Enhancing indigenous people's forest knowledge

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Introduction

Indigenous peoples and communities living in forests and depending on them for subsistence number some 60 million people worldwide (Salim and Ullsten, 1999). Forests are their habitat, and provide their principle means of survival. For most forest-dwelling indigenous peoples, forests also have aesthetic and spiritual importance. However, despite growing concern and efforts to prevent it, forests are disappearing and degrading. Deforestation continues at an alarmingly high rate – some 13 million hectares per year (FAO, 2005). Indigenous peoples are facing increasingly difficult living conditions. Indigenous knowledge is in itself no longer sufficient to deal with the surrounding world. Planning and negotiation skills are becoming increasingly important. Moreover, indigenous knowledge is equally under threat and vanishing little by little.

Governments largely fail to govern forest areas in a sustainable way. Their unsustainable policies and their inability to control practices of logging companies and other people are not supportive to indigenous peoples. Indigenous knowledge and the efforts of indigenous peoples are an immense and potentially valuable resource to improve national forest management. The challenge is to encounter ways of mutual enrichment between: local and (inter)national levels of forest management; between indigenous knowledge and formal knowledge related to the forests; between indigenous practices and values and national forest policies; and between local forest planning processes and the collaboration of indigenous peoples.

Such interchanges are useful contributions to both reducing forest degradation and improving indigenous people's lives. However, still only limited successful examples of mutual enrichment exist and these have not easily been achieved. The two knowledge bases involved (formal and indigenous knowledge) are entirely different; 'linking' requires important changes in attitudes and visions. In the Indigenous Forest Management (IFM) Programme, participatory action research at local level is being implemented. Both knowledge bases can meet and demonstrate what is meant through accompanied analysis, planning and action by the community itself.

For people at local level, it also became important to understand which type of knowledge is used at national level, in order to be able to foresee its implications at the local level. To disseminate the generated new knowledge, deliberate and careful communication and capacity enhancement activities are needed. Mutual enrichment of knowledge about forest management at all the levels involved, requires profound changes in attitude and the knowledge base; respect, dialogue and autonomy are some of the most important notions. The chapter explains the different principles and approaches the IFM Programme is promoting.

Background

The IFM Programme is a collaborative research and action programme on forest and indigenous peoples, undertaken by five NGOs and a university from five countries in two regions, Central America and South-East Asia. The organizations involved from Central America are CEASPA in Panama, FEV in Nicaragua and SER in Guatemala, and from South-East Asia are ESSC in The Philippines and CRES in Vietnam. The programme is coordinated by FMD Consultants, an organization based in Portugal and The Netherlands.

In 1998, the above organizations started discussions and participatory research into the field of indigenous management of forest resources. The demand-driven process allowed for full participation of the most important stakeholders in different areas of the countries involved, through the formation of ad hoc working groups composed of representatives of indigenous people's organizations, universities, research institutes, NGOs, government bodies and the private sector. The agenda-setting process allowed for ownership of the action and research agenda relevant for indigenous poor people's development.

Outcomes of the first phase include: an assessment in the five countries of the situation of indigenous peoples and role of indigenous knowledge in community-based forest management; an analysis of the policy and institutional context; and major concerns related to the role of indigenous peoples and indigenous knowledge community-based forest management. Furthermore, the outcome is an action, training and research programme with a common conceptual framework, vision, objectives, methodology and approach, together with a general agenda for action, training and research, as well as specific agendas for each country related to the specific local context, needs and key issues at hand.

Indigenous peoples and forests

Most forest inhabitants and more specifically, indigenous people, see themselves as connected and attached to the land. Indigenous peoples have a history that is generally distinct from those with political, economic and linguistic dominance at national level. Governments are often unable or indifferent to provide proper policy or services to these peoples' communities. Often, indigenous peoples (IP) are being discriminated against, suffer from social exclusion and live in poverty under marginal conditions (health, education). Their dependency on degrading natural resources further threatens the difficult socio-economic contexts of these communities.

