

# Implementing the Convention on Biological Diversity: Developing Linkages with Local Communities <sup>1</sup>

*A Commentary by*  
**Kirk Talbott<sup>2</sup>**

## THE IMPORTANCE OF LOCAL PARTICIPATION

Without question, the earth's biological diversity is an invaluable ecological, genetic, social, economic, scientific, educational, cultural, recreational, and aesthetic resource. However, over the past century, a variety of human activities have significantly reduced biological diversity world wide. The resulting loss of bio-diversity jeopardizes the life-sustaining systems of the environment and, more specifically, the ability of humankind to meet the food, health, and other needs of a growing world population. While investments required to conserve biological diversity are substantial, such measures will pay off with a broad range of environmental, economic, and social benefits.

The signing of the Convention on Biological Diversity at the Environment Summit in Rio de Janeiro in 1992 represents one of these investments. This ambitious document, signed by more than 150 participating nations, is significant not only in that it addresses the variety of issues related to biological diversity comprehensively, but also in the fact that it effectively strengthens the position of developing nations in relation to resource use and management. Specifically, it recognizes the rights of individual nations to utilize their biological resources and recommends, among other things, that developing countries be given access to environmentally sound technologies needed for conservation and sustainable use of biodiversity.

However, as with many multilateral agreements, implementation is beset with a myriad of obstacles and difficulties. In fact, it can be argued that full and effective implementation of the spirit of the agreement is undermined considerably by the fact that, in spite of the agreement's progressive tone, it does not adequately emphasize local people's rights, responsibilities, and roles in environmental planning and natural resource management. While this document addresses local-level resource management more than any previous international legal agreements, we assert that the document nevertheless fails to adequately address its importance.

The argument for community-based management systems is centered around the assumption that the fate of the earth's biological resources is intimately dependent upon the cumulative actions of indigenous and local communities. As the growing body of scientific evidence attests, indigenous and local peoples, particularly those who have lived forests and other unique ecosystems for extended periods of time and are closely dependent on its biological resources, often have the best working knowledge of conservation and sustainable use of these resources.

All nations would be well advised to make use of this traditional knowledge in the planning and implementation of resource management. In order to do this, current environment and resource management schemes need to re-orient their focus to involve local communities in natural resources management.

After briefly discussing some of the key issues of the Convention on Biological Diversity, this paper addresses three different legal and policy approaches for involving local communities in natural resource management. First, the paper examines the efforts of the governments of Norway and the Philippines to integrate biodiversity planning into their national development processes. Second, it discusses Nepal's recent

reforms in community forestry law and its effects on forestry management. Third, it considers current resource management schemes involving the private sector, specifically examining innovative relationships between international pharmaceutical companies and resource management organizations in Latin America.

Each example offers a different, practical approach for integrating local communities into the resource management process in order to promote not only biodiversity conservation objectives but also economic development objectives. Although each example is country-specific, southeast Asian nations, many still rich in biological diversity, can benefit from variations on these schemes.

This paper does not suggest that the Biodiversity Convention should be renegotiated or the language changed. Rather, it argues for building on the spirit and letter of this particular treaty and its call for action by strengthening community-based resource management systems.

## **THE BIODIVERSITY CONVENTION: INTERNATIONAL LAW IN THE MAKING**

Although the Convention on Biological Diversity was signed at the ground-breaking Rio de Janeiro "Earth Summit" in June 1992, the four years leading up to that historic occasion were filled with contentious and often bitter negotiations.<sup>3</sup> The results, however, are impressive: for the first time in the history of international law, the major elements of biological diversity (species, genetic, and ecological diversity) were comprehensively addressed.

### **National Sovereignty Issues**

Perhaps the most volatile issue in the negotiation process was the question of the importance of biological diversity in relation to national sovereignty, i.e., to what degree international concern for biological diversity would supersede a signatory nation's rights to utilize its resources. In the end, participating nations agreed that biological diversity was a matter of "common concern" to humanity rather than the "common heritage" of humanity (the distinction being that the latter implies that biodiversity is part of a "global commons" and as such is subject to some degree of governance by the community of nations). A majority of nations found the term "common heritage" to be in conflict with national sovereignty and thus voted the proposed term down.

