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**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 BIODIVERSITY**

Note by the Executive Secretary

The Executive Secretary is circulating herewith the full text of the first phase 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 biodiversity, prepared by a consultant in accordance with decision VI/10 of the Conference of the Parties and annex I thereto. The executive summary and recommendations arising out of the first phase of the composite report are before the Ad Hoc Working Group as a separate working document (UNEP/CBD/WG8J/4). The document is being reproduced in the form and language in which it was received by the Secretariat.

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Composite Report: Phase I

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 Biodiversity

August 2003

Prepared for the Secretariat of the Convention on Biological Diversity

Compiled by UNEP-WCMC

Project number: 1248



The **UNEP World Conservation Monitoring Centre** (UNEP-WCMC) is the biodiversity assessment and policy implementation arm of the United Nations Environment Programme, the world's foremost intergovernmental environmental organization. UNEP-WCMC aims to help decision-makers recognize the value of biodiversity to people everywhere, and to apply this knowledge in all that they do. The Centre's challenge is to transform complex data into policy-relevant information, to build tools and systems for analysis and integration of these data, and to support the needs of nations and the international community as they engage in joint programmes of action.

El **PNUMA Centro de Monitoreo de la Conservación Mundial** (UNEP-WCMC) es el brazo del Programa de las Naciones Unidas del Medio Ambiente, la principal organización intergubernamental ambiental en el mundo, encargado de evaluar la biodiversidad y la implementación de políticas ambientales. El UNEP-WCMC aspira a ayudar a tomadores de decisiones a reconocer el valor de la biodiversidad para la gente de todo el mundo, y a aplicar este conocimiento en todo lo que hacen. El desafío del Centro es transformar datos complejos en información relevante para las formulación de políticas de gestión, desarrollar instrumentos y sistemas para el análisis y la integración de esos datos, y apoyar las necesidades de las naciones y de la comunidad internacional en general en sus esfuerzos por desarrollar programas de acción conjunta.

Le **PNUE Centre de Surveillance Continue pour la Conservation de la Nature Mondiale** (UNEP-WCMC) est l'agence chargée de l'évaluation de la diversité biologique et de la mise en oeuvre des directives du Programme des Nations Unies pour l'Environnement, la principale organisation intergouvernementale environnementale au monde. Le Centre aspire à aider les gouvernements à reconnaître l'importance de la diversité biologique pour les êtres humains du monde entier et à appliquer cette connaissance à toutes leurs activités. Le défi du Centre consiste à transformer et simplifier des données complexes en informations pertinentes afin de trouver des outils et d'établir des systèmes permettant leur intégration et leur analyse dans la politique de tous les jours. Le Centre vise à appuyer les besoins des nations et de la communauté internationale dans leurs activités et programmes communs environnementaux.

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1 Acknowledgements

This Composite Report prepared on behalf of the CBD Secretariat by the UNEP World Conservation Monitoring Centre (UNEP-WCMC). It was compiled and edited by Dr. Mark Elliott and Harriet Gillett. Alice Davies compiled Appendices 1 and 2. The project was managed by Harriet Gillett.

Dr. Gerardo Fragoso is thanked for his support as project supervisor.

Henrietta Marie from the CBD Secretariat is thanked for her guidance and support.

2 Background to Report

The proposal to produce this Composite Report was developed by UNEP-WCMC, in response to the CBD Notification SCBD/SEL/HM of 27 June 2002 *Hiring of a consultant team for the preparation of a Composite Report on the Status and Trends Regarding the Knowledge, Innovations and Practices of Indigenous and Local Communities Embodying Traditional Lifestyles Relevant to the Conservation and Sustainable Use of Biological Diversity*.

This Composite report was prepared as an eight week desk study, undertaken from July-August 2003 at UNEP-WCMC in Cambridge, UK, for discussion at the Third *Ad Hoc* Open-Ended Inter-Sessional Working Group on Article 8(j) and related provisions of the Convention on Biological Diversity.

It is based on information provided in the Regional Reports, produced between March-June 2003 in response to the same notification, and represents the Phase 1 report referred to in the CBD notification.

3 Abbreviations

Abbreviations used in this report.

CBD	Convention on Biological Diversity
CGRFA	Crop genetic resources for food and agriculture
TEK	Traditional ecological knowledge
TK	Traditional knowledge

4 Information sources

4.1 Regional reports

This *Composite Report on the status and trends concerning the knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biological diversity* is based on regional reports compiled by consultants under contract to the Secretariat of the Convention on Biological Diversity.

