

# CHAPTER III



# ENVIRONMENT

By Neva Collings

*Western science may have invented the words “nature”, “biodiversity” and “sustainability”, but it certainly did not initiate the concepts. Indigenous, traditional and local communities have sustainably utilized and conserved a vast diversity of plants, animals and ecosystems since the dawn of homo-sapiens. Furthermore, human beings have molded environments through their conscious and unconscious activities for millennia – to the extent that it is often impossible to separate nature from culture.*

*Source: Posey (1999), 7.*

## Introduction

Throughout the world, there are approximately 370 million indigenous peoples occupying 20 per cent of the earth’s territory. It is also estimated that they represent as many as 5,000 different indigenous cultures, and the indigenous peoples of the world therefore account for most of the world’s cultural diversity, even though they constitute a numerical minority.<sup>1</sup> The areas they inhabit often coincide with areas of high biological diversity, and a strong correlation between areas of high biological diversity and areas of high cultural diversity has been established.<sup>2</sup>

Indigenous peoples have always identified themselves by the importance of the bond with their lands and their distinct cultures.<sup>3</sup> Indigenous peoples share a spiritual, cultural, social and economic relationship with their traditional lands, and their customary laws, customs and practices reflect both an attachment to land and a responsibility for preserving traditional lands for use by future generations.<sup>4</sup> A critical issue for indigenous peoples around the world is therefore access to, as well as the protection and preservation of, their lands and territories and the natural resources pertaining to these lands.

Although indigenous peoples have demonstrated that their close relationship with the environment also makes them its best guardians, the strong environmental movement that emerged after World War II made no reference to indigenous peoples, and for a long time, efforts focused more on how nature could be protected from damaging interventions by human activities<sup>5</sup> than on what impact environmental degradation had on human beings.

Thus, it was first in 1972, with the UN Conference on the Human Environment,<sup>6</sup> that “the protection and improvement of the human environment” was seen as a major issue “which affects the well-being of peoples...”<sup>7</sup> Conference documents, however, made no mention of indigenous peoples and their critical situation, and it was to take

---

<sup>1</sup> Gray (1991), 8.

<sup>2</sup> See, e.g., WWF-International and Terralingua (2000).

<sup>3</sup> Gray (1991), 8.

<sup>4</sup> OHCHR (2008).

<sup>5</sup> IUCN (International Union for Conservation of Nature and Natural Resources) was founded in 1948 as an organization dedicated to natural resource conservation; WWF (standing, at that time, for World Wildlife Fund), was established in 1961 for the conservation, research and restoration of the natural environment.

<sup>6</sup> Also known as the Stockholm Conference. One of the outcomes of this conference was the decision to create an environmental agency - the United Nations Environment Programme (UNEP).

<sup>7</sup> See Declaration of the Conference on the Human Environment at <http://www.unep.org>

15 years and the Brundtland report on sustainable development (1987)<sup>8</sup> before indigenous peoples were mentioned in an environmental document.

The real breakthrough occurred during the 1992 United Nations Conference on Environment and Development (UNCED, often called the Earth Summit), when indigenous peoples were included as a “major group” that their specific relationship with the environment was recognized and some of their concerns taken into consideration. This was, among other things, the result of efforts made by the international indigenous movement prior to the Earth Summit. The indigenous movement had by then gained strength and recognition within the UN system, notably with the creation of the Working Group on Indigenous Populations (1982) and the adoption of ILO Convention No. 169 (1989).

UNCED was therefore seen as an opportunity to inform the international community about the environmental issues indigenous peoples were facing and how their traditional ecological knowledge and practices could contribute to resolving the global environmental problems.

Indigenous peoples prepared for UNCED as thoroughly and extensively as any state. Prior to the Earth Summit, indigenous peoples held their own summit at Kari Oca, near Rio de Janeiro, to develop their own Declaration and Charter on sustainable development. The Kari Oca Summit was instrumental in formulating the basic documents for indigenous peoples on issues related to sustainable development at a global level and for influencing the official and civil society summits.

All these efforts were reflected in some of the documents that came out of the Summit, including the Convention on Biological Diversity. Since then, indigenous concerns, knowledge and expertise have been taken increasingly into account by the numerous international initiatives related to the environment and by the ensuing documents and policies. Indigenous peoples have also gained some recognition from a number of large environmental organizations such as WWF and IUCN,<sup>9</sup> which have taken this step to work with indigenous peoples in their conservation activities.

At the same time, the inherent rights of indigenous peoples to their lands and resources and to their full and effective participation in decisions relating to their lands, resources and livelihoods have been reflected in a number of

this Declaration recognizes in its preamble that “respect for indigenous knowledge, cultures and traditional practices contributes to sustainable and equitable development and proper management of the environment

<sup>8</sup> See *Our Common Future* (also known as the Brundtland Report), Report of the World Commission on Environment and Development (1987).

<sup>9</sup> In 1996, WWF (now standing for World Wide Fund for Nature) issued a Statement of Principles on Indigenous Peoples and Conservation, intended to guide partnerships between WWF and indigenous peoples' organizations in conserving biodiversity within indigenous peoples' lands and territories and in promoting sustainable use of natural resources. This statement was last updated in 2008. The IUCN's World Conservation Congress has passed several resolutions on indigenous peoples (e.g. in 1996) in relation to issues such as protected areas, traditional biodiversity knowledge, forests, marine and coastal areas, and mining.



international documents and mechanisms, most recently in the UN Declaration on the Rights of Indigenous Peoples, adopted by the General Assembly in 2007. This Declaration recognizes in its preamble that “respect for indigenous knowledge, cultures and traditional practices contributes to sustainable and equitable development and proper management of the environment”, and although it does not create any new rights, it responds to the urgent need to respect and promote indigenous peoples’ right to self-determination and thereby, among other things, their inherent rights in relation to political, economic, social, cultural, spiritual as well as environmental and natural resource management<sup>10</sup>.

### Inherent rights of indigenous peoples

The right of self-determination established in the UN Declaration on the Rights of Indigenous Peoples essentially implies the following inherent rights of indigenous peoples in relation to natural resource management:

- ◆ to their ancestral land, territories and resources, as a collective and individual right;
- ◆ to exercise control and management of their right to lands, territories and resources;
- ◆ to self-government by their own institutions and authorities within their lands and territories;
- ◆ to self-development (meaning the right to their own decision-making on conservation and development options for their lands, territories and resources);
- ◆ to fair and equitable benefit sharing from conservation and development actions involving their lands, territories, resources, and people;
- ◆ to conserve, develop, use and protect their traditional knowledge.

These remarkable advances do not mean, however, that the struggle of indigenous peoples for their rights and concerns when it comes to lands and natural resources is over. At the international level, indigenous peoples’ voices are still often marginalized, and vital indigenous interests not taken into consideration at the moment of formulating policies. But it is at the national and local levels that indigenous peoples face the most overwhelming challenges in protecting their environmental rights from structural discrimination, corporate interests, globalization, etc., and in adapting their livelihoods to climate changes.

This chapter examines a number of issues on the topic of indigenous peoples and the environment. After identifying some of the environmental problems confronting indigenous peoples, the chapter looks at the existing international law and mechanisms for environmental protection and how indigenous peoples make use of these instruments. It finally identifies some of the implementation gaps and challenges indigenous peoples still face in the struggle for their environmental rights.

<sup>10</sup> Joffe (2008), 2.2.

## Major issues

The environmental challenges faced by indigenous peoples today are manifold. The dispossession of lands and natural resources and the impact of large-scale development projects are issues that indigenous peoples have confronted for decades, if not centuries. In addition, there is a range of new challenges that have to do with science-based technology and development in general, such as genetic resources, biopiracy and intellectual property rights, as well as the environmental problems faced by the increasing number of indigenous peoples living in urban areas. And, finally, there is the global challenge of climate change, which will have a great impact on most indigenous peoples, since they often live in physically isolated, fragile and harsh environments which may be “especially vulnerable to climate change due to their latitude, topography, distance from the sea, soils quality, etc.”<sup>11</sup>

Common to all these challenges is their close connection with indigenous peoples’ rights to land and their lack of self-determination.

### Land dispossession

Dispossession of traditional lands and territories is one of the major problems faced by indigenous peoples all over the world. This process has been going on for centuries, first as a result of the intrusion of colonial systems and the ever-growing search for rich agricultural areas and natural wealth; today, as a result of development policies and globalization.

In many regions, the experience of indigenous peoples has been “that inadequate legal frameworks resulted in disruption to their traditional land tenure and use patterns, fragmentation and loss of traditional land, changes in settlement patterns, privatization of communal lands, degradation of land and/or resources, lack of recognition of territorial rights, insufficient and inequitable land allocation, lack of effective mechanisms for conflict resolution, inefficient official land registers, and difficult procedures for land demarcation and titling. These factors have generated local tensions over land tenure and lack of access to productive lands, which impact on the economic and socio-cultural stability of indigenous peoples and their communities.”<sup>12</sup> Only a few countries recognize indigenous peoples’ land rights, but even in those countries, land titling and demarcation procedures have often not been completed, suffer delays or are shelved because of changes in political leadership and policies. The right to natural resources, on the other hand, is usually restricted, especially when it comes to sub-soil resources. Even where indigenous peoples have legal title deeds to their lands, these lands are often leased out by the state as mining or logging concessions without consultation of indigenous peoples, let alone

indigenous peoples feel that many development policies are either directly or indirectly geared toward weakening or eradicating their traditional modes of production

<sup>11</sup> Macchi (2008), 21.

<sup>12</sup> Working Group on Article 8J (2007d).



their free and prior informed consent. The lack of legal security of tenure remains a crucial issue for indigenous peoples almost everywhere.

In many countries, dominating development paradigms undermine the modes of production of indigenous peoples, such as hunting and gathering, pastoralism and shifting agriculture, which are often perceived as primitive, non-productive and not in line with the modernization aspirations of present-day states. Indigenous peoples feel that many development policies are either directly or indirectly geared toward weakening or eradicating their traditional modes of production.<sup>13</sup> The promotion of new technologies such as improved seeds, chemical fertilizers and pesticides, etc., the introduction of cash-crop cultivation and large plantation schemes have caused environmental degradation and destroyed self-sustaining eco-systems, affecting many indigenous communities to the point of forcing them to resettle elsewhere.

A general trend of promoting individual land ownership at the expense of collective land rights is another threat to indigenous communities. This results in the privatization of land and resources and, more seriously, in land being sold to non-indigenous individuals and business interests—ultimately leaving the landless indigenous people with few options other than to take up menial jobs or migrate to urban areas.<sup>14</sup>

### Land privatization in Kenya

Since the end of the 1960s, the Government of Kenya, supported by the World Bank, has promoted the transformation of Trust Lands into group ranches and then individual ownership, thus limiting the land available for traditional transhumant grazing, which forms the basis of indigenous pastoralists' livelihood. Based on the idea that individual titles, through a "willing buyer-willing seller" approach, would improve the prospects for investment and economic growth, this policy in fact encouraged land grabbing and the massive sale of pastoralist land, particularly in areas neighbouring urban centres.

*Source: Stavenhagen (2007), Para 29.*

### Large-scale development projects

Economic policies, promoted by international agencies and triggered by free-trade agreements and globalization, have resulted in a proliferation of large-scale development projects on indigenous lands and territories.

Such projects cover a wide array of activities: the large-scale exploitation of natural resources, including subsoil resources; the establishment of plantations and industrial plants; tourist developments; and the construction of ports, transportation networks, multipurpose dams, military bases or toxic waste dumps.<sup>15</sup>

Evidence shows that indigenous peoples bear the costs of the resource-intensive projects disproportionately, and the human rights effects include loss of traditional territories and land, eviction, migration and eventual resettlement, depletion of resources necessary for physical and cultural survival, destruction and pollution of the traditional environment, social and community disorganization, long-term negative health and nutritional impacts as well as, in some cases, harassment and violence.<sup>16</sup>

<sup>13</sup> "Indigenous Peoples and Land Rights" at <http://www.iwgia.org/sw231.asp>

<sup>14</sup> See, e.g., Stavenhagen (2004).

<sup>15</sup> Stavenhagen (2003), 5.

<sup>16</sup> Stavenhagen (2004), 5.

### Large-scale developments and displacements of indigenous peoples

The Bakun Dam in Malaysia is reported to have caused the forced displacement of 5,000-8,000 indigenous persons from 15 communities by clear-cutting 80,000 hectares of rainforest. Indigenous peoples in Manipur, India, were reported to have suffered a similar fate caused by the building of 25 hydroelectric dams. Thousands of families of the Santhal Adivasi people in Jharkhand province of India have reportedly been displaced as a result of extraction of minerals, without proper compensation or economic security. In Thailand, several highland communities, including the Karen people, have reportedly been moved out of national parks against their will, while tourist development in Hawaii has resulted in the displacement of indigenous people and their increasing poverty.

Asian indigenous representatives informed the Working Group on Indigenous Populations (WGIP) at its eighteenth session in 2000 that "conflict and development interventions had resulted in large-scale displacements, internal and external, and serious consequences for [indigenous] children and youth resulting from the implementation of inappropriate and non-consultative development projects".

*Source: Stavenhagen (2003), Para. 22*

economic policies, promoted by international agencies and triggered by free-trade agreements and globalization, have resulted in a proliferation of large-scale development projects on indigenous lands and territories

### The forest issue

The example of indigenous forest-dwellers is illustrative. For many indigenous peoples, the forest plays an essential part in ensuring their physical, cultural, spiritual and economic well-being by giving them access to secure means of subsistence, medicinal plants and the ability to practice their customs. However, all this is in severe jeopardy as their forest refuge is increasingly being degraded, destroyed or placed off-limits.

Logging is the most prominent cause of deforestation, but agri-business, large-scale infrastructure projects such as hydroelectric dams and gas and oil pipelines, oil exploration and mining operations are also taking their toll.

### Oil palm plantations in Indonesia

Indonesia is experiencing the biggest rate of increase in terms of forests converted into oil palm plantations. In a period of 30 years (1967-1997) oil palm plantations have increased 20 times with 12 per cent average annual increases in crude palm oil (CPO) production. From 106,000 hectares in 1960 this has increased to 6 million hectares, although there were around 18 million hectares of forests cleared purportedly for oil palm in 2006. It





appears that loggers used oil palm plantations as a justification to harvest the timber. The government announced new plans under the Kalimantan Border Oil Palm Mega-Project (April 2006) to convert an additional 3 million hectares in Borneo, of which 2 million will be on the border between Kalimantan and Malaysia. It is understood that the area deemed suitable for oil palm includes forests used by thousands of people who depend on them for their livelihoods.

