

Hunger issues: natural resources

Forests: rural communities caught between markets and the objective of conserving the planet

Forests and forestry products have a vital role in the life and development of rural communities. Throughout history, there has been a close relationship between forests and economic development. Through deforestation, resources required for development were mobilised in Europe during the Middle-Ages and the Industrial Revolution. But excessive deforestation and its irreversible consequences on the environment have also been a cause of the downfall of some civilisations¹ as illustrated by the emblematic examples of Easter Island and the Maya civilisation. History demonstrates the critical importance of a balanced relationship between the population and forests.

Pre-agrarian societies and communities living today from hunting and gathering are highly dependent on forests for their subsistence. The emergence of agriculture has deeply modified the nature of dependence of humans on forests. It has brought deforestation, but forests for a long time forests have been the main source of virgin land for agriculture and food. With industrialisation, forests have become first and foremost a source of primary products (wood, industrial crops, energy and minerals). In the post-industrial era, forests are expected above all to serve as sources of ecological services such as water, carbon sequestration and recreational areas. With the coexistence of pre-agrarian, agrarian, industrial and post-industrial societies, conflicts are inevitable among population groups with differing interests and needs. The issue is then is how to ensure an equitable sharing of forest resources, with due respect for the most vulnerable population groups, particularly indigenous people.

Forest products

There are approximately 500 million people, among the poorest of the planet, including around 150 million indigenous people, who depend on the use of forests for their subsistence. This is for example the case of the Baka people in the Congo basin, of the Dayak of Borneo or the Kayako in Amazonia². But there is a much larger number of people who draw resources from the forest in some way or another.

The total forest area in the world is estimated at 4 billion ha or 31% of the land surface of the planet. It generates an estimated annual total value added of almost USD 500 billion, equivalent to 1% of world annual GDP. 45% of this amount comes from the pulp and paper industry, 30% from the wood industry and the rest from other forestry activities. Trade in forestry products is valued at more than USD 300 billion³.

¹ FAO, [State of the World's Forests 2012](#),

² ONF, [Les forêts tropicales](#)

³ Lebedys, [Contribution of the forestry sector to national economies, 1990-2006](#), FAO 2008



For rural communities, forests are the source of a great diversity of products. This diversity is the result of traditional management of forests⁴. Besides wood products used for construction and furniture making as well as a variety of hand-made products, forests also provide:

- Fuelwood and charcoal⁵
- Fodder for livestock, whether directly grazed by animals or harvested to be fed to them
- Soil fertility, through the manure of animals grazing part of the day in the forest, the application of leaves or of forest litter, through agroforestry, or through slash and burn cultivation
- Food⁶ (bushmeat, roots, edible leaves, fruits, nuts, mushrooms, honey, spices, etc.)
- Medicinal plants used by hundreds of millions of people, and increasingly by the pharmaceutical industry
- Dye for clothes and artisanal products which often have an important safety net role⁷
- Raw material for handicraft and wickerwork.

⁴ Some authors like W. Balée, believe that traditional forest management has improved biodiversity when compared to conditions in virgin forests without the presence of humans, **Footprints of the Forest: Ka'apor Ethnobotany—the Historical Ecology of Plant Utilization by an Amazonian People**. New York: Columbia University Press.

⁵ More than two billion people depend on energy from fuelwood for cooking their food and heating. This wood represents close to half of renewable energy consumption in the world or 10% of total supply of primary energy, equal to 1,100 million tonnes of oil equivalent.

⁶ In many countries, hunting and fishing in forests may supply more than 20% of the total need for proteins, vitamins and various essential nutrients.

⁷ Hand-made products, mainly manufactured from wood and other forest products, are a source of livelihood for at least 100 million artisans and their families in rural communities. (Scherr, White et Kaimowitz, 2004. [A new agenda for forest conservation and poverty reduction: making markets work for low-income producers](#). Washington, DC, Forest Trends et CIFOR).