The regional reports were based on desk studies, completed within a stringent timeframe (16 weeks). The composite report was completed in seven weeks, based largely on information provided in the regional reports. Given these conditions, the reports should only be considered to provide a preliminary overview of the subject, rather than the comprehensive view originally envisaged by the CBD in Decision VI/10. The regional reports consistently confirm this, stating that the scope and resources to compile the reports were insufficient to meet its objectives. The need for further targeted research, and the considerations which thus arise, are discussed in a later section of this report.

The regional reports are presented to the *Third Inter-Sessional Ad Hoc Working Group on Article 8j* of the CBD as the following information documents:

- UNEP/CBD/WG8J/INF/3 **Africa** - Regional report on the status and trends concerning the knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biological diversity
- UNEP/CBD/WG8J/INF/4 **Australia, Asia and the Middle East** - Regional report on the status and trends concerning the knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biological diversity
- UNEP/CBD/WG8J/INF/5 **Caribbean** - Regional report on the status and trends concerning the knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biological diversity
- UNEP/CBD/WG8J/INF/6 **Central America** - Regional report on the status and trends concerning the knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biological diversity
- UNEP/CBD/WG8J/INF/7 **Europe** - Regional report on the status and trends concerning the knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biological diversity
- UNEP/CBD/WG8J/INF/8 **North America** - Regional report on the status and trends concerning the knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biological diversity
- UNEP/CBD/WG8J/INF/9 **Pacific** - Regional report on the status and trends concerning the knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biological diversity
- UNEP/CBD/WG8J/INF/10 **South America** - Regional report on the status and trends concerning the knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biological diversity

In addition to the Regional Reports, three other texts are referred to in the Composite report. The full references are given here:

Ellen, R & Holly Harris (2000), 'Introduction', to R. Ellen, P. Parkes & A. Bicker (eds), *Indigenous Environmental Knowledge and its Transformations: critical Anthropological Perspectives*. Studies in Environmental Anthropology, Harwood Academic Publishers, Amsterdam, pp.1-34

Posey, Darrell A. 1996. *Provisions and mechanisms of the convention on biological diversity for access to traditional technologies and benefit sharing for indigenous and local communities embodying traditional lifestyles*. Oxford Centre for Environment, Ethics and Society Research Papers 6.

WHO, 2000: *Promoting the Role of Traditional Medicine in Health Systems: A Strategy for the African Region 2001-2010*, WHO, 2000, (AFR/RC50/)

Sources of information for regional reports

Second National Reports by Parties to the Secretariat of the Convention on Biological Diversity were to be a principal source of information for the compilation of the regional reports providing the basis for this Composite Report. However, of the 187 countries and economic integrated organizations which are Party to the CBD, only 94 had submitted their Second National Reports at the time of drafting this report. Most of these reports (with only one exception) give some information on issues relating to Article 8(j), even if this is only to say that such issues are not relevant to their national context. The **Caribbean** UNEP/CBD/WG8J/INF/5 report highlights the difficulties faced in its compilation, owing to the lack of information provided by Parties. Only 5 states of that region contributed Second National Reports, which were intended to be the primary sources for these regional reports.

Of those focal points which did respond, however, many responses were little more than generalisations and statements of intent. Geopolitical boundaries, too, prevent much pertinent data from being included. Autonomous regions, for example, may be excluded from the national report, resulting in an incomplete picture being produced.

Recommendation 1

Thematic reports on Article 8(j) should be compiled by Parties, based on a questionnaire produced by the Secretariat.

4.2 Other sources

Although a large body of written evidence other than that contained within national focal points' submissions was used in compiling the regional reports, there are many reasons for it to be considered unsatisfactory. **South America** UNEP/CBD/WG8J/INF/10 notes that "despite the importance of the indigenous presence" in South America, "there is no corresponding volume of studies and information". Even the most extensive literature, as pointed out by McGowan (19, quoted in **Pacific** UNEP/CBD/WG8J/INF/9) should not be relied upon excessively. All too often, such literature (emerging from a Western scientific tradition) "does little justice to traditional knowledge and to the culture and traditions out of which that knowledge developed". This, and other issues concerning documentation, will be discussed further below.

Recommendation 2

Take steps to ensure parity between the submissions of indigenous peoples and, for example, Parties through National Focal Points.