*Source: Tauli-Corpuz and Tamang (2007), Para. 20.*



According to latest estimates, the net forest loss over the period 2000-2005 was 7.5 million ha of forest per year.<sup>17</sup> In order to counter this development and save the last large forest systems, efforts have been made over the past few decades to establish national parks, game reserves and other forms of protected areas.

But whether logging, large-scale development schemes or conservation are being considered, indigenous peoples have, for the most part, paid a high price. As the plants and wildlife disappear along with the trees, the subsistence base of forest-dwellers disappears too, and forces them to abandon their traditional ways of life based on hunting and gathering. The same happens when their forests are turned into protected areas and they are no longer allowed to reside there or gain access to the forest's natural resources. Whether evicted, involuntarily displaced or forced to find their subsistence elsewhere, these indigenous peoples become landless squatters living on the fringes of settled society. They receive no compensation or other reparation for their losses, and in order to survive, they are forced to farm the lands of others in arrangements that are often functionally equivalent to bonded labour. Many of them eventually end up in urban slums.

### The case of the Twa “Pygmies” of Democratic Republic of Congo

The expulsion of the Twa from the Kahuzi-Biega forest (later to become a gorilla reserve) has deprived them of their sources of meat, honey and wild tubers from the forest. Their traditional relationships with non-Twa farmers, which involved exchanges of meat, honey, medicines, etc., were disrupted. They can no longer obtain the plants that used to serve them as medicine for curing illnesses.... Most of their religious activities and rites, for example the initiation of males, which can be performed only in the forest, have become impossible because of their new environment. For the Twa, nothing can substitute or compensate for the loss of the forest, as no other environment can provide them with the same spiritual and material benefits.

*Source: Barume (2000), 81.*



The experience of most indigenous peoples is that national forest policies and legislation have generally been designed without, or with very little, input and involvement from them. Very few countries have included considerations regarding forest-related traditional knowledge in their forest policies. There are critical problems of an overlap of logging concessions with traditional territories, as well as problems of illegal logging on indigenous peoples' lands.<sup>18</sup> In other instances, indigenous peoples have been arrested and jailed for carrying out customary activities on lands that were declared conservation forest.<sup>19</sup>

<sup>17</sup> Tauli-Corpuz and Tamang (2007), para.20.

<sup>18</sup> Working Group on Article 8J (2007g), 15.

<sup>19</sup> Working Group on Article 8J (2007c), 37.





## Illegal logging

Illegal logging has become a growing problem in the world's rainforests. Recent estimates for Peru suggest that 90 per cent of the timber being extracted in the Peruvian Amazon is illegal and originates from protected areas belonging to indigenous communities or set aside for indigenous peoples who live in voluntary isolation. Apart from the environmental destruction such illegal logging causes, it also puts these isolated people at risk of contracting contagious diseases if contacted by loggers.

*Source: Stavenhagen (2004), 9-10.*

## Protected areas—a story of evictions and abuses

The creation of protected areas has been a central element of conservation policies since the end of the nineteenth century. Between 1872, when Yellowstone National Park was established in the United States, and the early 1960s, some 10,000 protected areas were created. In 2003, the total number of protected areas stood at 102,102, covering more than 18.8 million square kilometres.<sup>20</sup> It should moreover be noted that there is a growing number of privately owned protected areas across the world.

From their inception, most protected areas were designed as areas of land taken over by the state, without the consent and the consideration of indigenous peoples and their land use patterns, and primarily for the enjoyment of outsiders.<sup>21</sup> Applying the so-called Yellowstone model, which consisted of establishing and managing national parks for the benefit of future generations, but to the exclusion of indigenous residents, national parks in many parts of the world have denied indigenous peoples their rights, evicted them from their homelands, and provoked long-term social conflict. This model of “colonial conservation” caused, and continues to cause, widespread human suffering and resentment among indigenous peoples.<sup>22</sup>

Today, a new model of conservation can also be discerned based on respect for the rights of indigenous peoples and their traditional knowledge. “Protected area” has become a cover term and includes many different categories with varying purposes ranging from scientific research to tourism and recreation. In the late 1980s and early 1990s, for instance, a new trend promoting community-based conservation and community-based natural resource management emerged as a way of integrating conservation and development and securing the livelihoods

national parks in many parts of the world have denied indigenous peoples their rights, evicted them from their homelands, and provoked long-term social conflict

<sup>20</sup> See UNEP-World Conservation Monitoring Centre at [http://www.unep-wcmc.org/protected\\_areas/UN\\_list/index.htm](http://www.unep-wcmc.org/protected_areas/UN_list/index.htm)

<sup>21</sup> Borgerhoff Mulder and Coppolillo (2005).

<sup>22</sup> Colchester (2004).



of indigenous peoples.<sup>23</sup> And today, there is some acceptance that conservation can and must be achieved in collaboration with indigenous peoples and based on respect for their internationally recognized rights.

In a number of Latin American countries, where the total size of protected areas has nearly doubled over the past 10 years, there is some progress at the national level in terms of recognising the role of indigenous peoples in the conservation of biodiversity and protected areas management.<sup>24</sup> A number of indigenous communal reserves or indigenous protected areas have been established, for instance, in Peru and Brazil, and the participation of indigenous peoples in the management of other types of protected areas has increased. Nevertheless, co-management of protected areas is still limited, and difficult relationships have often been reported to exist between indigenous communities and the management of protected areas. This has been attributed to limitations imposed on the use of resources in the protected areas and to a lack of formal recognition of land and resource rights within such areas.<sup>25</sup>

In Australia, the Indigenous Protected Area Programme commenced in 1997 with the development of the first Indigenous Protected Area at Nantawarrina, in South Australia.<sup>26</sup> There are now approximately 23 declared Indigenous Protected Areas covering close to 17 million ha, or 23 per cent of Australia's National Reserve System. Indigenous Protected Areas (IPAs) are voluntary agreements entered into by the Traditional Owners of the land and the Commonwealth government. The primary objectives of IPAs are to promote biodiversity and cultural resource conservation on indigenous-owned land.

However, protected areas on the ground often still continue to be imposed according to the colonial model, calling into question the extent to which there is a real commitment to giving conservation a human face.<sup>27</sup> In some countries in Africa, for instance, the authorities responsible for the national parks and protected areas have often displaced indigenous communities, expropriated their lands and denied them access to the natural resources critical for their livelihoods and survival.<sup>28</sup> In Tanzania and Kenya, for example, the expulsions of Maasai from their ancestral territories, which started during the colonial era, are continuing today. The creation of the national parks of Manyara, Tarangire, Ngorongoro, Serengeti and Mkomazi in Tanzania, and of Amboseli, Maasai Mara and others in Kenya, has each time led to the eviction of indigenous Maasai from their ancestral land without compensation—supposedly in the national interest.<sup>29</sup>

Another disconcerting development is that the discussion of “natural” alliances between conservationists and indigenous peoples and the need to work closely also seem on the wane among the big conservationist NGOs, who appear once more to be focussing on large-scale conservation strategies in which science matters more than social realities.<sup>30</sup>

While there is a lack of overall statistics as to how many indigenous peoples have been evicted and displaced to make way for large-scale projects—whether agricultural schemes, infrastructural development, natural resource extraction or protected areas—the consequences of these impositions of development on indigenous peoples' livelihoods have been better documented, and common experiences include:

---

<sup>23</sup> See, e.g., Hitchcock (2001), 38-49.

<sup>24</sup> Valente (2007).

<sup>25</sup> Working Group on Article 8J (2007d), 12.

<sup>26</sup> Commonwealth of Australia (2007).

<sup>27</sup> Colchester (2004).

<sup>28</sup> Nairobi Declaration (2004).

<sup>29</sup> Working Group on Article 8J, (2007a)

<sup>30</sup> Chapin (2004), 20. See also Dowie (2005).

1. Landlessness (expropriation of land assets and loss of access to land)
2. Joblessness (even when the resettlement creates some temporary jobs)
3. Homelessness (loss of physical houses, family homes and cultural space)
4. Marginalization (social, psychological and economic downward mobility)
5. Food insecurity (malnourishment, etc.)
6. Increased morbidity and mortality
7. Loss of access to common property (forests, water, wasteland, cultural sites)
8. Social disarticulation (disempowerment, disruption to social institutions)<sup>31</sup>

It should be added that forced evictions and the dispossession of lands have particularly severe impacts on indigenous women, who, as a result, often have an increased workload as they must walk long distances to find alternative sources of water or fuel wood, or are driven out of income-earning productive activities and into a situation of economic dependence on men.<sup>32</sup>

When indigenous peoples have reacted and tried to assert their rights, they have suffered physical abuse, imprisonment, torture and even death.

### Indigenous protests result in human rights abuses

Indigenous peoples in Penan (Malaysia) have reportedly been arrested because they were blockading roads, trying to stop loggers destroying their traditional forests. Philippine indigenous peoples have allegedly been physically abused and detained by mining companies and the police in the process of peaceful picketing against mining activities on their traditional lands. Sometimes, the strict enforcement of environmental conservation laws prevents indigenous farmers, hunters, fishermen or gatherers from using their traditional land or resources, thus turning them into offenders who may be jailed for attempting to subsist. According to a recent report, oil workers in the Upper Pakiria River region of South-eastern Peru forced the Kugapakori to move deep into the Amazon and threatened to arrest and decimate the community with diseases if they refused to leave their home.

*Source: Stavenhagen (2004), 9.*

Being deprived of their traditional lands and natural resources has, however, also had other consequences. One has been a loss of traditional knowledge and cultural diversity; another, the impoverishment of thousands of indigenous peoples and their migration to urban areas.

### Indigenous traditional knowledge – erosion, loss and threats

The bond between nature and the culture of indigenous peoples is manifested in traditional knowledge, which forms the basis of their spiritual growth and reflects their intimate connection with the land. Until recently, conservation policies and practices failed to fully understand and appreciate the rights and roles of indigenous peoples in the management, use and conservation of biodiversity.<sup>33</sup> Today, however, indigenous peoples' traditional knowledge

<sup>31</sup> Cernea (2005).

<sup>32</sup> UN-Habitat and OHCHR (2005), xix.

<sup>33</sup> IUCN (2008).



and practices, which were formerly undervalued and ignored, are considered important and necessary contributions to the conservation of biodiversity. Yet this knowledge is under severe threat of being eroded, lost or misappropriated.

Dispossession or forced removal from traditional lands and sacred sites has eroded the relationship between indigenous peoples and their environment. Without access to their land and natural resources, people can no longer carry out their cultural activities or use and develop their traditional knowledge. When forced to migrate and resettle in new environments, indigenous peoples find that their traditional knowledge and practices have to be adapted to new and often difficult circumstances. This has put the cultural diversity and traditional knowledge of indigenous peoples under tremendous pressure.

indigenous peoples' traditional knowledge and practices, which were formerly undervalued and ignored, are considered important and necessary contributions to the conservation of biodiversity

Traditional knowledge may also sometimes be lost as the result of language extinction. In one century, the world has lost around 600 languages. At current rates, 90 per cent of all languages will be lost in the twenty-first century—most spoken by indigenous and traditional peoples.<sup>34</sup> Since the traditional knowledge accumulated by indigenous peoples is contained in languages that often have no script, this knowledge is passed on to other groups and new generations orally, making it difficult to retrieve once a language becomes extinct. The survival and vitality of indigenous languages is therefore a key to maintaining traditional knowledge.<sup>35</sup>

Poverty is another threat to traditional knowledge. Poverty will often drive the users of bio-diverse environments to over-exploit the resources in their territories to the point of no return in terms of sustainability. It is often the case that when people are poor, conservation is not a high priority, and they will take out of the environment whatever is needed for their survival. As noted in a regional report on threats to traditional knowledge, “even if people have knowledge about sustainable harvesting regimes, when they are poor, this knowledge is ignored”.<sup>36</sup> Livelihood diversification must therefore be a key consideration in the process of addressing people’s livelihoods and its link to the preservation of traditional knowledge systems recognized.<sup>37</sup>

A more recent threat that is raising growing concern is the misappropriation of indigenous knowledge in the form of biopiracy. It has been stated that “developments in science-based technologies, especially biotechnology and genetic engineering, have broadened the economic utility of natural resources and increased the economic value of biodiversity”.<sup>38</sup> As indigenous communities often inhabit areas with the highest biodiversity, “they are coming under increasing pressure from biodiversity prospectors and corporations interested

<sup>34</sup> UNHCHR (2008).

<sup>35</sup> Working Group on Article 8J (2007j), para. 42.

<sup>36</sup> Working Group on Article 8J (2007a) para. 54.

<sup>37</sup> Working Group on Article 8J (200ja), para. 54.

<sup>38</sup> Simpson (1997), 50-51.

in privatising and commercialising aspects of their biological knowledge”.<sup>39</sup> Furthermore, “in recent decades, developed countries have expanded intellectual property rights to include biological material and ‘new’ life forms, such as new plant varieties, transgenic animals and human genetic diversity, thereby raising serious ethical questions about ownership and the environmental impacts of these ‘new’ life forms. In many instances, the knowledge and biological resources that are collected and ‘developed’ in the laboratories of developed countries are derived from indigenous peoples and their territories”.<sup>40</sup> Needless to say, few indigenous peoples have ever received any kind of benefit from these technological developments.

## Climate change and indigenous peoples

Assessments of climate change<sup>41</sup> have consistently reported and confirmed that the Earth’s climate is changing. According to the most recent reports of the United Nations Intergovernmental Panel on Climate Change (IPCC), there is unequivocal evidence that the Earth’s climate is warming and that this is most likely due to anthropogenic (human-induced) greenhouse gas emissions (GHG).<sup>42</sup> Human activity has undermined the ecological integrity of the Earth by using the atmosphere as a dumping ground for GHGs.

### The greenhouse effect

Climate change is a negative response currently experienced in the world as a result of the growth of greenhouse gas emissions due to the burning of fossil fuels, mainly for industrial activities and motor transportation. As a result of this “smoke” from cars and machines, carbon dioxide gas is built up in the air and increases the level of heat in the world. This phenomenon is known in as the “greenhouse effect”.

*Source: Laltaika (2008).*

Since the mid-nineteenth century, annual global temperatures have increased by approximately 0.74 per cent.<sup>43</sup> Temperatures are predicted to rise further and indigenous peoples in some regions will be more severely affected than others.<sup>44</sup>

The impact of these temperature changes includes:

- ◆ diminishing polar sea ice and rising of sea levels, threatening low-lying coastal areas, notably many small islands in the Pacific;
- ◆ greater exposure to natural disasters, such as floods, and to frequent and intense extreme weather events;

<sup>39</sup> Simpson (1997), 50-51.