FAO estimated in 2005 the total value of forestry products other than wood (i.e. non-wood forest products - NWFP) at USD 18.5 billion⁸.

At the local level, income from the forest can be of a considerable importance for the population. For example, in Burkina Faso in the village of Tenkodogo, income drawn from the forest by poor households may represent as much as 50% of their total revenue, of which 10% is monetary income and the remaining 40% non-monetary income.

This proportion is higher for the poorest households and for women than for other categories. The more the isolated an area is, the greater is its dependence on the forest⁹.



Forests also play a regulatory role for the supply of water, acting as a buffer at times of drought or floods. Moreover, forest zones often have a high tourist potential. They also play a central role in carbon sequestration estimated at 289 billion tonnes of carbon every year¹⁰. As will be seen, all these potentials may constitute a threat for local populations in so far as they may stir up the greed of external companies seeking investment and profit-making opportunities. If not managed properly, this may result in local communities losing access to a resource essential for their subsistence.

Access to forest resources

Rural communities have, since time immemorial, had access to forests resources in their diversity. Around 80% of forests in the world are estimated to be part of the public domain¹¹. In recent decades, formal community forestry management mechanisms have been established and the rights of communities have been progressively recognised by governments, although often too slowly. However, in many countries the regulatory frameworks lack precision or do not guarantee a real security of access for communities for whom forests are an essential source of subsistence. These frameworks too often

⁸ FAO, [Global forest resources assessment 2010: Main results](#). Rome.

⁹ FAO, [State of the world's forests 2011](#)

¹⁰ FAO, 2012, op.cit.

¹¹ FAO, [Global forests land-use change 1990-2005](#). FAO Forestry Paper 163. Rome, Italy 2012

have loopholes that offer opportunities for external agents to grab the forest for their benefit.

The development of community capacities to get organised, negotiate and defend their rights with local or national authorities and against external threats, has proven to be critical to oblige governments and their leaders to respect the acquired rights of communities. Communities are often supported by international organisations or NGOs to defend their traditional rights of access forests. This right of access is increasingly challenged for various reasons. The loss of access to these resources will put these communities in a situation of greater vulnerability, poverty and chronic hunger.

Threats to the access by local communities to forest resources

What are the threats to the access to forest resources by local communities? They are of five types:

- Deforestation
- Commercial concessions
- Natural reserves and parks
- Carbon concessions
- Privatisation without decent compensation for traditional knowledge.

Deforestation

Over the last 5000 years, an estimated 1.8 billion ha of forested land have been cleared (around 14% of the land surface of the planet). This means a loss of around 360,000 ha per year¹². During the first 10 years of the XXIst century, around 520,000 ha were cleared yearly. Deforestation had slowed down considerably if not stopped altogether in the temperate zone, while it has strongly accelerated in the tropical zone. In fact, it is estimated that around 1.3 million ha of forest are lost every year, of which 400,000 ha of primeval forests, while around 780,000 ha are added to the forested area through forest plantations or natural regeneration. The net annual loss of forest area is clearly diminishing compared to the 90s (830,000 ha per year) mainly because of the increase of forest plantations in the temperate zone, in particularly in China ¹³.

According to Pavan Sukhdev¹⁴, Special Advisor at UNEP and leader of the [TEEB](#) project, the annual cost of deforestation is as high as USD 1,300 to 3,100 billion, an amount that is larger than the loss made by banks in Wall Street and the City of London during the financial crisis of 2008. And this is happening against the background of a quasi-general indifference. Interestingly it is not included in national accounts that however value the manufacturing of weapons and nuclear decontamination as «resources»...

¹² Williams, M. 2002. **Deforesting the earth: from prehistory to global crisis**, 2007 University of Chicago Press.

¹³ FAO 2012, op.cit.

¹⁴ Sukhdev, [TEEB, Public goods and forests](#), The IUCN Forest Conservation Programme Newsletter, Nb 41, 2010, p.8-9.