Although the Convention clearly comes down on the side of national sovereignty in defining biological diversity as a "common concern," the debate over the issue continues. According to Article 3 of the Convention, for example, individual countries have the sovereign and exclusive right to exploit biological resources within their own national borders. However, Article 3 also states this right is qualified by the nation's "responsibility to ensure that activities within its jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction."

In this instance, the Convention addresses the well known fact that many of the world's natural systems span the boundaries of modern nations and thus viable solutions to contemporary environmental problems require international and, more immediately, regional approaches and cooperation. The tremendous effort put forth by the nations of Indochina in managing an international river system the size and importance of the Mekong illustrates this fact.

### **Local Issues**

A second related and similarly contentious issue raised during negotiations was the degree to which the Convention should address sub-regional, provincial, and community-level concerns. In the end, signatory nations agreed to address local issues in Article 8 with a call to "respect, preserve, and maintain knowledge, innovations, and practices of indigenous and local communities." Although general and loose, the particular language of this section is relatively progressive compared to previous international agreements.

Some governments have argued that any issues regarding treatment of their citizens are inappropriate in such a document; this paper argues that inclusion of this clause in Article 8 was a positive step in the right

direction as nations would be well served by strengthening local peoples' access rights to and management responsibilities of biological resources within an appropriate national policy. If part of an effective national legal framework, such a policy to involve local peoples in the resource management process could yield local and national economic benefits, in addition to sustaining biological diversity.

Ultimately, issues of national sovereignty and issues of involving local communities come down to questions of "access," i.e., rights to access the genetic resources of biological diversity, access to sustainable technologies, and access to the benefits derived from biological diversity. Although the Convention's recognition of national sovereignty helped clarify access issues in the international context, as is evident below, access issues remain central to domestic policy strategies for implementing resource management schemes. Specifically, many current conservation and/or sustainable development strategies sidestep the issue of equitable sharing of benefits *within* countries. If nations continue on this path without creating effective and enduring linkages at the community level, the Convention on Biological Diversity cannot be effectively implemented. The following cases represent examples of progressive policy approaches to promote more equitable and effective natural resources management between and within countries.

## **PROMISING STRATEGIES FOR IMPLEMENTING THE CONVENTION**

Signatory nations of the Convention on Biological Diversity committed their nations to a number of far-reaching obligations related to the conservation of biodiversity, sustainable use of its components, and fair and equitable sharing of the benefits derived from biological resources. Perhaps the most important of the related obligations is the requirement in Article 6 that signatory nations develop and integrate biodiversity strategies into their national planning processes. However, as is well known, balancing biodiversity conservation objectives with short-term economic imperatives is profoundly difficult, particularly in developing nations. Nevertheless, as outlined below, several nations offer compelling approaches to bridging national imperatives and local-level priorities.

### **Integrating Biodiversity Conservation into Mainstream Development Planning: Norway and the Philippines**

Norway has made significant progress toward integrating the objectives of the Convention, particularly local participation, into its national policy. In fact, Norway's National Biodiversity Strategy relies on a participatory framework for design and implementation of policies. Specifically, Norway's central ministries (transportation, communications, education, defense, fisheries, and agriculture) are charged with formulating economic and sectoral programs related to biodiversity. The Ministry of Environment, for example, is working with seven communities to develop experimental biodiversity action plans as models for local participation and responsibility. At the same time, the Norwegian government has also undertaken an ambitious effort to internalize and streamline Norway's legal and regulatory framework with regard to issues associated with biological diversity.<sup>4</sup>

The Philippines has undertaken an equally ambitious and comprehensive plan for developing and implementing a National Biodiversity Strategy. Specifically, the Department of Environment and Natural Resources (DENR) is working with the recently established Philippine Council for Sustainable Development in coordinating a workable national strategy. Thus far, their efforts have been complemented by the participation of key central and line ministries, the Cabinet, and a broad range of sectoral agencies and private interests. Furthermore, the Philippines' active network of non-governmental organizations as well as the country's many academic biodiversity specialists are participating in this process by providing perspective and data relevant to formulating policies. Policy-makers hope to implement a series of provincial-level planning exercises within the context of ongoing governmental decentralization initiatives.<sup>5</sup>

The real test of the effectiveness of Norway's and the Philippines' biodiversity planning will be in the degree to which policies result in identifiable and measurable actions. While it is too early in the process to assess the effectiveness of the Philippines' or Norway's strategies, their emphasis on decentralization and their inclusion of local participation in the planning and drafting of the policies will likely have positive impacts on policy implementation as effective implementation of management strategy ultimately hinges on cumulative

local-level compliance and participation.