To IP, land and water areas and *forest resources* form an integral part of their world, religious and cosmic vision and have multiple uses. Therefore, their notion of forests is quite different from the one commonly held in national forestry departments. As a consequence, reforestation areas or monocultures for example are not regarded by IP as 'forest', while areas with few trees sometimes are. Similarly , IP do not identify with terms like 'management' to refer to the mechanisms that guide their relationship with the environment. They commonly allude to a partnership and harmonious relationship that must be established or maintained with the surroundings

and its supernatural forces if they, human beings, are to continue to propagate in the future. Nevertheless, today's scientific or modern environmental profesionals identify many IP' resource use practices and rituals as 'management' control measures. The Box 1 enumerates resource management measures common among IP communities (UNCED, 1991).

Indigenous peoples and other communities living in forests and depending on them for subsistence number some 60 million people worldwide (Salim and Ullsten, 1999). Forests are their habitat, and their principal means of survival. For many forest-dwelling IP, forests also have aesthetic and spiritual importance. In many cases the forest is a sacred place. Their traditional knowledge, acquired over centuries of interaction with forests and trees, generally leads such communities to relate to their forest habitat in ways that protect and sustain the forest as a socio-eco-spiritual system. The forest is an extension of their spiritual lives. Their cultural security is bound up with the security of forestlands. Likewise, cultural and spiritual values of forests often determine the extent to which people are dependent on them (van Rijsoort, 2000).

Box 1 Common IP communities 'management' measures

- Rationing access to resources through ownership rights and quotas
- Placing upper limits on resource use by imposing time and area restrictions on harvesters
- Setting aside refuges
- Forbidding the use/harvest of vulnerable species
- Limiting population growth
- Reducing social inequality
- Promoting religious ethics against excessive consumption or waste
- Adopting production methods that involve increasing biodiversity.

However, worldwide forest areas are becoming smaller and smaller. Some recent findings indicate that the total forest area in 2005 was estimated to be just less than 4 billion hectares. Deforestation continues at an alarmingly high rate – some 13 million hectares per year. South America suffered the largest net loss of forests from 2000 to 2005 of about 4.3 million hectares per year, followed by Africa, which lost 4.0 million hectares. An estimated 36 per cent of total forest area is classified as primary forest. About 6 million hectares of these forests were lost or modified each year since 1990, and there is no indication that the rate is slowing down (FAO, 2005).

According to Salim et al (1999), and this is confirmed in the country assessments made during the agenda-setting process of the IFM Programme, IP are beset by similar forces:

- loggers, ranchers, colonists;
- erosion of their traditional rights of access and use;
- displacement of their homes;
- erosion of their livelihoods;
- ignorance from outsiders of their culture, their historical custodial values and their accumulated intellectual property rights;
- disregard by authorities;
- persecution by politically strong and dominant people.

These forces are likely to intensify as demands on forests increase. Deforestation is mainly due to: logging companies, mining companies and state investment projects like dams and artificial lakes. Of course IP also make use of wood as fuel, make selective use of certain plants and trees for medicinal purposes or for making products, and also use slash and burn systems. Although these practices, especially because of population pressure, affect the forest substantially, their impact is small compared to those of the other phenomena. IP living in and around the forests areas have less and less land available, and they are sometimes forced to move to other places. Furthermore, evidence shows that the erosion of natural and biological resources goes hand-in-hand with disappearing traditional knowledge and diminishing cultural diversity. Many traditional societies break up and numerous customs, cultural expressions and languages are vanishing.

Differences and commonalities in IFM Programme countries

The IFM Programme has been given impetus and financial support by the Dutch government and functions in two language areas (English and Spanish), covering the cultural and ecosystems prevailing in Meso-America and South-East Asia. The research of IFM revealed that local realities of the five countries involved in the programme are very diverse (FMD, 2004). Indigenous communities range from groups of 50 to several thousand people. Land areas vary from 100 to more than 60,000 hectares. Forest types vary in area, quality and level of utilization by the different communities, as well as their use of non-timber forest products (NTFP). There are multiple forestcovers and uses of forestlands.