According to FAO¹⁵, at the end of the last century, the main causes of deforestation and forest degradation were, by order of importance, the expansion of subsistence agriculture (63%), the expansion of agricultural plantations (16%), overexploitation of forest for the collection of fuelwood (8%), the development of livestock (6.5%), wood cutting (5.5%) and the development of infrastructure - e.g. roads, cities and mines (1%).

More recently, a report prepared for the British and Norwegian governments¹⁶ estimated that agriculture remained the main direct cause of deforestation and forest degradation (80%). The report however stresses that in Latin America, two thirds of deforestation came from the establishment of commercial agriculture. In Brazilian Amazonia, extensive cattle rearing is generally considered to be the main cause of deforestation. Poorly defined land rights make it easier for investors outside of local communities to grab land¹⁷. Commercial agriculture was also at level with subsistence agriculture as a cause of deforestation in Africa and in inter-tropical Asia. In Asia, the development of palm oil during the last twenty years has been taking place through deforestation¹⁸. Forest degradation was due in 70% of cases to commercial logging in Latin America and in Asia, while fuelwood gathering and the production of charcoal, and to a more limited extent overgrazing, were the main factors in forest degradation in most of Africa. The underlying causes of this degradation are:

- At world level, markets and the price of primary commodities (wood, but also agricultural and food commodities whose price has been pushed upwards because of a fast growing demand)
- At the national level, demographic pressure and poor governance (inappropriate policies, corruption, illegal logging)
- At the local level, poverty, quest for means of subsistence and insecure land rights.

Other reasons for deforestation and forest degradation include tourism, acid rains, various tree parasites and diseases, and war, as well as the under-estimation of the real value of forests and of their importance in relation to climate change¹⁹.

Commercial concessions

Commercial concessions are the main mechanism through which deforestation is taking place. Their development is the result of a renewed interest in forest products on the world market. These concessions have developed rapidly in various parts of the world during the latest part of the XXth century.

In 2010 in Central Africa, around 26% of the 170 million ha of the dense rainforest of the Congo river basin had been given as forest concessions. This is 10% less than in 2000. These concessions covered 75% of forests in Congo, 45% in Gabon, 43% in the Central

¹⁵ Lanly, [Deforestation and forests degradation factors](#), FAO 2002

¹⁶ Kissinger, Herold et de Sy, [Drivers of deforestation and forest degradation, A Synthesis Report for REDD+ Policymakers](#), Lexeme Consulting, Vancouver Canada, 2012.

¹⁷ Karsenty et Ongolo, [Les terres agricoles et les forêts dans la mondialisation: de la tentation de l'accaparement à la diversification des modèles](#) ? Cahier Demeter,

¹⁸ Koh and Wilcove, [Is oil palm agriculture really destroying tropical biodiversity?](#) Princeton University 2008

¹⁹ Chakravarty, Ghosh, Suresh, Dey and Shula, [Deforestation: Causes, Effects and Control Strategies](#), InTech, 2012

African Republic, one third of forests in Cameroon, 12% in DR Congo. In Equatorial Guinea, all concessions were cancelled in 2008²⁰.

Forest concessions limit access to the forest by local populations when they do not ban it altogether. Moreover, the exploitation of concessions by private companies impacts on tree species of importance to local people. For example, 61% of the 23 main wood species exploited by private forest companies in Cameroon have a high value for local communities for their subsistence, their income and/or their health. The harvesting of the three most exploited species in Cameroon and the Central African Republic (*Triplochiton scleroxylon*, *Entandrophragma cylindricum* and *Melicia excelsa*) significantly reduces the availability of non-wood forest products for local communities. Logging activities also destroy trees that have no interest for private companies but provide very important products for local communities²¹.

