summit on Sustainable Development, Annex*, UN Doc. A/CONF.199/20 92002. www.un-documents.net/jburgpln.htm (accessed on 14 February 2007)

World Bank (2001) *World development report 2000/2001: Attacking poverty*. New York: World Bank

Wynberg, R (2003) 'A review of benefit sharing arrangements for biodiversity prospecting in South Africa'. In *Developing Access and Benefit Sharing Legislation in South Africa. A Review of international and National Experiences*. Gland: IUCN

Authors

Krishna Prasad Oli, Tara Devi Dhakal,
Joy Das Gupta, Michael Kollmair

For further information contact

Krishna Prasad Oli: koli@icimod.org
Tara Devi Dhakal: tdhakal@icimod.org
Regional Programme on Access and Benefit Sharing from Genetic Resources and Associated Traditional Knowledge in the Eastern Himalayas
www.icimod.org/abs

This programme was made possible through special support from

gtz

commissioned by
Federal Ministry
for Economic Cooperation
and Development

© ICIMOD 2008

International Centre for Integrated Mountain Development

GPO Box 3226, Khumaltar, Lalitpur, Kathmandu, Nepal

Tel +977-1-5003222 email info@icimod.org www.icimod.org