<sup>40</sup> Simpson (1997), 50-51.

<sup>41</sup> Climate change is defined as a variation either in the mean state of the climate or in its variability, persisting for an extended period, typically decades or longer. It encompasses temperature increases, sea-level rises, changes in precipitation patterns and increases in the frequency of extreme weather events.

<sup>42</sup> Greenhouse gases that are covered by the Kyoto Protocol include carbon dioxide (CO<sub>2</sub>), nitrous oxide, methane, sulphur hexachloride, HFCs (hydrofluorocarbons) and PFCs (perfluorocarbons).

<sup>43</sup> IPCC (2007a).

<sup>44</sup> Whilst the IPCC predicts the Earth’s air temperatures will increase by 2.0 to 4.5 degrees by the end of the century, predicted temperatures in the Arctic are projected to rise 5 to 7 degrees in the same period. See IPCC (2007a).



- ◆ degradation of wetlands due to changing freeze-thaw cycles;
- ◆ glacial melts in high-altitude regions and subsequent inundations of valleys and hill areas;
- ◆ increased fires in tropical rainforests;
- ◆ changes in precipitation and desertification.

Despite having contributed the least to GHG, indigenous peoples are the ones most at risk from the consequences of climate change because of their dependence upon and close relationship with the environment and its resources.<sup>45</sup> Although climate change is regionally specific and will be significant for indigenous peoples in many different ways, indigenous peoples in general are expected to be disproportionately affected. Indigenous communities already affected by other stresses (such as, for example, the aftermath of resettlement processes), are considered especially vulnerable.<sup>46</sup>

Some of the consequences of climate change can already be felt, and indigenous peoples across the world have experienced changes in:

- ◆ the migratory pattern of fish, birds and mammals;
- ◆ the timing of many life-cycle events, such as blooming, migration and insect emergence;
- ◆ the population size of certain plants and animals;
- ◆ the availability of water resources;
- ◆ the availability of grazing areas, the size of crop yields, etc.

These changes or even losses in the biodiversity of their environment will adversely affect or disrupt:

- ◆ the traditional hunting, fishing and herding practices of indigenous peoples, not only in the Arctic, but also in other parts of the world;
- ◆ the livelihood of pastoralists worldwide;
- ◆ the traditional agricultural activities of indigenous peoples living in mountainous regions;
- ◆ the cultural and ritual practices that are not only related to specific species or specific annual cycles, but also to specific places and spiritual sites, etc.;
- ◆ the health of indigenous communities (vector-borne diseases, hunger, etc.);
- ◆ the revenues from tourism.

The Arctic has been called “the world’s climate change barometer” and indigenous peoples “the mercury in that barometer”—especially vulnerable to the impacts of climate change.<sup>47</sup> As noted by the IPCC Fourth Assessment

---

<sup>45</sup> Nilsson (2008), 9.

<sup>46</sup> IPCC (2007b), 11.

<sup>47</sup> IPCC (2007b), 56.

Report, the resilience of indigenous populations is being severely challenged when combined with demographic, socio-economic and lifestyle changes.<sup>48</sup>

The Arctic region is predicted to lose whole ecosystems, which will have implications for the use, protection and management of wildlife, fisheries, and forests, affecting the customary uses of culturally and economically important species and resources. Arctic indigenous communities—as well as First Nations communities in Canada<sup>49</sup>—are already experiencing a decline in traditional food sources, such as ringed seal and caribou, which are mainstays of their traditional diet. Some communities are being forced to relocate because the thawing permafrost is damaging the road and building infrastructure. Throughout the region, travel is becoming dangerous and more expensive as a consequence of thinning sea ice, unpredictable freezing and thawing of rivers and lakes, and the delay in opening winter roads (roads that can be used only when the land is frozen).<sup>50</sup>

Changes in animal populations have also had an impact, and some indigenous communities are observing new species moving into their territories (“climate refugees”) as well as a decline in both the health and number of existing species that are staple foods and also have traditional economic value.<sup>51</sup> The resources available to indigenous peoples to counter these threats are limited.

In Africa, climate change projections indicate that some areas may become drier, whereas others may become wetter. Nomadic indigenous pastoralist communities in sub-Saharan and Eastern Africa, who live mainly in semi-arid lands, have started experiencing frequent droughts that are destroying vegetation and livestock. Climate change will also have significant implications in the use of the traditional knowledge, innovations and practices of African indigenous communities. Thus, it is important that climate change adaptation and mitigation measures of change take into consideration the traditional knowledge, innovations and practices of African indigenous communities.<sup>52</sup>

In the Pacific region, indigenous peoples live in sensitive zones where the effects of climate change-induced rising sea levels and coast erosion are most devastating. The challenges faced are a loss of territories, forced migration from low-lying islands and relocation of these migrants to other indigenous peoples’ traditional territories. Such relocations of indigenous “environmental refugee” communities are already taking place and are having, and will continue to have, a number of adverse social, spiritual, cultural and economic implications for the affected communities.<sup>53</sup>

the Arctic region is predicted to lose whole ecosystems, which will have implications for the use, protection and management of wildlife, fisheries, and forests, affecting the customary uses of culturally and economically important species and resources

<sup>48</sup> IPCC (2007b), 63.

<sup>49</sup> Working Group on Article 8J (2007e).

<sup>50</sup> IPCC (2007b).

<sup>51</sup> Centre for Indigenous Environmental Resources (2007), 16.

<sup>52</sup> Working Group on Article 8J (2007a), 39.

<sup>53</sup> UNEP/CBD/WG8J/4/4 (2005).



### Climate change impacts on a Pacific island

Lateu is one of the northernmost islands of the Vanuatu archipelago that is particularly vulnerable to the effects of climate change. The increasing frequency of spring tide events, tidal waves and cyclones, together with sea-level rise, has led to coastal erosion and created permanent flooding or standing pools of water. Over the past 20 years, the coastline has eroded 50 metres. In August 2005, the residents living in Lateu were forced to relocate to higher ground 600 metres from the coast to a new settlement named Lirak.

*Source: Working Group on Article 8J (2007i) and SCBD (2006).*



## International treaties, laws and declarations related to environmental protection

Over the past decades, a growing international awareness of the degradation and destruction of the global environment, the loss of biodiversity and the foreseen impact of climate change has generated a plethora of international laws and mechanisms addressing environmental protection and related issues.<sup>54</sup>

the challenge for indigenous peoples is to assert their sovereign rights as peoples to natural resources, decisions concerning resources, and the way in which states engage with them

At the same time, however, the current treaty-based framework of international environmental law is seen to be poorly equipped to accommodate indigenous peoples as non-state players with rights equivalent to states within the area of international environmental law.<sup>55</sup> International law is built on the Westphalian premise of state sovereignty. This is reiterated throughout international treaties, such as the Convention on Biological Diversity, which reaffirms that “states have sovereign rights over their own biological resources”. On the international and domestic stages, the challenge for indigenous peoples is to assert their sovereign rights as peoples to natural resources, decisions concerning resources, and the way in which states engage with them.

Indigenous peoples are not only affected by these instruments, they have also been able to play an important part both in the processes that have led up to the formulation of conference declarations and documents and to the establishment of related mechanisms, as well as in the follow-up processes.

<sup>54</sup> Regarding environmental protection, there exist almost 60 legally binding agreements encompassing a wide variety of issue-areas, from nature conservation and terrestrial living resources to atmospheric pollution, hazardous substances and nuclear safety.

<sup>55</sup> L. Westra *Environmental Justice and the Rights of Indigenous Peoples: International and Domestic Legal Perspectives* (2008) EarthscanPress, UK at p. 9 citing Metcalf (2004)



## International law and indigenous land rights

Environmental protection cannot be discussed from an indigenous perspective without first looking at indigenous peoples' rights to lands and territories and the natural resources pertaining to these lands, and the international treaties dealing with these rights.

### ILO Convention Nos. 107 and No. 169

The first international treaty to specifically deal with indigenous rights was ILO (International Labour Organization) Convention No. 107 Concerning the Protection and Integration of Indigenous and other Tribal and Semi-Tribal Populations in Independent Countries, adopted in 1959. This Convention recognized the indigenous peoples' right, among other things, of ownership, collective or individual, of the lands they traditionally occupy (Article 11).

Criticized for its assimilationist approach, Convention No. 107 was replaced in 1989 by Convention No. 169 Concerning Indigenous and Tribal Peoples in Independent Countries. This Convention also recognizes indigenous peoples' land rights, defining territory as including "the total environment of the areas which the peoples concerned occupy or otherwise use".<sup>56</sup> It establishes their right to "the natural resources pertaining to their lands, including the right to participate in the use, management and conservation of these resources".<sup>57</sup> Article 15.2 specifically provides rights to fair consultation, participation in the benefits, and compensation for any damages sustained as a result of exploration and exploitation of sub-surface resources. It also establishes their right to be consulted and to freely participate at all levels of decision-making "in bodies responsible for policies and programmes which concern them",<sup>58</sup> and to control their own institutions, ways of life and economic development.

The United Nations Declaration on the Rights of Indigenous Peoples also provides new international guidelines, such as the right to develop strategies for the development or use of indigenous peoples' lands and resources. Going beyond ILO 169 on this matter, the Declaration affirms that states not only have to consult indigenous peoples about projects that affect them, but have "to obtain their free and informed consent" prior to the projects' approval, particularly in connection with the development, use or exploitation of mineral, water or other resources.

### The Earth Summit (1992)

As already mentioned, the 1992 Rio Conference on Environment and Development (UNCED), commonly referred to as the Earth Summit, was a turning point for indigenous peoples. Not only were they recognized as a "major group" of civil society but, for the first time, they were able to participate in and influence processes relating to the environment.

UNCED led to the adoption of some of the most important treaties on the environment, namely, the 1992 Convention on Biological Diversity and the 1992 United Nations Framework Convention on Climate Change. In addition, several non-binding documents were adopted: the Declaration on Environment and Development—known as the Rio Declaration; Agenda 21; and the non-legal, non-binding Forest Principles. Most of these documents contain provisions on indigenous concerns.

<sup>56</sup> ILO Convention No. 169, Article 13.2

<sup>57</sup> ILO Convention No. 169, Articles 14.1 and 15.1.

<sup>58</sup> ILO Convention No. 169, Article 6.1.



The Rio Declaration, Agenda 21 and the Convention on Biological Diversity all recognize the unique relationship indigenous peoples<sup>59</sup> have with their traditional lands and establish international legal standards that go toward protecting indigenous peoples' rights to their traditional knowledge and practices in the area of environmental management and conservation.

### Agenda 21 and indigenous peoples' role in sustainable development

Agenda 21 is perhaps the most ambitious document to have come out of the UNCED process. A 300-page plan for achieving sustainable development in the twenty-first century, it is divided into four sections, 40 chapters and more than 100 programmes, and it covers all areas of the world in which environment and development intersect and major social groups are affected. The third section, "Strengthening the Role of Major Groups", gives extensive and formal recognition to indigenous peoples and recommends the incorporation of indigenous peoples' rights and responsibilities into national legislation. Agenda 21 recognizes that, with respect to indigenous peoples, "[t]heir ability to participate fully in sustainable development practices on their lands has tended to be limited as a result of factors of an economic, social and historical nature. In view of the interrelationship between the natural environment and its sustainable development and the cultural, social, economic and physical well-being of indigenous people, national and international efforts to implement environmentally sound and sustainable development should recognize, accommodate, promote and strengthen the role of indigenous people and their communities".

*Source: Agenda 21 (1992), chapter 26.1.*

### The Convention on Biological Diversity

The objectives of the UN Convention on Biological Diversity (CBD) "are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources...."<sup>60</sup> In its preamble, the Convention recognizes "the close and traditional dependence of indigenous and local communities" on biological diversity, and, in Article 8 on In-situ Conservation, which mainly deals with the establishment of protected areas,<sup>61</sup> paragraph (j) recommends that a Party shall,

subject to its national legislation, 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 and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.<sup>62</sup>

Other relevant articles are Article 10(c) on customary sustainable use and Article 15 on access and sharing of the benefits arising out of the utilization of genetic resources.

<sup>59</sup> It should be noted that these documents do not refer to "indigenous peoples" but to "indigenous people and their communities" or "indigenous and local communities".

<sup>60</sup> Convention on Biological Diversity (1992), Article 1.

<sup>61</sup> CBD, Article 8 reads: "Each contracting party shall... (a) establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity".

<sup>62</sup> CBD, Article 8(j).

With 191 Parties,<sup>63</sup> the CBD is one of the most widely adopted international agreements in history and is proving to be a relatively effective forum for indigenous and local communities to seek recognition of their rights.

## UN Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC) adopted in 1992 is aimed at stabilising greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The text of the Convention does not explicitly discuss indigenous peoples in relation to climate change, although Article 4 is interpreted as describing the urgency that various social groups are facing in relation to climate change. Further, developed countries are urged to support social groups living in developing countries through the transfer of knowledge and technology in order to strengthen their resilience to the adverse effects of climate change on their livelihoods.<sup>64</sup>

Since 1988, indigenous peoples have been participating at UNFCCC Conferences of the Parties (COP) and have released a number of statements and declarations expressing concerns on the implications of climate change policies on their livelihoods and cultures. Since 2001, indigenous peoples' organizations have been acknowledged as a constituency in climate change negotiations within the UNFCCC. At the same time, however, indigenous peoples are still waiting for the approval of an ad hoc Working Group on Indigenous Peoples and Climate Change by the UNFCCC, allowing them to actively participate in the meetings of the Conference of Parties.<sup>65</sup>

With no mandatory limits on GHG for individual nations and no enforcement provisions, the Convention is considered legally non-binding. However, it includes provisions for updates or "protocols" that can set mandatory emission limits. The Kyoto Protocol, adopted in 1997, thus commits ratifying countries to reduce their emissions of carbon dioxide and five other greenhouse gases. As with the UNFCCC, the Kyoto Protocol does not mention indigenous communities.

## The Forest Principles

The Statement of Principles for the sustainable management of forests is also non-legally binding. However, it has paved the way for a number of mechanisms, and Principle 12(d) recommends recognising, respecting, recording, developing and, as appropriate, introducing in the implementation of programmes "indigenous capacity and local knowledge regarding the conservation and sustainable development of forests". It further states that "benefits arising from the utilization of indigenous knowledge should therefore be equitably shared with such people".