In Asia, in Cambodia in 2001, 17 companies had 24 concessions covering more than 4 million ha out of a total of 10 million ha. In Indonesia in 2000, 320 concessions covered 41 million ha out of the total of 100 million ha of forest (the total forest area of Indonesia was 162 million ha in 1950!)²². The situation is similar in Latin America. In India, 1.1 million ha are under threat from coal mines and tens of thousands of indigenous people are in danger of being deported.

In most cases, local people are hardly associated with the management of concessions. In most cases they are excluded and there is no management authority or consultative body that could offer a venue for local communities to defend their interests²³.

The importance of concessions is a direct consequence of the fact that forests are assumed to belong to the state. This allows governments to give public forests in concessions without consulting with communities who however have ancestral traditional user rights²⁴. This process continues despite efforts made towards the certification of forest products with the aim of encouraging good practices. But certification currently covers only 2.3% of the world's forests (90 million ha)²⁵.

Reserves and nature parks

There are 100,000 sites, parks and sanctuaries protecting more than 1.5 billion ha, the first of which was the Yellowstone National Park in the US, established in 1872²⁶. At first, parks were essentially areas that had been set for the purpose of conservation and humans

²⁰ de Wasseige *et al.*, [The forests of the Congo Basin - The state of the forests in 2010](#), COMIFAC/UE

²¹ FAO, [Impact de l'exploitation des concessions forestières sur la disponibilité des produits forestiers non ligneux en Afrique Centrale](#), 2007

²² Global Forest Watch, Forest Watch Indonesia, [The State of Forests: Indonesia](#), 2002, World Resources Institute

²³ Laurent Grainer, [Participation des Communautés Locales et Autochtones à la Gestion des Concessions Forestières en République du Congo](#), 2012 Projet OI-FLEG Congo, U.E./DFID

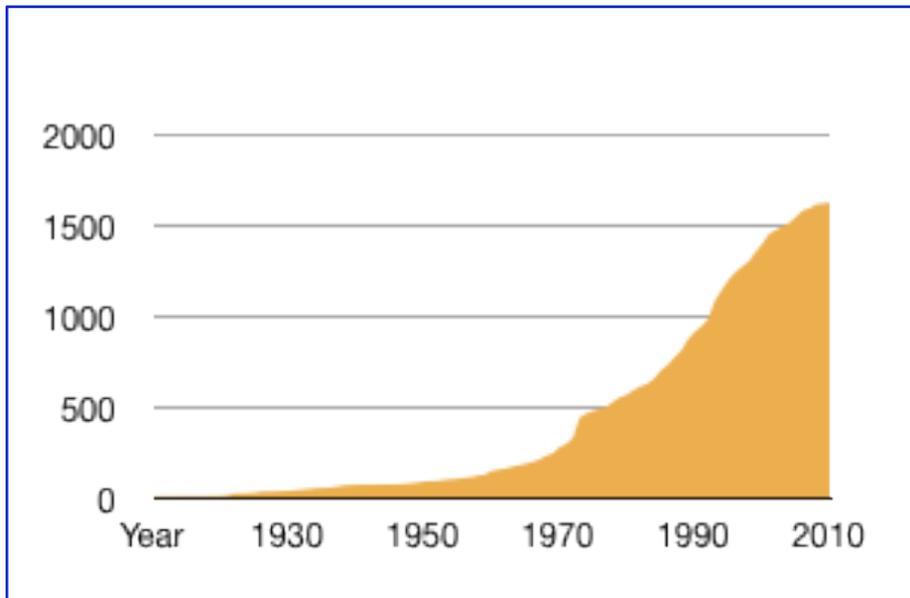
²⁴ Karsenty et Ongolo, *op.cit.*

²⁵ ONF, Les [Forêts tropicales](#)

²⁶ Some areas had already been set aside in a more ancient past, like in the case of the Maurya kings in the North of India during the IVth century B.C..

were not allowed in them. Today, reserves and parks have increasingly become means for the promotion of sustainable development that acknowledge the role of local people and the objective of conservation of both natural and cultural resources. This change of approach however remains a difficult challenge²⁷.