As for how local-level participation mechanisms can be used in national environmental planning, environmental impact assessment (EIA) procedures are effective avenues for participation. The EIA process, for example, is done prior to the development of an area to identify the "environmental impact" of a road, industry, dam, etc., on the area affected by the development. Public participation is an essential element of the EIA process as formal public hearings, village-level consultations, participatory appraisals for site selections, and other approaches can potentially enhance the design and implementation of the particular development strategies.

For example, as the road network between Kunming, Mandalay, Vientiane, Hanoi and Chiang Mai is expanded, it is in each of your countries' interest to support local peoples' involvement in EIA. This will promote participatory national biodiversity planning, strengthen the quality of expanded transportation infrastructure systems, and contribute to sustainable regional economic expansion.

### **Strengthening Community-Based Resource Management: The Tenure Factor in Nepal**

For a variety of reasons, national governments in a number of developing countries regard the majority of individuals living in designated forest zones as "illegal occupants" despite the fact that particular groups of individuals may have been forest dwellers for generations. As a result, forest dwellers are forced to leave their traditional environments and take up residency in unfamiliar surroundings. The tenurial instability which results from this move leads to an erosion of customary conservation values and undermines incentives to conserve the local resource base.<sup>6</sup> However, in several countries, natural resource law has begun to address the widespread problem of tenurial insecurity, thus offering much promise for advancing the objectives of the Biodiversity Convention with respect to local and indigenous peoples.<sup>7</sup>

In Nepal, for example, communities of families and villages in mountain valleys have gained considerable tenurial security over local forest resources as a direct result of recent national legislation that has codified progressive tenurial reforms in community forestry, encouraging rejuvenation of forests and permitting sustainable use of forest resources by local peoples. In other words, in these small pockets of forest communities, the objectives of the Biodiversity Convention are being achieved. Not only does the rehabilitation of forests positively affect forest dwellers, but the indirect hydrological and ecological benefits of sustainable forest management also benefit communities in other areas in terms of providing a sustainable source of building materials and economic activity.

Nepal's community forestry law establishes a relatively functional and equitable national legal framework for local peoples' genuine participation in natural resource management. The focus of this legislation is the "handing over" of state-owned forest resources to legitimate community users' groups in accordance with the terms of annual and easily renewable leasehold arrangements that delineate forest management rights and duties and establish due process for arbitrating conflicts.<sup>8</sup>

Indeed, local management of natural resources and, in particular, forests, seems to be catching on throughout Asia. Satellite imagery of the Indian state of West Bengal, for example, testifies to the success of India's project for joint local-state management forest management. Approximately 10,000 villages are taking part in the project to rehabilitate and replant thousands of hectares of forest land. The results are impressive: thousands of hectares are thriving where, just decades ago, wasteland existed.<sup>9</sup> Thailand and the Philippines have recently initiated similar programs.

While tenurial reforms have meant positive, tangible results in some nations, effective implementation of policies remains a challenge. Obstacles to effective implementation include political opposition and rural poverty as well as social inequities and political corruption. Nevertheless, policy-makers in some developing countries in southeast Asia, in particular, seem to be more sensitive now than ever before to the relationship between tenure and resource management. In Yunnan, China, for example, government has introduced measures to increase the number of long-term land management certificates issued to collectives and individual farmers, thus affording those who rely on natural resources the security of long-term tenure. The

governments of Laos P.D.R., Vietnam, and Cambodia are also beginning to experiment with national policies to devolve authority and decision-making in resource management such that local communities play larger and more direct roles. In time, we can expect policies and strategies such as these to be commonplace in not only in mainland southeast Asia but in the rest of the world.