## The United Nations World Summit on Sustainable Development (WSSD)

As stipulated in the Rio Declaration, a first assessment of Agenda 21 was made in 1997. This assessment concluded that, despite some positive developments, many of the trends and problems that faced leaders in Rio remained unabated or had worsened. In 2002, a second summit was convened in Johannesburg, South Africa, where the international indigenous movement participated actively.

Assembled in Kimberley (South Africa), 20-24 August 2002, more than 300 indigenous peoples' leaders and organizations from all over the world attended the Indigenous Peoples' International Summit on Sustainable

<sup>63</sup> These 191 Parties include 190 states and the European Union. 168 states signed the Convention in 1992.

<sup>64</sup> Macchi (2008), 11.

<sup>65</sup> Ibid, p. 12



Development. Two documents were adopted at the Summit: the “Kimberley Political Declaration”, which highlighted, among other things, the fact that the commitments made to indigenous peoples in Agenda 21, including their full and effective participation, had not been implemented because of a lack of political will, and the Plan of Implementation on Sustainable Development. This Plan sets forth commitments and visions addressing the future role of indigenous peoples in working toward a sustainable future and insists that sustainability on a global scale cannot be achieved if governments and corporations continue to ignore the rights and unique capabilities of indigenous communities.

### From the Kimberley Political Declaration, 2002

*We continue to pursue the commitments made at the Earth Summit as reflected in this political declaration and the accompanying plan of action. The commitments which were made to Indigenous Peoples in Agenda 21, including our full and effective participation, have not been implemented due to the lack of political will....*

*As peoples, we reaffirm our rights to self-determination and to own, control and manage our ancestral lands and territories, waters and other resources....*

*We have the right to determine and establish priorities and strategies for our self-development and for the use of our lands, territories and other resources. We demand that free, prior and informed consent must be the principle of approving or rejecting any project or activity affecting our lands, territories and other resources.*

*Source: For the full text of the Kimberley Political Declaration, see IWGIA Web site at <http://www.iwgia.org/sw217.asp>*

The Kimberley summit was able to contribute substantially to the WSSD. A major achievement was to get the sentence “We reaffirm the vital role of indigenous peoples in sustainable development” incorporated into the official Political Declaration as Paragraph 25. This meant that for the first time ever, the United Nations had accepted the term “indigenous peoples”, with an “s”, signifying its acceptance of indigenous peoples as peoples and not just as individuals.

The Johannesburg Plan of Implementation also reflects indigenous peoples’ concerns.<sup>66</sup> It reaffirms the potential of indigenous peoples to be “stewards” of national and global natural resources and biodiversity, their important role in sustainable development, and the value of their traditional knowledge and practices in a variety of areas (forest and agricultural management systems, medicine, biodiversity, etc.).

## Indigenous peoples and the international mechanisms

A number of mechanisms and bodies have been set up by Agenda 21 and the various conventions to ensure the implementation of their objectives. As one of the “major groups”,<sup>67</sup> indigenous peoples have increasingly become involved in the work of these bodies. This entails an impressive workload: indigenous representatives participate in numerous preparatory regional workshops, intersessional meetings and official sessions of the

<sup>66</sup> Johannesburg Plan of Implementation (2002) Full text available from [www.un.org/esa/sustdev/documents/WSSD\\_POI\\_PD/English/POIToc.htm](http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm)

<sup>67</sup> The Major Groups have a homepage at <http://www.un.org/esa/sustdev/mgroups/mgroups.htm>

governing bodies of the Conventions—the Conference of the Parties (COP); they elaborate background papers and documents, present statements, organize side events, lobby and promote indigenous issues. Prior to and during the official sessions, an indigenous caucus is usually organized so that indigenous representatives can meet to strategize, discuss and follow up on the debates taking place in the plenary meetings.

In order to ensure a better coordination of their efforts and have access to specialized expertise, indigenous peoples have formed several networks and bodies where representatives from indigenous governments, indigenous NGOs, scholars and activists meet to organize the pending tasks, which are often quite technical and demanding. The International Indigenous Forum on Biodiversity (IIFB), for instance, has, since 1996, organized indigenous representatives around the Convention on Biological Diversity (CBD) and its COP meetings, as well as other important international environmental meetings to help coordinate indigenous strategies, provide advice to government parties, and influence the interpretations of government obligations to recognize and respect indigenous rights to their knowledge and resources. It has also established an open-ended sub-group—the Indigenous Peoples Committee on Conservation (IPCC)—which is made up of a core of several dozen indigenous leaders and activists and a few support groups.

## UNEP

The level of indigenous involvement depends, to a large extent, on the various bodies' commitment to the indigenous cause, and it is often an uphill battle not to be marginalized in these international fora. It is, for instance, only recently (2007) that indigenous peoples—as a major group—have been able to gain accreditation with the Governing Council/Global Ministerial Environment Forum (GC/GMEF) of the UN Environment Programme (UNEP). This gives them the opportunity to comment on draft papers being considered by the governments, to participate as observers, and to make oral statements to the GC/GMEF, as well as to take part in the Global Civil Society Forum (GCSF), which is the main entry point for civil society organizations to the GC/GMEF. UNEP is currently working on a draft strategy that will include a broader consultation process among indigenous peoples' representatives.

## The Commission on Sustainable Development (CSD)

The Commission on Sustainable Development—established by Agenda 21 in 1992— has been very consistent in promoting the participation of the Major Groups, and indigenous peoples have been very active in this Forum. CSD is the high-level forum for sustainable development within the United Nations system and is responsible for reviewing progress in implementing Agenda 21 and the Rio Declaration on Environment and Development. It is also responsible for providing policy guidance to follow up on the Johannesburg Plan of Implementation at the local, national, regional and international levels. The CSD meets annually in New

indigenous representatives participate in numerous preparatory regional workshops, intersessional meetings and official sessions of the governing bodies of the Conventions—the Conference of the Parties (COP); they elaborate background papers and documents, present statements, organize side events, lobby and promote indigenous issues.



York in two-year cycles, with each cycle focusing on clusters of specific thematic and cross-sectoral issues. Through, among other things, its multi-stakeholder dialogue sessions, the CSD provides direct interaction between governments and civil society and thus gives indigenous peoples the possibility of directly voicing their concerns and suggestions.

### The Convention on Biological Diversity - COPs and Working Groups

For indigenous peoples, the Conference of the Parties (COP) of the CBD is particularly important because it has established seven thematic programmes of work that correspond to some of the major biomes, or ecological communities, on the planet. Each programme establishes a vision for and basic principles to guide future work. The COP has also initiated work on cross-cutting issues and set up a number of bodies and working groups to work toward achieving the commitments made in the Convention in, among other things, Article 8(j) (Ad Hoc Open-Ended Working Group on Article 8(j) and related provisions - WG8J), Article 25 (Subsidiary Body on Scientific, Technical and Technological Advice - WGSBSTA), Articles 15 and 8(j) (Ad Hoc Open-ended Working Group on Access and Benefit-sharing - WGABS), and on protected areas (Ad Hoc Open-Ended Working Group on Protected Areas - WGPA).

for indigenous peoples, the Conference of the Parties (COP) of the CBD is particularly important

The CBD has also developed specific mechanisms such as, for example, financial support through the recently established Voluntary Fund to facilitate the full and effective participation of indigenous peoples in meetings under the Convention, including the meetings of its governing body—the Conference of the Parties (COP). This has allowed indigenous peoples to be very active and to be represented in, among other groups, the Advisory Group/Steering Committee, where it assists with the completion of the composite report on the status and trends regarding traditional knowledge relevant to biological diversity. However, it is within the Working Groups that the role of indigenous peoples has been particularly crucial for the promotion of indigenous views and interests.

This is particularly the case with WG8J, the Working Group under Article 8(j) and related provisions. Its programme of work and plan of action “for the retention of traditional knowledge, innovations and practices” were adopted in 2000 and form the main instruments that Parties to the Convention have given themselves to achieve the commitments in Article 8(j) to “respect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity, to promote their wider application with the approval and involvement of the holders of such knowledge, and encourage the equitable sharing of the benefits arising from the utilization of such knowledge”.<sup>68</sup>

One of the main achievements of WG8J has been the Akwe: Kon Voluntary Guidelines, developed in cooperation with indigenous peoples. The name of the

<sup>68</sup> See <http://www.cbd.int/traditional>

Guidelines is a Mohawk term meaning “everything in creation” and was adopted in 2004 by COP7 as decision VII/16 F.<sup>69</sup> The Guidelines provide a collaborative framework ensuring the full involvement of indigenous peoples in assessing the cultural, environmental and social impact of proposed developments on sacred sites and on lands and waters they have traditionally occupied. Moreover, guidance is provided on how to take into account traditional knowledge, innovations and practices as part of the impact-assessment processes and promote the use of appropriate technologies.

### The objectives of the Akwe: Kon Voluntary Guidelines

The specific objectives of the Akwe: Kon Guidelines are to

- ◆ support the full and effective participation of indigenous peoples in screening, scoping and development planning exercises;
- ◆ take into account the cultural, environmental and social concerns and interests of indigenous peoples;
- ◆ take into account the traditional knowledge of indigenous peoples with due regard to the ownership of the need for its protection; promoting the use of technologies associated with TK;
- ◆ identify and implement appropriate measures to prevent or mitigate any negative impacts of proposed developments; and
- ◆ take into consideration the interrelationships between cultural, environmental and social elements.

Given that most indigenous peoples live in areas where the vast majority of the world's biological and genetic resources are found, the voluntary Akwe: Kon Guidelines are an important tool that can be used in development assessment processes to ameliorate the potential long-term negative impacts of developments on the livelihoods and traditional knowledge of indigenous peoples who have used biological diversity in a sustainable way for thousands of years and for whom living cultural traditions and knowledge are deeply rooted in the environment on which they depend.

The WG8J has also, more recently, undertaken the important task of developing elements of sui generis systems (laws within national legal systems) for the protection of traditional knowledge as well as draft elements of an Ethical Code of Conduct to Ensure Respect for the Cultural and Intellectual Heritage of Indigenous Peoples. This work will make a substantial contribution to the work being conducted by indigenous peoples in another working group—the Ad Hoc

the voluntary Akwe: Kon Guidelines are an important tool that can be used in development assessment processes to ameliorate the potential long-term negative impacts of developments on the livelihoods and traditional knowledge of indigenous peoples

<sup>69</sup> See full text at <http://www.cbd.int/doc/publications/akwe-brochure-en.pdf>



Open-ended Working Group on Access and Benefit-Sharing—on the elaboration and negotiation of an international regime on access and benefit-sharing. Such a regime is of great interest to indigenous peoples and their organizations, given the significant impact that a legal instrument of this kind could have on the genetic resources found on their territories and on their associated traditional knowledge and the fair and equitable sharing of benefits arising from their utilization.

### WIPO and the IGC

A growing concern with regard to traditional knowledge is the issue of protecting it from misappropriation and misuse. In this regard, the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (the IGC) under the World Intellectual Property Organization (WIPO) is relevant for indigenous peoples. WIPO was established by the WIPO Convention of 1967. It is a multifaceted, specialized UN agency that has among its many activities that of providing a forum for international policy debate and development of legal mechanisms and practical tools concerning the protection of traditional knowledge (TK) and traditional cultural expressions (TCEs) from misappropriation and misuse, and the intellectual property rights (IPRs) aspects of access and benefit-sharing of genetic resources. The IGC was established in 2001 to identify the needs and expectations of the holders of TK and cultural expressions.

a growing concern with regard to traditional knowledge is the issue of protecting it from misappropriation and misuse

While WIPO has a role to play in protecting TK, there is a belief among some indigenous peoples that it is not an appropriate forum to set standards because it is limited by its mandate to promoting intellectual property rights (IPRs) as the only viable path to protecting traditional knowledge. Indigenous peoples have consistently called on WIPO, governments and other multilateral organizations to explore other ways of protecting and promoting indigenous and traditional knowledge outside of the traditional IPRs regime.<sup>70</sup> The IGC is currently consolidating on-going work on two sets of draft provisions that outline policy objectives and core principles relating to the protection of TK and TCEs from misappropriation. The close involvement of indigenous peoples has been essential to this process.<sup>71</sup>

### United Nations Forum on Forests (UNFF)

As one of the Major Groups, indigenous peoples also participate in the work of the United Nations Forum on Forests (UNFF). The UNFF is a subsidiary body of ECOSOC and was established in 2000, together with the Collaborative Partnership on Forests (CPF), comprising forest-related UN agencies and international and regional organizations, institutions and instruments.

<sup>70</sup> See The Kimberley Political Declaration, Kimberley, South Africa, August 2002.

<sup>71</sup> See Chapter II, this publication; Traditional Knowledge Bulletin (2008) at <http://tkbulletin.wordpress.com>



The mandate of the UNFF has been to facilitate and promote the implementation of the Proposals for Action set up by the UN Intergovernmental Panel on Forests (IPF) and the Intergovernmental Forum on Forests (IFF).<sup>72</sup> In 2007, the Forum adopted the Non-Legally Binding Instrument on All Types of Forests (NLBI), and a Multi-Year Programme (2007-2015) with four measurable and time-bound global objectives to achieve sustainable forest management.<sup>73</sup>

NLBI is the first ever inter-governmental instrument on sustainable forest management. It covers issues ranging from protection and use of traditional forest-related knowledge and practices in sustainable forest management to the need for enhanced access to forest resources and relevant markets to support the livelihoods of forest-dependent indigenous communities living inside and outside forest areas.<sup>74</sup>

Although UNFF recognizes the role of indigenous peoples in achieving sustainable forest management, indigenous peoples' organizations and civil society have generally been disappointed by the UNFF, which does not build on the open and progressive practices of the IPF/IFF and CSD.<sup>75</sup> They have also widely criticized NLBI for failing to recognize, respect and support the implementation of customary rights of indigenous peoples who live in and depend on forests and for failing to comply with best practices in environment management.<sup>76</sup>

## UNCCD and UNFCCC

Indigenous peoples also participate in the COPs of the Convention on Desertification (UNCCD) and the Framework Convention on Climate Change (UNFCCC). However, they are admitted only as observers, not as peoples. In the case of the UNFCCC, for instance, they have participated since 1988 in the COPs and have released a number of statements and declarations expressing concerns regarding the implications of climate change policies on their livelihoods and cultures. Since 2001, indigenous peoples' organizations have been acknowledged as a constituency in climate change negotiations within UNFCCC. At the same time, however, indigenous peoples are still waiting for UNFCCC's approval of an Ad Hoc Working Group on Indigenous Peoples and Climate Change, which would allow them to actively participate in the meetings of the Conference of Parties in the same way they are able to under the Convention on Biological Diversity.<sup>77</sup>

## Implementation gaps and challenges

Indigenous peoples today are increasingly attempting to exert greater control over their natural resources as well as over their economic and political life. They are acutely aware of the environmental damage that accompanies most development programmes and the toll that these efforts impose on peoples and their ecosystems.<sup>78</sup> They also realize that the rapid pace of human-induced environmental change calls for decisive action not only at the international level but also at the national and local levels in order to fill the implementation gap and fully respect indigenous peoples' environmental rights. However, while indigenous peoples have, since 2002, experienced increased recognition of their environmental rights at the international level, translating this political

<sup>72</sup> IPF was set up by the CSD in 1995. It was succeeded by the IFF in 1997, which, in turn, gave way to the UNFF in 2000.