Evolution of protected areas in the world (1911-2011)



Source: [World database on protected areas](#)

In 2005, areas having conservation as their main objective and which excluded any human presence represented around half of the total protected areas (70% in North America where 20% of world's protected areas are found). In 2003, these areas covered approximately 13% of tropical rainforests (160 million ha), 7% of tropical dry forests (23 million ha) and 12% of woody savannah and savannah-forest mosaic areas. In many countries, local communities have lost their land and resources when these protected areas were created and have received little or no compensation, but in many cases this land is still occupied or partially used by neighbouring communities²⁸.

²⁷ Chape, Spalding and Jenkins, [The world's protected areas - Status, values and prospects in the 21st Century](#), UNEP-World Conservation and Monitoring Centre 2008

²⁸ Chape, Spalding and Jenkins, *op.cit.*

Two examples of reserves in Tanzania: 1. The Loliondo Masai in Ngorongoro district

The government of Tanzania, through the Minister of Tourism Khamis Kagasheki, confirmed its intention to seize 1,500km² (150,000 ha) in Ngorongoro, a district famous for its crater known for a rich fauna and which is an internationally renowned tourist attraction. This area is mainly covered by savannah and is being used as pasture area by the Masai. It is essential to the survival of their herds during the dry season. The pastoral activities of the Masai are considered as one of the most compatible activities with the conservation of the local fauna.



Since 1959, the British government had driven the Masai away from the huge neighbouring Serengeti Park in order to establish a national park. Part of the population who was then displaced was sent to Loliondo.

In 1992, the government of Tanzania gave the Loliondo area as hunting reserve to Otterlo Business Corporation Ltd. a company specialised in organising hunting safaris for United Emirate princes. During the 2009 hunting season, the government drove the population out of this area by burning down 150 temporary hamlets. In the process, a seven year old child disappeared and the cattle herd of around 60,000 heads was put in a state of extreme vulnerability, with a consequent increase of animal mortality.

The seizure of this territory was made official in 2011 by the publication of Wildlife Conservation Act No 5 of 2009. The declaration of the Minister of Tourism of 26 March 2013 confirms the intention of the government to give priority to the development of tourism to the detriment of agriculture and animal production.

An international campaign to support the Loliondo Masai is ongoing at the initiative of several international NGOs in particular [AVAAZ](#).

Check the [AVAAZ petition](#)

Read the [article in The Guardian of September 2009](#)

In some cases, the establishment of these protected areas seems to have taken place under benign conditions. For example, in Bamezoun, Benin, the setting aside of a coastal forest zone went along with an investment of USD 4.3 million by the [Global Environmental Facility](#) to establish a vegetable growing area, infrastructure for aquaculture, transport and

palm oil production, as well training several hundreds of local people. These new facilities are expected to compensate for the losses due to the setting aside of the coastal area²⁹.

Two examples of reserves in Tanzania: 2, The hunting reserve in Bagamoyo district

A Danish hunting association joined with 13 villages on the western border of Bagamoyo district and 11 villages of the Merger region to create a hunting reserve covering 25,000 ha of forest. Each of the villages receives an annual payment of one million Tanzanian shillings (around 480 euros). The association also financed the preparation of a land use plan and land ownership survey for a total cost of 120 million Tanzanian shillings (approx. 58,000 euros) which should result in the distribution of land titles. The agreement reads that villagers commit not to enter any more into the hunting and fishing area. The Danish association organises photo safaris and takes care of lodging the tourists.



Although the “rental” of the land is cheap (around 0.5 euro/ha) this reserve management approach can be considered as a good practice given that villagers are associated with this activity, see their rights recognised and get financial compensation, even if only very limited.