Tenurial reforms are but one option available to governments and policy makers concerned with resource management at the local level. As outlined below, the experience of Costa Rica offers yet another innovative approach to natural resource management and implementation of the Convention on Biological Diversity.

### **Contracting Benefits: Biodiversity Prospecting in the Americas**

As emphasized earlier, one of the most problematic areas in negotiation of the Convention on Biological Diversity and indeed one of the most complex controversies in national and international law centers around the rights and roles of indigenous peoples in traditional communities. At the heart of this controversy is the unique position of indigenous peoples in relation to the land and ecosystem in which they live. Quite unlike the position of "citizens" possessing "property rights," for many years, indigenous peoples have been considered by modern states to be little more than "squatters"—tolerated but by no means welcome on the land. As such, indigenous peoples, have been marginalized at most national and international forums dealing with issues of access to and management of biological or other "national" resources.

However, in recent years, indigenous peoples' knowledge of their environments—of local plants, organisms, and other biological resources—has been scientifically recognized. Now, indigenous peoples living in previously uncharted ecosystems rich in biological diversity find their knowledge of the ecosystem in demand by many in the scientific community. Ironically, it is this age-old knowledge that may yet preserve these communities and their traditional environments as the search—or race—to identify the totality of the earth's unique genetic resources takes off.

One of the most promising arrangements helping to preserve traditional communities' environments while also distributing the benefits of biological diversity is the Merck-INBio arrangement in Costa Rica. INBio, the Costa Rican Institute for Biological Diversity has given U.S.-based Merck Pharmaceuticals the rights to prospect for and harvest a limited number of biological specimens in return for an initial \$1.35 million and half of any profits derived from the exploration. This innovative agreement advances the notion that the returns to a biodiverse environment are a public rather than a private good.

Similarly, Shaman Pharmaceuticals, a small, U.S.-based firm, has embarked on a program of biodiversity prospecting by establishing corporate relations directly with indigenous societies and organizations. Like Merck, they aim to collect natural products, develop them into marketable products, and share the associated benefits with those who actually manage the resource base. Specifically, Shaman has set up a long-term program to work closely with the Pan Amazonian Indigenous Peoples Federation (COICA), a multi-country federation representing nearly 70,000 indigenous peoples. Despite the low economic and political status of its members, COICA represents a community rich in knowledge of ecosystem management. Specifically, these individuals have a wealth of knowledge about the medicinal applications of the thousands of the local plant species.<sup>10</sup> Like the INBio-Merck venture, Shaman and COICA's long-term arrangement involves shipments of local species of plants and organisms in return for direct and staged compensation to the local communities.

While the INBio-Merck and COICA-Shaman arrangements are not without problems, their agreements demonstrate that linking resource management and future direct benefits to host-country and/or local communities' can be a workable basis for legal contracting across international boundaries.<sup>11</sup> These and other similarly innovative arrangements show that natural resource management plans can involve not only local-national cooperation but also local-international and public-private innovation.<sup>12</sup>

### **CONCLUSION**

In the final analysis, it is the cumulative actions and effects of the world's billions of local resource users that

will determine the fate of earth's biological diversity. International agreements, national policies, and governments' enforcement efforts can only go so far in meeting the challenge of implementing the ambitious objectives of Convention on Biological Diversity.

The actions taken by indigenous and local populations vis-à-vis natural resources are central to effective implementation of the Convention on Biological Diversity. Seen this way, the conservation of biological diversity is not a North-South issue, but a shared challenge among all nations. Just as the Philippines and Norway are experimenting with public participation approaches in their national biodiversity planning processes, Nepal and other Asian countries are developing new, progressive paradigms of local forest management that mirror similar arrangements in European countries. Large and small pharmaceutical companies are forging creative biodiversity sharing contracts with partner organizations in Latin America.

The work of my organization, the World Resources Institute, has verified that knowledge of the concept of biodiversity is considerably higher in some African, Latin American and Asian countries than in the U.S. and other "developed" countries. In many cases, the populations of the mainland southeast Asian region, for example, have a sophisticated appreciation and understanding of their rich, biodiverse ecological heritage. The Kunming Institute of Botany, Chiang Mai University, and University of Hanoi's Center for Natural Resources Management and Environmental Studies (CRES), to name a few, have established impressive records for advancing knowledge of local biodiversity and its potential contribution to society.