<sup>73</sup> For full text of NLBI, see UN Doc. A/C.2/62/L.5 (2007).

<sup>74</sup> NLBI Article 6 (f) and (y).

<sup>75</sup> See, e.g., Forest Peoples Programme (2004a).

<sup>76</sup> See, e.g., Forest Peoples Programme (2007a).

<sup>77</sup> See indigenous peoples' statements made at various COPs on the web site of the International Alliance for Indigenous and Tribal Peoples of the Tropical Forests at <http://www.international-alliance.org>

<sup>78</sup> Barkin (2006).



while indigenous peoples have, since 2002, experienced increased recognition of their environmental rights at the international level, translating this political recognition into concrete advances at the national and local levels remains a major challenge

recognition into concrete advances at the national and local levels remains a major challenge. Many decisions made at the international level are not always respected or implemented at the national level, and indigenous peoples' voices are all too often marginalized, if heard at all.

Several factors contribute to this situation: structural discrimination of indigenous peoples at all levels in many countries, a lack of political will to prioritize indigenous issues and provide funds to address them, the low level and efficacy of indigenous participation in national policy formulation and implementation, and a lack of awareness of international commitments amongst government officials as well as among indigenous peoples themselves (except for a minority who work in leading indigenous organizations).

### Indigenous land rights

A main challenge still facing most indigenous peoples is the right to their traditional lands and resources. There are a number of other instruments that allow for broader recognition and protection of indigenous peoples' rights to lands and territories. In 1997, the UN Committee on the Elimination of Racial Discrimination, in its General Recommendation No. 23 on Indigenous Peoples, called on states-parties to "recognize and protect the rights of indigenous peoples to own, develop, control and use their communal lands, territories and resources and, where they have been deprived of their lands and territories traditionally owned or otherwise inhabited or used without their free and informed consent, to take steps to return these lands and territories." The Committee further called "upon state-parties with indigenous peoples in their territories to include in their periodic reports full information on the situation of such peoples, taking into account all relevant provisions of the Convention".<sup>79</sup> In recent years, in its comments on country reports, CERD has made several observations on the issue of indigenous peoples' right to land.<sup>80</sup>

In Africa, indigenous peoples can refer to Articles 21 and 22 of the African Charter, which enshrine the right of peoples to freely dispose of their wealth and natural resources and provide for the right of peoples to economic, social, and cultural development. Similar provisions are contained in other instruments adopted by the African Union, such as the African Convention on the Conservation of Nature and Natural Resources, which is intended "to preserve the traditional rights and property of local communities and request the prior consent of the communities concerned in respect of all that concerns their access to and use of traditional knowledge". These provisions have been used by the African Commission on Human and Peoples' Rights (ACHPR) to enhance protection of indigenous peoples' rights to lands. The African Commission has also received land-related communications, for example, from the Endorois, indigenous peoples of Kenya, regarding their claims to ancestral lands around Lake Bogoria.<sup>81</sup>

<sup>79</sup> CERD (1997) General Recommendation No.23: Indigenous Peoples.

<sup>80</sup> See, for instance, CERD (2003) Concluding Observation on Uganda.

<sup>81</sup> Barume (forthcoming 2009).

There have also been recent examples where, after exhausting national remedies, indigenous peoples of the Americas took their complaints to the Inter-American Human Rights System. A series of landmark decisions resulted: *Awastingni v. Nicaragua*, 2001; *Yakye Axa v. Paraguay*, 2005; and *Sawhoyamaya v. Paraguay*, 2006. In ruling on these cases, the court affirmed the validity of the United Nations (then) Draft Declaration and OAS Proposed Declaration on the Rights of Indigenous Peoples, even though neither had been finally approved at the time of the verdict.<sup>82</sup>

This raises the hope that, with the adoption of the Declaration, indigenous peoples' rights to land and to self-determination may appear on the domestic agenda of many countries.

### Biological diversity and traditional knowledge

The Convention on Biological Diversity is a commitment to achieving a significant reduction in the current rate of biodiversity loss at the global, regional and national level by 2010. The current rate is estimated to be up to 100 times the natural rate. This unprecedented biodiversity loss is being exacerbated by the negative impact of climate change. According to the IUCN Red List of Threatened Species, between 12 and 52 per cent of species within groups such as birds or mammals are threatened with extinction,<sup>83</sup> and up to 30 per cent of all known species may disappear before the end of this century because of climate change.<sup>84</sup>

the rate of erosion of traditional ecological/environmental biodiversity-related knowledge has never been as high as in the current generation

Parties to the Convention on Biological Diversity have also made a commitment to ensure the protection of indigenous peoples' traditional knowledge as established by Article 8(j), which states that "each contracting party shall as far as possible and as appropriate, subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biological diversity."

Yet, the rate of erosion of traditional ecological/environmental biodiversity-related knowledge has never been as high as in the current generation.<sup>85</sup> Although efforts are being made, for instance by the UNESCO programme LINKS,<sup>86</sup> to encourage the use and inter-generational transfer of innovations and practices in biodiversity-related traditional knowledge innovations and

<sup>82</sup> Alwyn (2006).

<sup>83</sup> See full list at <http://www.greenfacts.org/glossary/ghi/iucn-red-list.htm>

<sup>84</sup> Statement by Executive Secretary of the SCBD (2008). For full text, see <http://www.cbd.int/doc/speech/2008/sp-2008-06-16-ias-en.pdf>

<sup>85</sup> For detailed summaries of the threats to traditional knowledge, see Working Group on Article 8(j) (2005). For measures and mechanisms to address the decline of traditional knowledge, see Working Group on Article 8(j) (2007f).

<sup>86</sup> LINKS specifically seeks to maintain the vitality of local knowledge within communities by strengthening ties between elders and youth in order to reinforce the transmission of indigenous knowledge and know-how.



practices, more incentive measures tailored to ensure the survival of traditional knowledge within and beyond this current generation, urgently need to be developed.

Implementation of the goals related to biodiversity and traditional knowledge requires both political will and economic support. Most indigenous peoples are highly dependent on the states in which they live.<sup>87</sup> However, they rarely enjoy sufficient national legislative support or any degree of self-governance, both of which are needed for maintaining their biodiversity-related practices and knowledge and for ensuring the successful implementation of Article 8(j).<sup>88</sup> They also face constraints in the exercise of customary laws relevant to the management, conservation, and sustainable use of biological diversity. The outcome of the work being done in WG8J and WGABS is therefore of special interest to indigenous peoples.

In ratifying the Convention on Biological Diversity, developed countries have also committed themselves to providing financial resources to ensure that developing countries can implement the Convention. In adopting the Declaration on the Rights of Indigenous Peoples, states have recognized a similar obligation to “establish and implement assistance programmes for indigenous peoples for such conservation and protection without discrimination”.<sup>89</sup>

This funding, which can be made through bilateral, regional or multilateral donations, is channelled through the Global Environment Facility (GEF), the financial mechanism of the UN environmental conventions and the largest funder of projects to improve the global environment.<sup>90</sup> Indigenous peoples’ involvement in the GEF policy processes is limited, although they participate in the GEF assembly and council meetings and have their own focal point within the NGO network that is part of the GEF structure.<sup>91</sup>

Although the GEF is an independent financial body, its projects and programmes are implemented through agencies, such as the UNDP and the World Bank, some of which have their own policies on indigenous peoples. Several indigenous organizations have been able to access project funding, and the CBD Conference of the Parties has specifically requested that GEF finance projects strengthening the involvement of indigenous peoples in conserving biological diversity and in maintaining the sustainable use of its components, and in supporting the priority activities identified in the WG8j’s programme of work.

## Protected areas

Although 12 per cent of the earth’s land surface now consists of protected areas, they do not cover all biomes and species requiring protection, and so the objectives of the Convention on Biological Diversity (CBD) are not being fulfilled. In order to address these gaps, a Programme of Work on protected areas was developed at the CBD Conference of Parties in 2004. The objective of this Programme is to

*Support the establishment and maintenance by 2010 for terrestrial and by 2012 for marine areas of comprehensive, effectively managed, and ecologically representative national and regional protected areas that collectively contribute to achieving the 2010 target.*<sup>92</sup>

<sup>87</sup> Working Group on Article 8(j) (2007b).

<sup>88</sup> Working Group on Article 8(j) (2007b).

<sup>89</sup> United Nations (2007), Article 29.

<sup>90</sup> The GEF has, since 1991, assisted countries in meeting their obligations under the conventions that they have signed and ratified, such as the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change, the UN Convention to Combat Desertification (UNCCD), etc. GEF provides grants for projects related to the following six focal areas: biodiversity, climate change, international waters, land degradation, the ozone layer and persistent organic pollutants. See <http://thegef.org>

<sup>91</sup> See, e.g., Forest Peoples Programme (2007b).

<sup>92</sup> Convention on Biological Diversity (2004), COP 7 Decision VII/28.

However, prioritising the expansion of protected area networks without issues of equity and participation at the forefront may lead to an unjust implementation of the Programme of Work by excluding social, cultural and justice aspects while focusing on quantitative targets. A WWF report from 2004 identified indigenous peoples' participation in management decision-making as a weakness in protected area management and concluded, "one depressingly consistent problem is a failure to manage relations with people. Problems are evident in terms of effectively channelling the input of indigenous peoples and securing their voice and participation in management decisions".<sup>93</sup>

Only by adhering to the goals of the Programme of Work on Protected Areas, in particular Goal 2 on Equity and Benefit Sharing, can the Parties ensure that a number of outcomes are realized in the process of achieving the 2010 biodiversity targets and representative biomes in protected areas. This can be done by

- ◆ adjusting policies to avoid and mitigate negative impacts and, where appropriate, compensate costs & equitably share benefits in accordance with the national legislation;
- ◆ recognising and promoting a broad set of protected area governance types, which may include areas conserved by indigenous and local communities; and,
- ◆ using social and economic benefits generated by protected areas for poverty reduction, consistent with protected-area management objectives;
- ◆ enhancing and securing the involvement of indigenous and local communities and relevant stakeholders.<sup>94</sup>

The UN Declaration on the Rights of Indigenous Peoples also provides guidance with regard to protected areas. As mentioned above, one of the problems with protected areas is that indigenous peoples are forcibly removed from lands or excluded from accessing lands and the resources contained therein. Article 10 of the Declaration states that

*Indigenous peoples shall not be forcibly removed from their lands or territories. No relocation shall take place without the free, prior and informed consent of the indigenous peoples concerned and after agreement on just and fair compensation and, where possible, with the option of return.*

At the CBD Working Group on Protected Areas, convened in preparation for COP 9 (2008), indigenous peoples stated their disappointment at the lack of progress in the implementation of Element 2 of the Programme of Work on governance, equity, participation and benefit-sharing:

*Despite all the hard work to contribute to the development of the Programme of Work and our efforts at the national level to implement its activities directly relevant to the indigenous peoples and local communities, we have met many obstacles and in many cases Parties have preferred to continue with the establishment of protected areas without taking into account our rights and without ensuring our full and effective participation.<sup>95</sup>*

They therefore recommended that the Programme of Work proceed in accordance with the following:

---

<sup>93</sup> WWF (2004), 4.

<sup>94</sup> Workgin Group on Article 8(j) Programme of Work, Goal 2.1 and Goal 2.2. at <http://www.cbd.int/protected/pow.shtml?prog=p2>

<sup>95</sup> Indigenous Statement (2008).



- ◆ recognize the customary practices and legal system related to the sustainable use and conservation of biodiversity;
- ◆ recognize the rights of indigenous peoples to their territories, lands and resources and the rights of Free Prior Informed Consent;
- ◆ review and reform national protected area policies and laws that contravene the goals and targets of Element 2 of the programme; and,
- ◆ train protected area managers and personnel in participatory approaches and to recognize and respect indigenous rights.<sup>96</sup>

At COP 9 (May 2008), the Parties decided to promote the establishment of “effective processes for the full and effective participation of indigenous and local communities, in full respect of their rights and recognition of their responsibilities, in the governance of protected areas, consistent with national law and applicable international obligations”.<sup>97</sup> This would include building capacity for indigenous and local communities to enable their participation in establishing and managing protected areas and preserving and maintaining traditional knowledge for the conservation and sustainable use of biodiversity in the management of protected areas.<sup>98</sup>

## Forest issues

Policy commitments developed at the international level urge states to promote, support, protect and encourage the use of traditional knowledge and customary practices of indigenous peoples in the management and use of forest resources. These policy commitments can be found in specific instruments such as Agenda 21 (e.g., Chapter 11 on Combating Deforestation), the Convention on Biological Diversity, the non-legally binding Forest Principles and the Millennium Development Goals (Goal No.7 on Environmental Sustainability).

Since UNCED, the international community has made significant progress in the development of international forestry policy focused on sustainable forest management. However, there is much concern that progress on the ground is poor, and there is no effective monitoring system. Whilst there are state reports to the UNFF and CBD, and national strategy documents such as National Forest Plans (NFPs), National Forest Action Programmes (NFAPs), and National Biodiversity Strategy and Action Plans (NBSAPs) have been produced, information on effective implementation in laws and policies and related actions on the ground is far more difficult to obtain.<sup>99</sup>

Regarding the Non-Legally Binding Instrument on all Types of Forests (NLBI), indigenous peoples have pointed out that it is not clear whether such an instrument would better conserve forests and provide better protections of the rights of indigenous peoples because states seem to be unwilling to deal with social justice and human rights issues and instead prefer to strengthen state power and sovereignty over natural resources. A recurrent concern is that UNEP and UNFF, when defining “forests”, do not make the distinction between natural forests and forest plantations (of oil palms, for instance). This means that countries that expand the area for tree plantation can claim that they are achieving MDG 7 because one of its indicators is “proportion of lands covered by forests”.<sup>100</sup>

<sup>96</sup> Indigenous Statement (2008).