Source: Jussi Ylhäisi, [Sustainable land privatisation involving participatory land use planning in rural areas. An example from Tanzania](#), Land Tenure Journal, 1-10

²⁹ World Bank, [Préserver la biodiversité des zones côtières au Bénin](#), 2013

“Carbon” concessions

The concept on which [REDD](#), the United Nations initiative for the Reduction of Emissions resulting from Deforestation and forest Degradation, launched in 2008, is based is seemingly quite attractive. As indicated by its name, this initiative aims at reducing carbon emissions resulting from deforestation and forest degradation. These emissions represent year-in year-out around 15 to 20% of global carbon emissions. The approach to reduce these emissions is to work in close collaboration with rural communities and to mobilise financial resources from the carbon market where carbon emission rights are traded. The concept on which REDD+ is based even goes one step further by helping to establish forest management techniques that can result in increased carbon sequestration.

In the field, REDD/REDD+ is implemented by the establishment of forest concessions managed in a way to increase the amount of carbon they store. The setting aside of these concessions by concerned countries and communities who used them before is compensated by annual payments to the government and to the communities by polluting companies which then gain the right to emit a certain quantity of carbon through their industrial activities. The idea seemed great as it would allow rural communities to secure a financial income for a rather long period while giving them some limited possibility to use certain products from the forests they manage and maintain.

An example of success of REDD: The village of Ibi on the Batéké plateau in DR Congo

Carbon finance may constitute an importance source of income for communities by compensating the setting aside of forests.

For example, the villagers of Ibi on the Batéké plateau, situated at around 150 km from Kinshasa, DR Congo, decided to replant a degraded forest and finance the education of hundreds of children as well as providing basic medical care services with the funds obtained from the carbon market in the framework of the REDD programme.

Project activities have helped to regenerate portions of savannah and develop natural habitats for the local fauna.

Source: World Bank: [DRC: Congo community to use carbon payments to put kids through school: Reforestation project is DRC's first registered under Kyoto Protocol](#)

But reality turned out to be less exciting and the implementation of the REDD+ programme was strongly criticised by civil society organisations and particularly by [Via Campesina](#)³⁰. Reasons put forward include:

³⁰ See for example: Via Campesina, [Mozambique : Carbon Trading and REDD+: farmers ‘grow’ carbon for the benefit of polluters](#) 2012

Critical comments by communities participating in the REDD programme

The representative of the indigenous people of Paraguay, S. Marcelo, who is also administrator of the International Alliance of Indigenous and Tribal Peoples of the Tropical Forests, thinks that REDD is both inefficient and highly damaging for the «traditional forest wardens».

He considers that the establishment of a compensatory mechanism which involves countries who have no responsibility for climate change but suffer directly from its consequences is shameful. REDD, according to him, is all about land, territories, land titles and natural resources. Mr Marcelo explained to an appalled audience that the government of Paraguay had expelled communities from their ancestral forests on the ground that these forests represent a carbon sink that could generate a large number of credits on the forest carbon market. These communities are now obliged to rent their land to foreign companies who manage the forests!



The Kenyan representative explained that the system was so complex that community organisations will always have more difficulties in benefitting from REDD than large national or foreign organisations. For them, the first beneficiaries will remain the large operators and intermediaries. Indeed, as repeated endlessly by NGOs in the corridors of the Bella Centre, mechanisms financed by carbon markets will give power to investors and financial intermediaries, the former having the land titles and the latter speculating on carbon emission credits.

Benefits will go as compensation those who used to cut forests and to economic forces.

It is therefore impossible for those who really protect the forests to be compensated for their function in conserving environmental services provided by the forest, particularly the sequestration of carbon.