Despite the differences, many commonalities have been encountered during the assessments. As described, IP are connected to the land. Their common history is generally distinct from the political, economic and cultural dominance at national level. Land area and forest resources are inclusive of multiple uses and form an integral part of people's lives, where the so-called 'management' of the forest for them is a 'way of life'. Also for IP, forests are not limited to the practice of forestry, as perceived by forestry departments at national and regional level. For them living in and with the forests means showing respect to mother nature, a way of living in which the earth and everything that comes with it form a central element in everyday life. However, most evident in all local realities assessed is land use change and degradation occurring together. Most IP communities recognize the relationship between forest and water. In the communities, 'their' forests are a major internal concern. The environmental situation, the forest and climate are of determining importance, as are the less articulated socio-economic contexts of these communities.

In nearly all cultures assessed, external concerns of the communities are related to the poor or conflicting policies, and the inability or indifference of governments to put existing laws and policies in practice. Landownership as well as access to forest is often based on traditional community property rights, which are usually passed on orally. IP are much more familiar with the communal laws than with technocratic national civil laws. They need specialists to defend and exercise their rights. In some

cases, only after a long dispute and period of struggle, IP are entitled to own land. Furthermore, important decisions about forest management are often taken in remote government offices far from people affected by the changes in tropical forest. Indigenous poor people's concerns are not taken into account and IP lack power to exercise their basic rights. Finally, specific indigenous forest-related knowledge under threat of disappearing.

Legislation and landownership

An important issue in all five countries is that of landownership and legislation. In many countries, there were movements in the last century that clearly advocated and fought for the ownership rights of IP. In many cases there are legal frameworks in terms of laws that entitle IP as the proprietors or legal holders of their lands. However, there is big difference between theory and practice. The laws are there, but often they are not being put into practice; there is no adequate control system that certifies the rights of (small) communities or landowners. In some cases, only after a long dispute and long periods of struggle, are IP entitled de facto to own land. This is the case in certain parts of Panama, Guatemala and The Philippines.

There is also a difference between those who own the land and those who use the land. In some countries, governments can give mining or logging companies concessions to exploit certain areas of the forest, despite the fact that it is the territory of IP. Furthermore, even in situations where people have legal rights, these persons are often threatened by subdivision plans for land, land sales and growth of population. This leads to a reproduction of poverty; indigenous people have to adjust the way they maintain the needs of the family by going further and further into the forests. As a result of the pressure on the forest, the pressure on the forest peoples is mounting. This becomes a vicious circle.

Another issue regarding legislation is the often-existing gap between (general) state laws that give citizens individual rights and (specific) traditional laws, usually passed on orally, which give communal rights. Legal pluralism, whereby customary law is practiced by IP but not acknowledged by the state, is the common situation, rather than the exception. In the same way that indigenous knowledge avails of entirely different worldviews, principles and terminology, when compared to formal forest knowledge, traditional law is very different from national law.

Because of their exclusion and lack of representation at all (government) levels, more IP are becoming organized to protest and in some cases they start armed struggles to have their rights recognized. There are examples of this in Guatemala, Nicaragua and Panama. IP in Panama autonomously rule large territories as legal owners, as discussed in Box 2.

Box 2 Panama

In Panama, 20 per cent of the national territories are so-called *comarcas*, which are the official property of IP. Three levels of IP organizations exist: regional (*congresos regionales*), communities, and social organizations that can be local or regional (for example, of fishermen, botanists, women or the young). All three types of IP organizations are acknowledged by law and their influence is considerable. The indigenous lands are property of the *congresos generales*. Within the *comarcas*, different types of property rights exist: by community, family, organization or individual. Only IP can own land; land cannot be sold to non-indigenous people. Some types of property right are hereditary; others are rotated within the family.
No land titles or documents exist; the recognition of the community prevails. The *congreso local* acts as a kind of court. Customary law rules within the *comarcas*, though some conflicts with national politics exist (Alemancia et al, 2004).