<sup>97</sup> Convention on Biological Diversity (2008a), 165: Decision IX/18, 6(d).

<sup>98</sup> Convention on Biological Diversity (2008a), 165: Decision IX/18,12.

<sup>99</sup> See Newing (2004).

<sup>100</sup> Tauli-Corpuz and Tamang (2007).

The efforts being made to improve commercial forest management through a certification process that ensures that the social, economic and ecological needs of present and future generations that are being met are more positive. One example is the Forest Stewardship Council (FSC), whose principles and criteria for certification include “respect of human rights with particular attention to indigenous peoples” and “identification and appropriate management of areas that need special protection, (e.g., cultural or sacred sites, habitat of endangered animals or plants)”. Currently, more than 100 million ha of forest worldwide have been certified to FSC standards. These forests are distributed over 79 countries and represent the equivalent of 7 per cent of the world’s productive forests. In most cases, these forests are inhabited by indigenous peoples who are actively involved in mapping, management and other related activities.<sup>101</sup>

### Environmental impact assessment

As keepers of life-sustaining resources, indigenous peoples have proven to be successful in developing mechanisms and techniques in harmony with their environment. Although indigenous knowledge is different from the Western paradigm of development, the knowledge of indigenous peoples is of particular interest for environmental assessment because it is systemic and comprehensive and offers an all-encompassing understanding of a territory that is utilized and known in its entirety. In contrast, Western scientific expertise has a tendency to move toward increasing levels of specialization, rendering a holistic vision difficult, if not impossible. Indigenous peoples’ traditional ecological knowledge and management systems are therefore the subject of increasing attention because they can be used to improve development planning in regions inhabited by indigenous peoples. There are an increasing number of texts advocating the articulation of environmental assessment and indigenous knowledge (e.g., Agenda 21, Convention on Biological Diversity, the Akwe: Kon Voluntary Guidelines and the Declaration on the Rights of Indigenous Peoples).

the knowledge of indigenous peoples is of particular interest for environmental assessment because it is systemic and comprehensive and offers an all-encompassing understanding of a territory that is utilized and known in its entirety

But beyond statements of good intent, there are still questions as to whether real progress has been made toward bringing indigenous knowledge into environmental assessment, and the extent to which environmental impact assessment and land use planning and decision-making reflect the above mentioned texts is highly variable throughout and within regions. So far, most national reports submitted by the Parties to the Convention on Biological Diversity indicate that the *Akwe: Kon Guidelines* have not been implemented.

In several cases, indigenous peoples have tried to have traditional knowledge integrated into environmental impact assessments conducted for climate change response measures. It was, for instance, recommended by the Arctic International Expert Meeting on Responses to Climate Change for Indigenous Communities and the Impact on their Traditional Knowledge Related to Biological

<sup>101</sup> See, e.g., Lewis and Nelson (2006).



Diversity, which also noted the relevance of the Akwe: Kon Guidelines. It also recommended that processes be developed to link local-level adaptation to national planning.<sup>102</sup>

In many parts of the world, the “environment” is still not a priority when dealing with difficult development decisions, and cultural factors are almost always absent from decision-making processes. In the case of extractive industries in Latin America, for instance, there is insufficient evaluation of their impacts on traditional knowledge and practices, even if it is argued that such impacts, especially indirect impacts, are of considerable magnitude.<sup>103</sup>

for many indigenous peoples, climate change is already a reality, and they are increasingly realising that climate change is clearly not just an environmental issue, but one with severe socioeconomic implications

In 2005, indigenous peoples living in the Russian Federation protested against the oil industry, demanding the implementation of an “ethnological impact assessment” in addition to the environmental impact assessment. In 2007, the Committee of Nationalities Affairs of the Russian State Duma drafted a federal law “[o]n the protection of the environment, traditional way of life, and traditional natural resource use of the small numbered indigenous peoples in the Russian Federation”. Such a law would have made ethnological impact assessments a reality and secured traditional lands and natural resource management for the indigenous peoples’ communal enterprises. The Department of Nationalities Affairs has, however, reacted negatively to the draft law and the general feeling is therefore that it will not be passed by Duma, even though several regional administrations have stressed the need for such a law.<sup>104</sup>

## Climate Change – adaptation and mitigation

For many indigenous peoples, climate change is already a reality, and they are increasingly realising that climate change is clearly not just an environmental issue, but one with severe socioeconomic implications. The World Bank, among other things, also sees climate change as having the potential to hamper achievement of the Millennium Development Goals, including those on poverty eradication, child mortality, combating malaria and other diseases, as well as environmental sustainability. For indigenous peoples, already vulnerable and marginalized, climate change therefore represents a major challenge to which the only answer so far seems to be adaptation and mitigation.

## Adaptation

Indigenous peoples have survived many kinds of environmental changes and are therefore often seen as having a special capacity to adapt. As Nuttall observes, however, “adaptive capacity and resilience depend on the strength of culture, of human-environment relations, cohesiveness of community, identity, and of strong social relationships... Adaptation may well begin at the local level in individual, household and community decisions, but it also requires strong policy measures

<sup>102</sup> Convention on Biological Diversity (2008b).

<sup>103</sup> Working Group on Article 8(j) (2007g).

<sup>104</sup> IWGIA (2008), 40.



that, for example, support traditional practises of hunting, fishing and pastoralism, agricultural production, food security, resource management, infrastructure development, and education".<sup>105</sup> In many instances, adaptation to new conditions requires additional financial resources and a transfer of technological capacity, which most indigenous communities do not possess.

On the other hand, indigenous peoples may have valuable lessons to offer about successful and unsuccessful adaptations which could be vital in the context of climate change. There is increasing recognition of the "untapped resource of indigenous peoples' knowledge about past climate change"<sup>106</sup> that could be used to inform adaptation options,<sup>107</sup> as well as scientific research, as was the case during the Arctic climate impact assessment.

### Incorporating indigenous knowledge and Western science

Indigenous observations of climate change contribute to understanding climate change and associated changes in the behaviour and movement of animals. Over many generations and based on the direct, everyday experience of living in the Arctic, they have developed specific ways of observing, interpreting, and adjusting to weather and climate changes. Based on careful observations, on which they often base life-and-death decisions and set priorities, indigenous peoples have come to possess a rich body of knowledge about their surroundings. Researchers are now working with indigenous peoples to learn from their observations and perspectives about the influences of climate change and weather events on the Arctic environment and on their own lives and cultures. These studies are finding that the climate variations observed by indigenous people and by scientific observation are, for the most part, in good accord and often provide mutually reinforcing information.

*Source: Arctic Climate Impact Assessment (2005), 992.*

Taking indigenous peoples' knowledge into account when designing climate change policies could also lead to the development of effective adaptation strategies that are cost-effective, participatory and sustainable.<sup>108</sup> It is also important to emphasize that any attempt to enhance and support the adaptive capacity of indigenous peoples will be successful only if integrated with other strategies, such as disaster preparation, land-use planning, environmental conservation and national plans for sustainable development.

### Coping with climate changes in the Arctic

Living in the north-eastern corner of Siberia, the Nutendli peoples have witnessed the disappearance of lakes, severe flooding and the rapid new erosion of the banks of the Kolyma River. In order to survive the changes that modernity, and now climate changes, impose on them and their world, the Nutendli community acts to prioritize the survival of traditional knowledge, spirituality and language. This effort manifests itself in a unique attempt to provide education to the children of the community by means of a nomadic school. The community believes that it is able to build a relationship with the rapid changes of the land as long as its knowledge and beings survive.

*Source: Convention on Biological Diversity (2008b), 17.*

<sup>105</sup> Nuttall (2008), 6.

<sup>106</sup> IPCC (2007b), 523, citing Rose (1996), Lewis (2002) and Orlove (2003).

<sup>107</sup> IPCC (2007b), 523, citing Webb (1997) and Hill (2004).

<sup>108</sup> IPCC (2007b), 865, citing Robinson and Herbert (2001).



Although indigenous peoples are experts in adapting to changing conditions, adapting to simultaneous changes in their homeland that affect, for instance, their land tenure, their access to natural resources, their health situation, etc., indigenous communities may start to show signs of stress and may be unable to cope when a rapidly changing climate accelerates the degradation of their ecosystem and impinges upon their ability to maintain their livelihoods.<sup>109</sup>

It should also be mentioned, however, that indigenous groups, in some regions of the world, see economic opportunities in climate change. In Greenland, for instance, the Home Rule Government reckons that a warmer climate will make mining and hydrocarbon development possible and potentially open the path for lucrative industrial development.<sup>110</sup> In other regions, opportunities may be found in having wind and solar power generated on traditional lands. In Australia, in June 2007, ConocoPhillips, a giant new natural gas refinery, and Aboriginal landowners agreed to offset 100,000 tons of the refinery's own greenhouse emissions over a period of 17 years. The Aboriginal landowners in question will use traditional fire management practices, which have been scientifically shown to reduce greenhouse emissions as compared to naturally occurring wildfires.<sup>111</sup>

### Mitigation efforts

indigenous peoples also point to an increase in human rights violations, evictions and conflicts due to expropriation of ancestral lands and forests for afforestation and reforestation or biofuel plantations

Current mitigation efforts include a whole gamut of initiatives that all have the objective of reducing the emission of CO<sub>2</sub> and other gases. These initiatives include bio-fuel plantations, hydropower dams, geothermal plants, etc., and a series of projects to deal with emission reductions in general and the reduction of emissions from deforestation and forest degradation in particular.

Many indigenous peoples adopt a defensive position in view of these efforts as they fear they will lead to expropriation of their lands, displacement or loss of biological diversity. In Australia and New Zealand, for instance, "large-scale" participation of indigenous lands in the mitigation effort is anticipated.<sup>112</sup> The IPCC Fourth Assessment Report recommends that more research is required regarding adaptation options for Australian indigenous and New Zealand Maori communities, particularly those on traditional lands that may be targeted for mitigation schemes.<sup>113</sup> At the Conference of the Parties of UNFCCC in 2005, the International Alliance of Indigenous and Tribal Peoples of Tropical Forests was critical of the fact that the modalities and procedures for activities under the Clean Development Mechanism (CDM) did not respect or guarantee indigenous peoples' right to lands, territories and self-determination. There is a view that CDM and carbon sinks projects do not contribute to climate change mitigation and sustainable development.

<sup>109</sup> See, e.g., ACIA (2005), 676.

<sup>110</sup> Nuttall (2008), 45.

<sup>111</sup> Mugarura (2007).

<sup>112</sup> See also the The Garnaut Climate Change Review (2008).

<sup>113</sup> IPCC (2007b), 531.

Indigenous peoples also point to an increase in human rights violations, evictions and conflicts due to expropriation of ancestral lands and forests for afforestation and reforestation or biofuel plantations (soya, sugar cane, jatropha, oil palm, corn, etc.). Such projects affect whole eco-systems, placing demands on water supply, changing the face of the landscape upon which indigenous peoples depend and bringing about an associated decline in food security.<sup>114</sup>

## The World Bank and the carbon market

According to the World Bank, the resources needed to tackle climate change are unprecedented compared to existing development and global public goods financing,<sup>115</sup> and together with GEF, the World Bank Group (WBG) has become the leading agency in developing funding facilities aimed at adaptation and mitigation efforts. The first fund—the Prototype Carbon Fund (PCF)—became operational in 2000 and, since then, two more carbon funds have been created. The Bank also administers several funds on behalf of individual donor countries, including Italy, the Netherlands and Spain.

More recently, the World Bank has developed a new range of funding facilities, such as the Climate Investment Funds,<sup>116</sup> the Transformation Fund for Sustainable Development<sup>117</sup> and the Forest Carbon Partnership Facility (FCPF). Such initiatives potentially represent billions of dollars in funding for activities related to the mitigation of global climate change and for adaptation to changing climatic conditions.

The Forest Carbon Partnership Facility (FCPF) was developed by the Bank in 2006 and 2007, together with a larger proposal for a Global Forest Partnership (GFP) which, if adopted, will have major implications for forests and forest peoples.<sup>118</sup> Both were launched at the UNFCCC COP 13, in Bali, in 2007, and were met with massive criticism from indigenous peoples.

According to a survey conducted by the Forest Peoples Programme,<sup>119</sup> the general concerns expressed by indigenous peoples regarding the FCPF included, among other things

- ◆ the FCPF fails to take into account the UN Declaration on the Rights of Indigenous Peoples and does not provide any other form of effective protection for the rights of indigenous peoples, their lands and territories;
- ◆ the draft proposals for “emission reduction programmes” include a variety of areas of great concern to indigenous peoples, including expansion of protected area systems, expansion of plantations, strong emphasis on law enforcement and patrolling of lands;
- ◆ the proposed FCPF governance structures privilege the interests of governments and business over those of indigenous peoples, and there is a fear that indigenous peoples will be marginalized by a top-down implementation process, as well as by the centralized forest-policy planning and design process;
- ◆ affected indigenous communities would have few avenues for redress in the event of conflict or violation of rights stemming from activities supported by the FCPF.<sup>120</sup>

<sup>114</sup> Working Group on Article 8(j) (2007a).

<sup>115</sup> See World Bank (2007).

<sup>116</sup> Two trust funds are to be created under the CIF: the Clean Technology Fund and the Strategic Climate Fund.

<sup>117</sup> This is a British-funded initiative administered by the Bank.

<sup>118</sup> Forest Peoples Programme (2008), 5.

<sup>119</sup> Forest Peoples Programme (2008), 4.

<sup>120</sup> Forest Peoples Programme (2008), 4.



Regarding the Global Forest Partnership (GFP), concerns included, among others things, that

- ◆ the GFP does not recognize indigenous peoples as rights holders;
- ◆ it risks undermining or impoverishing indigenous forest-based livelihoods and traditional practices in forests by supporting conventional protected area systems;
- ◆ it would enable activities that could lead to the expropriation of indigenous peoples' forest lands;
- ◆ it would deliver only minimal or token benefits to indigenous peoples and forest communities;
- ◆ it would marginalize indigenous peoples through top-down implementation processes, as well as by its centralized planning and design structure;
- ◆ a lack of transparency and accountability in its governance arrangements does not provide indigenous peoples and affected communities with avenues for effective involvement or representation.<sup>121</sup>

Indigenous peoples were also critical of the fact that they had been excluded from the FCPF/GFP process in spite of the fact they are the main stakeholders in tropical and subtropical regions. In response, the World Bank held consultations with indigenous peoples in Asia, Latin America and Africa in early 2008.