Translated from [Les communautés dans les pays du sud et les bénéfices du REDD](#)

- The programme generates strong interest of external operators - often financiers specialised in carbon trading for forests in the South. It attracts them to remote rural areas where they speculate in anticipation of the implementation of the REDD/ REDD+ mechanism. For example in Mozambique, a company supported by British

capital has its eyes on 15 million ha of land³¹

- It creates social tensions between peasant groups, communities and the companies with which contracts are signed
- Some of the local people drop relatively rapidly out of the projects because of the low income they get from them
- The contracts commit local people beyond the period during which they get payments
- Some REDD projects have led to the total deportation of some population groups (in Mexico in particular)
- REDD agreements tend to divert farmers from traditional food production and make them more vulnerable to the market
- With time, local communities may lose their ancestral access rights to land and this affects negatively their food security. Forest conservation is likely to be decoupled from local development
- Some private investors may be tempted to fence private conservation areas
- With time, REDD may erode culturally rooted not-for-profit conservation values and replace them by conservation values based on considerations of profitability³².

All these limitations and risks demonstrate the need for an independent evaluation of REDD to see whether its basic principles are respected in practice and the possible adaptations that would need to be brought to the programme for it to become more favourable to the development of local people.

Moreover, the underlying principle of this programme itself can be criticised as it has been designed to allow industries in the North to continue producing and growing, while, in compensation, people in the South are driven into a situation of passive dependence and have to rely on modest payments. It is clear that this mechanism is not designed in ways that will generate sustainable and autonomous development in the South.

Privatisation without decent compensation of traditional knowledge

Similarly to what has been seen in the case of genetic resources [[read here](#)], traditional knowledge of the forest which has been acquired throughout history, is threatened by large multinational groups who see in its use a cheap opportunity for making profit, in so far as they can appropriate this knowledge without compensating the people who have accumulated it and without fear of being punished for doing it.

It is clear that this traditional knowledge has played a pivotal role in the development of pharmaceutical industries, herbal treatments, cosmetics and floriculture. Industries producing and selling herbal treatments, food supplements, cosmetics and body care products, food and drinks based on traditional products (saw palmetto, milk thistle, ginkgo, goji, ginseng, guarana, cordyceps, devil's claw, acai, elderberries, echinacea, etc.) have been growing very rapidly worldwide, particularly in Europe, the US and in China³³.

³¹ Isilda Nhamumbo, [REDD+ in Mozambique: new opportunity for land grabbers?](#), IIED, 2011

³² [UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries \(UN-REDD\)](#) 2008

³³ FAO, Op.cit. 2011

Article 8 j) of the Convention on Biological Diversity stipulates the obligation to “*respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity*”. It also stipulates that a “*wider application*” of this knowledge should be done “*with the approval and involvement of the holders of such knowledge, innovations and practices*”.

The United Nations Declaration on the Rights of Indigenous Peoples of 2007 also stipulates that “*Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions*”. (Article 31.1.)



A proposal has been formulated to modify the WTO agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) to add a clause imposing an obligation to reveal the origin of knowledge in the requests for patents and to share the benefits with the communities involved. This modification would prevent biopiracy by private companies to the detriment of indigenous people³⁴. The legal recognition of collective ownership of resources and knowledge, and the shared ownership of patents and products as well as clear proofs of prior agreement by communities would certainly help to ensure and organise an equitable sharing of the benefits of the industrial use of traditional knowledge.

There is still a long way to go and actual practices remain dependent on the degree of ethics of industrialists and local governments. The involvement of NGOs as intermediaries between communities and private companies is often a way to compensate for the legislative vacuum and at least reduce in part the imbalance existing between companies and local communities.

³⁴ FAO, Op.cit. 2011

To conclude

This review of the threats to access to forest resources by local communities shows that, as in the case of land, water and genetic resources, the economic pressure to take away from rural communities assets that are essential to their food security is enormous.

In the case of forests, beyond the threats exerted by private companies, resources are also under pressure by forces that are often well-intentioned and aim at preserving the planet, minimising the emission of greenhouse gases and increasing carbon sequestration. But the unfair sharing of costs and advantages and the loss of development prospects for concerned communities arising from the arrangements made cast a doubt on the real advantages they can get from this process.

It may be that it will continue to be most difficult to protect the interests and rights to forest resources of indigenous people as they are often poorly organised and have to face a strong coalition of very different interests.

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(May 2013)