It is clear that property rights alone are not the solution to all problems. In Panama, the recognition of rights and participation of indigenous organizations and communities allows the opinions and decisions of IP to have legal bases. However, the favourable legal context is diminished by the poverty levels of IP, which prevent them from using their opportunities.

Communities and the forest

Indigenous communities in countries such as Vietnam, The Philippines, Guatemala and Nicaragua continue to be faced with poverty and marginality (see Box 3). Government data in The Philippines on poverty and forests are increasingly used to show how the problem has become compounded. Communities have difficulties in managing resources given their history of poverty. The need for immediate responses to concerns of food and water use may be in conflict with their traditional sense of relations in life. The growing internal pressures of population and age group, differences of expectations and visions require greater efforts to create resolutions. Knowledge levels are changing and forest-based food sources are being reduced, while there is greater need for protection of plant and animal life. This demands the strengthening of regulations and rules by communities. Community rules operate with different strengths and often there is a lack of control and implementation of those local rules supported by the community.

Box 3

Totonicapan
Indigenous communities of the region of Totonicapan in the highlands of Guatemala have, against the odds, been able to utilize, maintain and preserve their forests through a system of communal forest and partial ownership of the land. These forests are located in an area where there exist four watersheds that give origin to important rivers that are vital for the development of the country. IP' attitudes toward nature and its conservation are proof of their conscious effort towards sustainable use of natural resources (Gonón et al, 2004).

The Kankaneys of Luzon

Another example of sustainable resource management are the Kankanaey IP communities in the Mountain Province in the highlands of Luzon, The Philippines. The people have what they call their Inayan. This is an overarching philosophy of customs and traditions that speaks about values and respect for people and the landscape. It teaches people self-restraint and discipline in how to use *doga* (land) and *danum* (water). If people use these elements in the proper (sustainable) way, they can get into contact with their ancestors and with spirits. They also have *dop-ay* and *umili*, places where conflicts and problems are being solved and that are of great importance to the social and political structures of their society. Forests are commonly owned. Land use is divided among forestry, pastureland, honey collection, hunting and rice fields called *payeo* (the famous old terrace structures patronized as world heritage by UNESCO) (ESSC, 2004).

Not all communities involved in the IFM Programme have official plans for forest 'management' to which local government can relate. Some do management planning at different levels. However, such planning can potentially negatively affect indigenous knowledge as it uses a different logic and has a different knowledge base. Eventually, it may result in the discarding of the old. There is a lack of technical support, of regulations, plans, management skills and of means to impose these regulations. Some communities want to understand how to imporve their economies in order to become part of the tempting market economy.

Government and forest management

At the level of local government, relations with communities vary from positive to negative, but a practice of constructive planning with communities seldom exists. Political history has had a radical effect on most of these communities since colonial times. Concrete policy frameworks related to forest and IP are often lacking or have a limited presence. In many countries, forestland, being a national natural resource or a common good, is often state owned. The state grants concessions to investors such as logging companies, largely ignoring the fact that IP live there and depend on the forest. Or, the area is proclaimed a 'protected area', making any extraction from the forest an illegal act, without consulting IP living there. In general, protected or park areas are seldomly experienced as respectful to communities in the area. Other external pressures, such as investment or tourism, are generally associated with interventions from the government.

Although legal frameworks may have changed, often this does not lead to real changes in practice. For example, the new political constitution of Nicaragua establishes a juridical baseline on environment and indigenous rights. This comprises of the recognition of:

- The social right of Nicaraguans to enjoy a healthy environment;
- The importance of production systems and development patterns based on rational use of natural resources and on conservation of the environment;
- Its multi-ethnicity and the respect for communal ways of property rights, use of water and forests resources.

However, in practice this remains pure theory. In The Philippines, a reform of the legal framework favourable for IP was recently achieved (See Box 4).