Many people, including indigenous peoples in developing countries, have questioned the logic of having a multilateral bank that has been and continues to be involved in funding the drivers of deforestation and climate change (fossil fuel energy extraction, mining, industrial logging, industrial plantations and infrastructure—including dams, roads, oil and gas pipelines and coastal developments) fund mitigation and adaptation efforts. These critics have called upon the Bank to cease the funding of fossil fuel activities and to prevent its projects from resulting in deforestation.<sup>122</sup>

## REDD

At the COP meeting, a programme on Reducing Emissions from Deforestation and Forest Degradation (REDD) was launched by the Norwegian government, which pledged to spend NOK 3 billion annually to support developing countries in fighting deforestation and reducing global CO<sub>2</sub> emissions. The REDD programme, too, has met with criticism. It makes no reference to indigenous peoples' rights, and it is argued that it will reinforce a centralized, top-down management of forests and undermine indigenous rights.

The concerns regarding the Forest Carbon Partnership Facility and REDD were also raised at the Seventh Session of the UN Permanent Forum on Indigenous Issues in May 2008, where the theme was Climate Change. Recommendations related to adaptation and mitigation initiatives were made, and it was emphasized that all actions to be taken should be implemented with the participation or consent of indigenous peoples and in accordance with the UN Declaration. In particular, it was recommended that

*[i]ndigenous peoples should be effectively involved in the design, implementation and evaluation of the Forest Carbon Partnership Facility. Displacement and exclusion of indigenous peoples from their forests, which may be triggered by projects funded by the Partnership Facility, should*

<sup>121</sup> Forest Peoples Programme (2008), 4.

<sup>122</sup> Forest Peoples Programme (2008), 16

*be avoided at all costs. Indigenous peoples or their representatives should have a voice in and a vote on the decision-making body of the Partnership Facility and of other climate change funds that will have impacts on them. In the case of those who opt not to participate in reducing emissions from deforestation and degradation or in the projects supported by the Partnership Facility, their choice should be respected. The Forum calls on all parties to ensure that the United Nations Declaration on the Rights of Indigenous Peoples is implemented when undertaking these processes.*<sup>123</sup>

## Concluding Remarks

Since the Earth Summit in 1992, interest in the rights of indigenous peoples in relation to the environment has continued to grow. There is now a better understanding of the importance of traditional lands and natural resources for the economic, cultural and spiritual survival of indigenous peoples, and indigenous values, knowledge and perspectives are increasingly respected as vital contributions to the renewal of society and nature.<sup>124</sup> The creation of a number of mechanisms specifically targeted at indigenous peoples<sup>125</sup> has contributed significantly to this development.

Indigenous peoples have invested enormous efforts in the work related to the different processes within the Committee for Sustainable Development, the Convention on Biological Diversity, the Forest Forum and the Framework Convention on Climate Change. It has been an uphill battle to gain recognition as valuable partners today, but indigenous peoples have become highly visible in international environmental fora.

At the local and national level, however, indigenous land rights, land use and resource management remain critical issues. The environmental damage to indigenous lands and territories has been substantial: flora and fauna species have become extinct or endangered, unique ecosystems have been destroyed, and rivers and other water catchments have been heavily polluted. Commercial plant varieties have replaced the many locally adapted varieties used in traditional farming systems, leading to an increase in industrialized farming methods. In many countries, development projects, mining and forestry activities, and agricultural and conservation programmes continue to displace indigenous peoples. In addition, indigenous peoples are now also facing new challenges, such as biotechnology, intellectual property rights and, not least, the impacts of climate change. For many indigenous peoples, climate change is a potential threat to their very existence and a major issue of human rights and equity.

It has been argued that this situation is the result of the current treaty-based framework of international law, including the Convention on Biological Diversity, which is poorly equipped to accommodate non-state players such as indigenous peoples with rights equivalent to those of states.<sup>126</sup> International law is built on the principle of state sovereignty and Article 3 of the CBD therefore affirms that “States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies...”

<sup>123</sup> UNPFII (2008), para. 49.

<sup>124</sup> Carino (2001), 4.

<sup>125</sup> These mechanisms include the two International Decades of the World's Indigenous People (1995-2004 and 2005-2015); the Permanent Forum on Indigenous Issues (2000); the Special Rapporteur Mechanism on the situation of human rights and fundamental freedoms of indigenous people (2001); the Declaration on the Rights of Indigenous Peoples (2007); and the Human Council's Expert Mechanism on the Rights of Indigenous Peoples (2007).

<sup>126</sup> Westra (2008), 9 citing Metcalf (2004).



However, it has also been argued “that the CBD must be read consistently with the superior authority of the UN Charter whose article 1(3) defines one of the primary purposes and principles of the UN as ‘promoting and encouraging respect for human rights and fundamental freedoms for all without distinction as to race, sex, language or religion...’ In the exercise of their sovereign will, the vast majority of states have voluntarily accepted this international legal obligation by ratifying international human rights conventions.<sup>127</sup> These and other obligations are not suspended in connection with CBD; Article 22 of the Convention on Biological Diversity specifically states that its provisions ‘shall not affect the rights and obligations of any Contracting party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity’”.<sup>128</sup> The Declaration on the Rights of Indigenous Peoples also refers to international human rights obligations and states in its Article 32 (3) that: its provisions “shall be interpreted in accordance with the principles of justice, democracy, respect for human rights, equality, non-discrimination, good governance and good faith”.

But good international policies do not necessarily result in good implementation, and one of the greatest challenges lies at the national level. Many indigenous peoples have a distinct legal status within their countries, are barely recognized as equal citizens, and face multiple constraints when trying to claim the rights that international law grants them. This does not mean that efforts at the international level should not be sustained. On the contrary, because it is here that indigenous peoples, aside from their political aims, can develop a multiplicity of additional relationships, that are critically important for self-realization and the exercise of self-determination<sup>129</sup> and can have the opportunity for face-to-face interactions and dialogues with decision-makers at the national level and thereby the possibility to impact domestic policies.

At both levels, the Declaration can be a useful tool. Indigenous participants in recent CBD meetings on the International Regime on Access to Genetic Resources and Benefit-Sharing pointed out that the Declaration contained articles of direct relevance to the issues under discussion and that any component or provision of the International Regime had to be consistent with the Declaration. At the same time, they also noted among the Parties a widespread recognition of the Declaration as a new framework to be taken into account.<sup>130</sup>

On the international and domestic stages, the challenge for indigenous peoples is therefore to continue to assert their sovereign rights as peoples to access their lands and natural resources, to participate in decisions concerning these resources, and to use their right of free, prior and informed consent.

---

<sup>127</sup> For instance, the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social and Cultural Rights (ICESCR), and the International Covenant on the Elimination of Racial Discrimination (ICERD).

<sup>128</sup> Forest Peoples Programme (2004b), 2.

<sup>129</sup> Carino (2001), 5.

<sup>130</sup> IWGIA (2008), 564.

## List of references

**Agenda 21. 1992.** Plan of Action adopted at the Rio Conference on Environment and Development (UNCED). Available online at [www.un.org/esa/sustdev/agenda21.htm](http://www.un.org/esa/sustdev/agenda21.htm)

**Akwe: Kon. 2004.** The Akwe: Kon Voluntary Guidelines. Available online at <http://www.cbd.int/doc/publications/akwe-brochure-en.pdf>

**Alwyn, José. 2006.** "Land and Resources" in *Cultural Survival Quarterly*, Issue 30.4, December 2006.

**Arctic Climate Impact Assessment. 2005.** Cambridge, Mass.: Cambridge University Press. Available online at <http://www.amap.no/acia>

**Barkin, David. 2005.** "Incorporating indigenous epistemologies into the construction of alternative strategies to globalization to promote sustainable regional resource management: The struggle for local autonomy in a multiethnic society". Paper at the Workshop on Ethics and Development: The Capability Approach in Practice, Michigan State University, 13 April, 2005. Available online at <http://www.ma.caudillweb.com/documents/bridging/papers/Barkin.david.pdf>

**Barume, Albert K. 2009 (forthcoming).** Land Rights in Africa (working title). Copenhagen: IWGIA.

**Borgerhoff Mulder, Monique and Coppolillo, Peter. 2005.** Conservation: Linking Ecology, Economics, and Culture. Princeton: Princeton University Press.

**Brockington, Daniel and Igoe, James. 2006.** "Eviction for Conservation: A Global Overview" in *Conservation and Society*, Volume 4, No. 3, September 2006: 424–470.

**Carino, Joji. 2001.** "Indigenous peoples and the World Summit for Sustainable Development (WSSD)". *Indigenous Affairs, Sustainable Development*, 4/2001: 4-6. Copenhagen: IWGIA.

**CSD Indigenous Peoples' Caucus. 2001.** "Dialogue paper by indigenous peoples". *Indigenous Affairs, Sustainable Development*, 4/2001: 13-25. Copenhagen: IWGIA.

**Centre for Indigenous Environmental Resources. 2007.** Climate change impacts on abundance and distribution of traditional foods and medicines – Effects on a First Nation and their capacity to adapt. Available at <http://www.cier.ca/WorkArea/showcontent.aspx?id=1296>

**Cernea, Michael M. 2005.** "Concept and method: Applying the IRR model in Africa to resettlement and poverty". In *Displacement Risks in Africa: Refugees, Resettlers and their Host Population*, ed. I. Ohta and Y.D. Gebre. Kyoto: Kyoto University Press.

**Cernea, Michael M. and Schmidt-Soltau, Kai. 2006.** "Poverty Risks and National Parks: Policy Issues in Conservation and Resettlement". *World Development* Vol. 34, No. 10: 1808–1830.

**Chapin, Mac. 2004.** "A Challenge to Conservationists". *World Watch Magazine*, November/December 2004.

**Colchester, Marcus. 2004.** "Conservation Policy and Indigenous Peoples", *Cultural Survival Quarterly*, Issue 28.1, March 2004.

**Committee on the Elimination of All Forms of Racial Discrimination (CERD). 1997.** General Recommendation No. 23: Indigenous Peoples. Fifty first session of the CERD, August 1997. Available online at <http://www2.ohchr.org/english/bodies/cerd/index.htm>



**Committee on the Elimination of All Forms of Racial Discrimination (CERD). 2003.** Concluding Observations on Uganda. UN Doc. CERD/C/62/CO/11, 2 June 2003. Available online at [http://www.unhchr.ch/tbs/doc.nsf/\(Symbol\)/CERD.C.62.CO.11.En?Opendocument](http://www.unhchr.ch/tbs/doc.nsf/(Symbol)/CERD.C.62.CO.11.En?Opendocument)

**Commonwealth of Australia. 2007.** Growing up Strong – The first 10 years of Indigenous Protected Areas in Australia. Canberra: Commonwealth of Australia. Available online at <http://www.environment.gov.au/indigenous/publications/growingupstrong.html>

**Convention on Biological Diversity (2002).** The text of the Convention available online at <http://www.cbd.int>

**Convention on Biological Diversity (CBD). 2004.** Report on the Conference of the Parties to the Convention on Biological Diversity on the work of its seventh meeting. UN Doc. UNEP/CBD/COP/7/21 February 2004.

**Convention on Biological Diversity (CBD). 2008a.** Report of the Conference of the Parties to the Convention on Biological Diversity on the work of its ninth meeting. UN Doc. UNEP/CBD/COP/9/29 October 2008.

**Convention on Biological Diversity (CBD). 2008b.** Report of the International Expert Meeting on Responses to Climate Change for Indigenous and Local Communities and the impact on their traditional Knowledge Related to Biological Diversity: The Arctic Region. UN Doc. UNEP/CBD/COP/9/INF/43 March 2008.

**Dowie, Mark. 2005.** Conservation Refugees – When protecting nature means kicking people out. Orion November/December 2005. At <http://www.oriononline.org/pages/om/o5-6om/Dowie.html>

**Forest Peoples Programme. 2004a.** Briefing on the United Nations Forum on Forests (UNFF) and Collaborative Partnership on Forests (CPF). Available online at <http://www.forestpeoples.org>

**Forest Peoples Programme. 2004b.** Indigenous Peoples' Rights, State Sovereignty and the Convention on Biological Diversity. Available online at <http://www.forestpeoples.org>

**Forest Peoples Programme. 2007a.** The UNFF fails indigenous peoples again. Briefing Note. Available online at <http://www.forestpeoples.org>

**Forest Peoples Programme. 2007b.** Indigenous peoples' Participation in the Decisions and Policy-making of GEF. Available online at <http://www.forestpeoples.org>

**Forest Peoples Programme. 2008.** Some views of indigenous peoples and forest-related organisations on World Bank's "Forest Carbon Partnership Facility" and proposals for a "Global Forest Partnership". A global survey. FPP Briefing. Available online at <http://www.forestpeoples.org>

**Garnaut Climate Change Review. 2008.** Final Report. Available online at <http://www.garnautreview.org.au/index.htm>

**Gray, Andrew. 1991.** Between the spice of life and the melting pot: biodiversity conservation and its impact on indigenous peoples. IWGIA Document No. 70. Copenhagen: IWGIA.

**Hill, R. 2004.** Yalanji Warranga Kaban: Yalanji People of the Rainforest Fire Management Book. Cairns: Little Ramsay Press.

**Hitchcock, R.K. 2001.** "Decentralization, Natural Resource Management, and Community-Based Conservation Institutions in Southern Africa". *Indigenous Affairs, Sustainable Development*, 4/2001: 38-49. Copenhagen: IWGIA.



**Indigenous Statement. 2008.** Statement made by the Indigenous Peoples Committee on Conservation during Agenda item 3.1.1 and 3.1.2 at Working Group Meeting on Protected Areas on the Review of the Implementation of the Programme of Work on Protected Areas for the Period 2004-2007 (UNEP/CBD/WG-PA/2/2). Available online at <http://indigenousstatement.blogspot.com/2008/02/unepcbdwgpa22.html>

**IPCC. 2007a.** Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment. Report of the Intergovernmental Panel on Climate Change, ed. S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller. Cambridge, U.K. and New York, N.Y.: Cambridge University Press.

**IPCC. 2007b.** Climate change 2007: Impacts, Adaptation, Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate change, ed. M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson. Cambridge, UK.: Cambridge University Press.