Our greatest challenge now lies in implementation of the Convention, a task requiring the cooperation of all the world's communities. The signing of the Convention on Biological Diversity by more than 150 nations is reassuring in that it demonstrates that there is consensus in the world community that biological diversity is a "common concern" of humanity. Yet the utility and power of law and policy—be it national legislation or international treaty—is only as great as its potential for implementation and enforcement.

The examples presented here offer concrete approaches—starting points—for implementing the Convention on Biological Diversity by linking international law to local peoples. A host of ecological crises underscore the importance of starting now, rather than later, to implement innovative sustainable resource management strategies.

## REFERENCES

Burhenne-Guilmin, Francois and Susan Casey-Lefkowitz. 1992. "The Convention on Biological Diversity: A Hard Won Achievement." *1992 Yearbook of International Environmental Law*. Gland, Switzerland: World Conservation Union (IUCN).

Lynch, Owen J. and Kirk Talbott. Forthcoming. *Balancing Acts: Community-based Forest Management and National Law in Asia and the Pacific*. Washington, D.C.: World Resources Institute.

Maggio, Gregory F. Forthcoming 1995. "Local Community Component to Sustainable Development of Biodiversity and Forestry Resources." Dissertation. Cambridge University, Magdalene College.

Miller, Kenton R. and Steven M. Lanou. Forthcoming. *National Biodiversity Strategies*. Washington, D.C.: World Resources Institute.

Poffenberger, Mark. 1992. "The Resurgence of Community Forest Management in the Jungle of Mahals of West Bengal." Paper presented at the Conference on South Asia's Changing Environment, Bolagio, Italy, 16-20 March.

Talbott, Kirk and Shamtam Khadka. 1994. *"Handing it Over": An Analysis of the Legal and Policy Framework of Community Forestry in Nepal*. World Resources Institute/Cases in Development Report. Washington, D.C.: World Resources Institute.

Weiss, Edith Brown. 1989. *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity*. Tokyo: United Nations University.

World Resources Institute/National Biodiversity Institute of Costa Rica/Rainforest Alliance/African Centre for Technology Studies. 1993. *Biodiversity Prospecting: Guidelines for Using Genetic and Biochemical Resources Sustainably and Equitably*. Washington, D.C.: World Resources Institute.

World Resources Institute/World Conservation Union/United Nations Development Programme. 1993. *Global Biodiversity Strategy: Guidelines for Action to Save, Study, and Use Earth's Biotic Wealth Sustainably and Equitably*. Washington, D.C.: World Resources Institute.

## RELATED READINGS

Glowka, Lyle, Françoise Burheen-Guilmin and Hugh Synge (in collaboration with Jeffrey A. McNeely and Lothar Gündling). 1994. *A Guide to the Convention on Biological Diversity*. Environmental Policy and Law Paper No. 30. Cambridge, England: The World Conservation Union.

Greaves, Tom, ed. 1994. *Intellectual Property Rights for Indigenous Peoples: A Sourcebook*. Oklahoma City: The Society for Applied Anthropology.

Kimball, Lee A. 1992. *Forging International Agreement: The Role of Institutions in Environment and Development*. Washington, D.C.: World Resources Institute.

McNeeley, Jeffrey A. et al. 1990. *Conserving the World's Biological Diversity*. Washington, D.C.: World Resources Institute in cooperation with The World Conservation Union, Conservation International, The World Wildlife Fund and The World Bank.

Reid, Walter V. et al. 1993. *Biodiversity Indicators for Policymakers*. Washington, D.C.: World Resources Institute in cooperation with The World Conservation Union.

Reid, Walter V. and Kenton R. Miller. 1989. *Keeping Options Alive: The Scientific Basis for the Conservation of Biodiversity*. Washington, D.C.: World Resources Institute.

Van der Wansem, Mieke and David Smith. Forthcoming. *Strengthening EIA Capacity in Asia: A Synthesis Report of Recent Experience with Environmental Impact Assessment in Three Countries: The Philippines, Indonesia, and Sri Lanka*. Washington, D.C.: World Resources Institute.

---

© Copyright 1995 Thailand Development Research Institute