Box 4 Constitutional provisions in The Philippines for IP

In 1987, progressive elements were incorporated into The Constitution of Republic of the Philippines. Sections on the rights and welfare of indigenous peoples include the following:

Section 4, Article XII (National Economy and Patrimony) - The protection of the rights of IP to their ancestral domains to ensure their economic, social and cultural well-being and the recognition of the applicability of customary laws, governing property rights or relations in determining the ownership and extent of ancestral domains.

Section 6, Article XIII (Social Justice and Human Rights) - The State shall apply the principles of agrarian reform or stewardship, whenever applicable in accordance with law, in the disposition or utilization of other natural resources, including lands of public domain under lease or concession suitable to agriculture, subject to prior rights, homestead rights of small settlers, and the rights of indigenous communities to their ancestral lands.

Section 17, Article XIV - The State shall recognize, respect and protect the rights of indigenous cultural communities to preserve and develop their cultures, traditions and institutions. It shall consider these rights in the formulation of national plans and policies.

These and other constitutional mandates provided the basis for the formulation and passing of the Indigenous Peoples' Rights Act (IPRA) of 1997. IPRA, considered a landmark law in Asia, fundamentally granted full recognition of indigenous peoples as citizens of the country, their rights to self-determination, as well as the protection and promotion of their heritage and cultural integrity. It also called for the establishment of the National Commission on Indigenous Peoples (NCIP). A major mandate of the commission is to secure the ancestral domains of IP through certificates of ancestral domain titles.

Although the constitution of The Philippines has embraced the rights of the IP and has established various cultural administrative procedures to protect these rights, the country is constrained, on the one hand, by serious technical and material limitations and, on the other hand, by lack of political will to seriously work on the recommended changes. Also workable mechanisms are yet to be put in place to provide IP with the opportunities to enhance their knowledge and harness their capabilities in resource management. At the same time, some IP have very fragmented cultural identities. They have never been able to work together in the past and need far more time and involvement before an effective engagement with broader society can be achieved. Furthermore, major conflicts are due to an ever-expanding society that daily encroaches on IP lands and to a development drive that too often seeks economic growth that is unsustainable and is disregarding of the particular local needs and priorities of IP.

Participatory forest management and community empowerment

For the IFM Programme, the participation of local communities is central to achieve sustainable use of forest resources. It is a means of improving equity, effectiveness and sustainability. Participatory approaches implemented must be differentiated and context specific in order to be successful (Lammerink, 1999).

Forests provide diverse benefits to multiple groups of users. Rights, resource flows and social relationships are complex, dynamic and may lead to conflicts between and within different categories of users. A first step in addressing these conflicts is to identify the various stakeholders with an interest in forest management and to determine their rights, responsibilities and objectives. Analysis of the local institutional context and social dynamics may shed light on power relationships among user groups.

The programme acknowledges that an appropriate policy and a regulatory framework at national and local levels play a crucial role in enabling local initiatives on forest management to become successful. Local forestry initiatives need to be developed within a policy framework that fosters economic, social and cultural activities in and around the forest.

The IFM Programme is firmly rooted in local circumstances and situations, and cooperating with indigenous communities and organizations in developing their own initiatives to improve their situation is central. Indigenous knowledge is a starting point for improving the local forest management, however, without rejecting useful outside knowledge. Formal forest-related knowledge if relevant and useful for local purposes can be 'localized' or adapted to the specifics of the local situation in an appropriate way (in The Philippines this process is called indigenization).

Thus, jointly with communities using participatory action research, 'best practices' at a local level, originating both from indigenous and formal knowledge are being identified. Scaling-up these local experiences, responses and approaches in such a way that they can be used to develop or adjust forest management policies at a regional, national and even international level is one of the major challenges of the programme. Example of such 'best practice' are the three inter-related principles of indigenous resource management: consulting the spirits; working with nature and sharing with others. Here rituals are the tools for planning the partnership of culture and biodiversity to work together, and for the equitable sharing of produce and collective welfare as a mechanism for sustainability (Bennagen, 1993).