**IPCC. 2007c.** Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, ed. B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer. Cambridge, U.K. and New York, N.Y.: Cambridge University Press.

**IUCN. 1994.** WCC Resolution and Recommendations. Available online at <http://www.iucn.org/resolutions/index.html>

**IUCN. 1996.** WCC Resolution and Recommendations. Available online at <http://www.iucn.org/resolutions/index.html>

**IUCN. 2008.** Indigenous and Traditional Peoples. Available online at [http://www.iucn.org/about/work/programmes/social\\_policy/sp\\_themes/sp\\_themes\\_ip/index.cfm](http://www.iucn.org/about/work/programmes/social_policy/sp_themes/sp_themes_ip/index.cfm)

**IUCN-WWF. 1996.** IUCN-WWF Principles and Guidelines on Indigenous and Traditional Peoples and Protected Areas. Available at <http://www.iucn.org/themes/wcpa/pubs/pdfs/Indig>

**IWGIA. 2008. The Indigenous World 2008.** IWGIA's yearbook. Copenhagen: IWGIA. Available online at <http://www.iwgia.org>

**Joffe, Paul. 2008.** UN Declaration: Achieving Reconciliation and Effective Application in the Canadian Context. Paper prepared for the Continuing Legal Education Society of British Columbia, Aboriginal Law Conference 2008, Vancouver.

**Johannesburg Plan of Implementation. 2002.** Adopted by the World Summit on Sustainable Development in Johannesburg, South Africa. Available online at [http://www.un.org/esa/sustdev/documents/WSSD\\_POI\\_PD/English/POIToc.htm](http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm)

**Kimberley Political Declaration. 2002.** Declaration adopted at the International Indigenous Peoples Summit on Sustainable Development, Khoi-San Territory, Kimberley, South Africa, 20-23 August 2002. Available online at <http://www.iwgia.org/sw217.asp>

**Kyoto Protocol. 1997.** Available online at [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php)

**Laltaika, Eliamani. 2008.** "Climate Change Mitigation & Indigenous Peoples' Welfare: Analysis of the International Legal Regime". Mimeo. Kenya: TAPHGO. Accessible at <http://www.taphgo.org>



**Larsen, Peter Bille and Springer, Jenny. 2008.** Mainstreaming WWF principles on indigenous peoples and conservation in project and programme management. Gland, Switzerland and Washington, D.C.: WWF.

**Lewis, D. 2002.** Slower Than the Eye Can See: Environmental Change in Northern Australia's Cattle Lands, A Case Study from the Victoria River District, Northern Territory. Darwin, Northern Territory: Tropical Savannas CRC. Available online at [http://savanna.ntu.edu.au/publications/landscape\\_change.html](http://savanna.ntu.edu.au/publications/landscape_change.html)

**Lewis, Jerome and John Nelson. 2006.** "Logging in the Congo Basin: What Hope for Indigenous Peoples' Resources and their Environments?" *Indigenous Affairs, Logging and Indigenous Peoples*, 4/06: 8-15. Copenhagen: IWGIA.

**Macchi, Mirjam. 2008.** *Indigenous and Traditional Peoples and Climate Change. Issues Paper.* Gland, Switzerland: IUCN.

**Mugarura, Victor. 2007.** "Aborigines burn the way to climate control". BBC (18.11.2007) at <http://news.bbc.co.uk/2/hi/asia-pacific/6726059.stm>

**Metcalf, Cherie. 2004.** "Indigenous Rights and the Environment: Evolving International Law". 35 *Ottawa L. Rev.* 103, 105 (2003/-2004).

**Nairobi Declaration. 2004.** Declaration of the 2nd African Indigenous Women's Conference, Nairobi. Available online at <http://www.indigenous-info-kenya.org/images/issue%208/nairobi%20declaration%20of%20the%202nd%20african%20indigenous%20women's%20co.pdf>

**Newing, Helen. 2004.** A summary of case study findings on implementation of international commitments on traditional forest related knowledge (tfrk). Available online at <http://www.international-alliance.org/documents/overview-finaledit.pdf>

**Nilsson, Christiana. 2008.** "Climate Change from an Indigenous Perspective: Key issues and Challenges". *Indigenous Affairs, Climate Change and Indigenous Peoples*, 1-2/08: 8-15. Copenhagen: IWGIA.

**Nuttall, Mark. 2008.** "Climate change and the warming politics of autonomy in Greenland". *Indigenous Affairs, Climate Change and Indigenous Peoples*, 1-2/08: 45-51. Copenhagen: IWGIA.

**Orlove, B. 2003.** *How People Name Seasons*, ed. S. Strauss and B. Orlove. Oxford: Berg Publishers.

**Parry, M.L., Canziani, O.F., Palutikof, J.P., van der Linden, P.J. and Hanson, C.E., eds., 2007.** "Cross-chapter case study" in *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* Cambridge, UK: Cambridge University Press.

**Posey, Darrell A., ed. 2000.** *Cultural and Spiritual Values of Biodiversity.* New York, N.Y.: United Nations Environment Program/London: Intermediate Technology Publications.

**Ribis, Nick and Andrea Mascarenhas. 1994.** "Indigenous Peoples after UNCED". *Cultural Survival Quarterly*, Issue 18.1, 1994.

**Rio Declaration. 1992.** Declaration on Environment and Development adopted at the World Conference on Environment and Development, Rio de Janeiro, 1992. Available online at <http://www.unep.org/documents/default.asp?documentid=78>

**Robinson, J.B. and D. Herbert. 2001.** "Integrating climate change and sustainable development", *Int. J. Global Environ.*, 1, 130-149.

**Rose, D. 1996.** *Nourishing Terrains: Australian Aboriginal Views of Landscape and Wilderness.* Canberra: Australian Heritage Commission. Available online at <http://www.ahc.gov.au/publications/generalpubs/nourishing/index.html>

**SCBD. 2003.** Interlinkages between biological diversity and climate change. Advice on the integration of biodiversity considerations into the implementation of the United Nations Framework Convention on Climate Change and its Kyoto protocol. CBD Technical Series No. 10. Montreal: Secretariat of the Convention on Biological Diversity. Available online at <http://www.cbd.int/doc/meetings/tk/emccilc-01/other/emccilc-01-cbd-ts-10-en.pdf>

**SCBD. 2006.** Guidance for Promoting Synergy Among Activities Addressing Biological Diversity, Desertification, Land Degradation and Climate Change. Technical Series No. 25. Montreal: Secretariat of the Convention on Biological Diversity CBD. Available online at <http://www.cbd.int/doc/meetings/tk/emccilc-01/other/emccilc-01-cbd-ts-25-en.pdf>

**Simpson, Tony. 1997.** *Indigenous Heritage and Self-Determination.* IWGIA Document 86. Copenhagen: IWGIA.

**Stavenhagen, Rodolfo. 2003.** Report on Large Scale development. Report of the Special Rapporteur on the situation of human rights and fundamental freedoms of indigenous people to the UN Economic and Social Council. UN Doc. E/CN.4/2003/90 21 January 2003.

**Stavenhagen, Rodolfo. 2004.** *Indigenous Peoples in Comparative Perspective – Problems and Policies.* Background paper for the Human Development Report Office. UNDP.

**Stavenhagen, Rodolfo. 2007.** "Mission to Kenya". Report of the Special Rapporteur on the situation of human rights and fundamental freedoms of indigenous people to the UN Economic and Social Council, Addendum 3. UN Doc. A/HRC/4/32/Add.3 26 February 2007.

**Tauli-Corpus, Victoria and Tamang, Parshuram. 2007.** Oil palm and other commercial tree plantations: Monocropping impacts on indigenous peoples' land tenure and resource management systems and livelihood. Paper prepared for UNPFII Sixth Session. UN Doc. E/C.19/2007/CRP.6. Available online at UNPFII website <http://www.un.org/esa/socdev/unpfii>

**United Nations. 2007.** Declaration on the Rights of Indigenous Peoples. Resolution A/61/L.67, September 2007. Available online at UNPFII Web site <http://www.un.org/esa/socdev/unpfii/en/declaration.html>

**United Nations Convention to Combat Desertification (UNCCD). 1994.** Text of Convention available at <http://www.unccd.int>

**United Nations Forum on Forests (UNFF). 2000.** See Web site at <http://www.un.org/esa/forests>

**United Nations Framework Convention on Climate Change (UNFCCC). 1992.** Text of Convention available at <http://unfccc.int/>

**UN-HABITAT 2005.** *Indigenous peoples' right to adequate housing: A global overview.* Nairobi: United Nations Human Settlements Programme (UN-HABITAT) and Office of the High Commissioner for Human Rights (OHCHR).



**UNHCHR. 2008.** Leaflet No. 10: Indigenous Peoples and the Environment. Available online at <http://www.unhchr.ch/html/racism/indileaflet10.doc>

**United Nations Permanent Forum on Indigenous Issues (UNPFII). 2008.** Report on the Seventh Session (21 April-2 May 2008). UN DOC. E/C.19/2008/13. Available online at <http://www.un.org/esa/socdev/unpfii>

**Valente, Marcela. 2007.** "Environment: Conservation expands in Latin America". Inter Press Service (IPS) online at <http://ipsnews.net/news.asp?idnews=39493>

**Webb, E.K. 1997.** Windows on Meteorology: Australian Perspective. Collingwood: CSIRO Publishing.

**Westra, L. 2008.** Environmental Justice and the Rights of Indigenous Peoples: International and Domestic Legal Perspectives. UK: EarthscanPress.

**Working Group on Article 8J. 2005.** The Revised Phase One and Phase Two of the Composite Report on the Status and Trends Regarding the Knowledge, Innovations and Practices of Indigenous and Local Communities relevant to the Conservation and sustainable use of Biological Diversity. UN Doc. UNEP/CBD/WG8J/4/4 December 2005.

**Working Group on Article 8J. 2007a.** Revision of the Second Phase of the Composite Report on the Status and Trends Regarding the Knowledge, Innovation and Practices of Indigenous Peoples and Local Communities. Report on Threats to the Practice and Transmission of Traditional Knowledge: Africa. UN Doc. UNEP/CBD/WG8J/AG/2/2/Add.1 April 2007.

**Working Group on Article 8J. 2007b.** Revision of the Second Phase of the Composite Report on the Status and Trends Regarding the Knowledge, Innovation and Practices of Indigenous Peoples and Local Communities. Report on Threats to the Practice and Transmission of Traditional Knowledge: Arctic. UN Doc. UNEP/CBD/WG8J/AG/2/2/Add.2 April 2007.

**Working Group on Article 8J. 2007c.** Revision of the Second Phase of the Composite Report on the Status and Trends Regarding the Knowledge, Innovation and Practices of Indigenous Peoples and Local Communities. Report on Threats to the Practice and Transmission of Traditional Knowledge: Asia and Australia. UN Doc. UNEP/CBD/WG8J/AG/2/2/Add.3 April 2007.

**Working Group on Article 8J. 2007d.** Composite Report on the Status and Trends Regarding the Knowledge, Innovations and Practices of Indigenous and Local Communities: Regional Report: Latin America, Central and the Caribbean. UN Doc. UNEP/CBD/WG8J/AG/2/2/Add.4 April 2007.

**Working Group on Article 8J. 2007e.** Composite Report on the Status and Trends Regarding the Knowledge, Innovations and Practices of Indigenous and Local Communities: Regional Report: North America. UN Doc. UNEP/CBD/WG8J/AG/2/2/Add.6 April 2007.

**Working Group on Article 8J. 2007f.** Draft Report of Measures and Mechanisms to Address the Underlying Causes of the Decline of Traditional Knowledge. Element D of the Plan of Action for the Retention of Traditional Knowledge, Innovations and Practices of Indigenous and Local Communities. UN Doc. UNEP/CBD/WG8J/AG/2/4, April 2007.

**Working Group on Article 8J. 2007g.** Revision of the Second Phase of the Composite Report on the Status and Trends Regarding the Knowledge, Innovations and Practices of Indigenous and Local Communities: Latin America, Central and the Caribbean. UN Doc. UNEP/CBD/WG8J/5/INF/6, July 2007.

**Working Group on Article 8J. 2007h.** Report on Research on and Implementation of Mechanisms and Measures to Address the Underlying Causes of the Decline of Traditional Knowledge, Innovations and Practices. UN Doc. UNEP/CBD/WG8J/5/INF/9 July 2007.

**Working Group on Article 8J. 2007i.** Report on Indigenous and Local Communities Highly Vulnerable to Climate Change, inter alia, of the Arctic, Small Island States and High Altitudes, with a focus on causes and solution. UN Doc. UNEP/CBD/WG8J/5/INF/18 July 2007.

**Working Group on Article 8J. 2007j.** Plan of Action for the Retention of Traditional Knowledge –Section D: Research on and implementation of mechanisms and measures to address the underlying causes of the decline of traditional knowledge, innovations and practices. UN Doc. UNEP/CBD/WG8J/5/3/Add.1 September 2007.

**World Bank. 2007.** Clean Energy for Development Investment Framework: Progress Report on the World Bank Group Action Plan. Washington, D.C.: World Bank Group. Available online at [http://siteresources.worldbank.org/DEVCOMMINT/Documentation/21510693/DC2007-0018\(E\)CleanEnergy.pdf](http://siteresources.worldbank.org/DEVCOMMINT/Documentation/21510693/DC2007-0018(E)CleanEnergy.pdf)

**World Commission on Environment and Development. 1987.** Our Common Future. Report of the WCED (Brundtland Report). UN Doc. A/42/427 1987.

**WWF. 1996.** Indigenous Peoples and Conservation: WWF Statement of Principles. Gland, Switzerland, World Wide Fund For Nature. Available online at <http://assets.panda.org>

**WWF. 2004.** Are protected areas working? An analysis of forest protected areas. Gland, Switzerland: WWF. Available online at <http://assets.panda.org>

**WWF. 2008.** Indigenous Peoples and Conservation: Statement of Principles. Principles for partnership between WWF and indigenous peoples' organizations in conserving biodiversity within indigenous peoples' lands and territories, and in promoting sustainable use of natural resources. Gland, Switzerland: WWF. Accessible at website: <http://assets.panda.org>

**WWF - International. 2008.** Indigenous Peoples and Conservation: WWF Statement of Principles. Available online at <http://assets.panda.org>.

**WWF-International and Terralingua. 2000.** Indigenous and Traditional Peoples of the World and Ecoregion Conservation: An Integrated Approach to Conserving the World's Biological and Cultural Diversity. Switzerland: WWF-International and Terralingua.