'Linking' local knowledge to the national knowledge base on forest management is absolutely necessary. Van Bodegom (2000) notes that

> In the field, international conventions and agreements often seem very distant and irrelevant… In many cases, not much is known at local level about the contents of international agreements. Moreover, the input of a country at international level is often not based on experience in the field. It is important to improve communication between the international level and the national and local levels… Input originating at local level is particularly important.

Documenting indigenous knowledge from within

There is an increased awareness of the fragility of the earth's ecosystem. Although indigenous knowledge systems have generally been disregarded by formal scientists and policy-makers, recently there is a growing recognition that indigenous knowledge and traditional cultures contain characteristics that need to be taken seriously in order to meet the global challenge of bio-cultural sustainability.

As a result, many Northern-based scientific, donor and development institutions are increasingly acknowledging the importance of indigenous knowledge and practices. These agencies are often interested in the preservation of cultural and biological diversity. Indigenous people are also interested in recuperating their cultural autonomy and in preserving their habitat. These two views converge and it would seem simple to respond to both. Yet external pressures – political and commercial interests, missionaries, conventional development policies – continue to act in a contrary direction.

One of the pressures stems from disputes over intellectual property rights. Many indigenous techniques and practices have been documented, improved and made public. These *ex situ* documentation and conservation approaches are accessible in scientific and governmental circuits, but these approaches face the delicate issue of intellectual property rights. There is a risk of extracting knowledge from a local community and opening its use and benefits up to outsiders, who may even patent it. The benefits to the local community who provided the knowledge to the database are often very limited in this approach.

The IFM Programme promotes the enhancement of *in situ* development of local knowledge systems to avoid extracting knowledge from its original base. Local control over the dynamics of local knowledge systems is another reason why *in situ* documentation is promoted. It is important to document processes of knowledge generation (concepts, ways of learning, teaching and experimenting), but not necessarily the concrete outcomes as solutions to specific problems. Local determination and retention of the benefits will allow harnessing of these knowledge generation processes between local communities.

Furthermore, the IFM Programme respects a worldview shared by indigenous cultures, avoiding its substitution by a western worldview that separates the spiritual from the material, religion from knowledge, and culture from nature. The philosophy of indigenous cultures is better characterized as a cosmovision or as holistic. A better understanding by IFM partners asks for the opening of all their intellectual and sensorial pathways (touch, smell, taste, sight, sound). The understanding of indigenous knowledge from within an indigenous worldview is required.

Thus, aspects of indigenous knowledge are considered essential, such as the way local people interpret the world (their worldview or cosmovision), the roles of traditional leaders and spiritual practices and the way local people learn, teach and experiment in order to improve their own traditional knowledge and practices.

This is in line with the concept of endogenous development. Endogenous development is based, mainly but not exclusively, on locally available resources, such as land, water, vegetation and forest, local knowledge and the values and preferences of local people. Endogenous development strives to optimize the dynamics of these local resources and thus to contribute to economic growth, ecological stability and

cultural diversity. Endogenous development aims at the local determination of the development options, local control over the development process and the retention of the benefits of development within the local area (Haverkort et al, 2001).

In studies on IP and their forest-related knowledge, only a few cases could be found where interventions were actually based on incorporation and full development of this local knowledge. Moreover, in practice little attention is given to approaches that could be applied for supporting indigenous communities to harness specific forest-related knowledge in their own development process. In many cases, forestry innovations are still based only on formal forest knowledge. And although information exchange between formal and indigenous knowledge systems has been encouraged for several years now, this has not yet led to real substantial results (Colchester and Erni, 2000; Rovillos et al, 2000; van Leeuwen, 1988).

Indigenous Knowledge and local knowledge are not only very context specific, but are totally different from formal knowledge in structure, jargon, ways of (re)generation and of communication. Also prejudices may exist among academics about indigenous knowledge and among indigenous peoples about 'book knowledge'. Indeed, both parties may not recognize the other type of knowledge as being useful. Learning in the IFM Programme thus not only concerns learning on forest management, but also discovering how knowledge can be mobilized and be made to flow, flow from formal knowledge to community level and flow back to use elements of indigenous knowledge to enable design of suitable forest policies.

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