Recommendation 3

Establish mechanisms to encourage representatives of indigenous groups and local communities to present information to the CBD

Recommendation 4

Develop mechanisms to ensure input from overseas territories and autonomous or semi-autonomous regions

Recommendation 5

Develop mechanisms to ensure input from groups within states which are not Party to the CBD

Recommendation 6

Establish a clearing house mechanism relating to Article 8(j).

5 Crises of definition

“it is impossible to use ‘indigenous’ in a morally neutral or apolitical way.”

Ellen & Harris, 2000:3

5.1 What is traditional knowledge?

In presenting the combined regional reports, the first question which must be addressed, and which is raised in all the regional reports is: what is traditional, indigenous or local knowledge? Alongside this, goes the question “who are indigenous people?” Traditional knowledge (TK) is most frequently (and problematically) regarded as knowledge held or mobilized by “traditional, local or indigenous” communities. This causes its own problems, for not all indigenous peoples are traditional knowledge holders, and not all traditional knowledge holders are indigenous peoples.

“As elsewhere in many Latin American countries and in the whole of the Caribbean, in Central America traditional knowledge is a concept not only associated to the indigenous peoples who inhabited this territory before the arrival of the Europeans, but also to the Afro-Latin-Americans who developed their own culture within the region.”

South America UNEP/CBD/WG8J/INF/10

The regional report on **North America** UNEP/CBD/WG8J/INF/8, citing Paci *et al* (2000) warns that not all members of a given community are traditional knowledge holders. The emphasis is upon the potential variation and adaptation of traditional knowledge, but this just as effectively demonstrates the difficulty of assessing retention of traditional knowledge, distribution of which is “patchy at best”.

Each of the regional reports illustrates dominant attitudes to TK which are to some extent unique to the region in question. Ellen and Harris (2000:6) highlight the peculiar attitude towards TK in western, industrialised countries:

“The West often assumes that it has no IK that is relevant, in the sense of ‘folk’ knowledge, that it once existed but has now disappeared, and that somehow science and technology have become its indigenous knowledge.”

Europe and Russia UNEP/CBD/WG8J/INF/7 draws attention to an apparent tendency by many European countries, according to comments in their National reports, to sweep traditional knowledge under the carpet. These reports not only suggest the absence of “indigenous or local communities” within the meaning of Article 8(j), but downplay the existence of “traditional knowledge” in general within their national context.

However, these comments conflict with the important examples of the retention of traditional knowledge that are provided across the region, from the use of seaweed as fertiliser in **Ireland** to coppicing in the **UK** and traditional forms of “sea tenure” in **Western European** fisheries. Moreover, such examples belie the notion that “traditional” practices in the West have become integrated into “scientific” knowledge. Much of this knowledge is under threat, and initiatives are being pursued to sustain it. The danger, evident in the responses of National Focal Points in **Europe**, is that such initiatives are not considered to be of high priority within the context of 8(j), as they should be, and thus receive insufficient attention.

Ellen and Harris (2000:6) challenge assertions that traditional knowledge is of less relevance in developed nations:

“But western folk knowledge (non-professional, experimental, uncodified, ad hoc, often orally transmitted) is arguably just as important as it ever has been; just different, informed by science where appropriate, and located in different contexts (domestic horticulture, dog-breeding, bee-keeping etc.).”

Similarly, Vogl, in **Europe** UNEP/CBD/WG8J/3/INF/7 recognises the importance of traditional knowledge in developed countries:

“TK in industrialised countries needs special attention and special policies. It is well recognised that many countries of Latin America, Asia, Africa, Oceania and countries of the North with ethnic indigenous groups have TK. But especially European countries ignore that many professions, that deal with biodiversity over generations, hold highly valuable TK for the conservation of biodiversity.”

In the **Caribbean** UNEP/CBD/WG8J/3/INF/5 the problems caused in the compilation of the report by the lack of clear definition of traditional knowledge and related issues are highlighted. For the **Middle East (Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4) there is little discussion of the importance of traditional knowledge or of how such categories are perceived (although both **Lebanon** and **Syria** claim that traditional knowledge is a high priority for their governments, and Syria has ratified ILO 107, the *Indigenous and Tribal Peoples Convention*, 1957).

5.2 Who are traditional knowledge holders?

In former settler colonies, such as in North America, New Zealand, Australia and South America in particular, the definition of “traditional knowledge” or indeed “indigenous people” appears less problematic. Both the **USA** and **Canada** legally recognise aboriginal and indigenous peoples, and **North America** UNEP/CBD/WG8J/INF/8 deals principally with knowledge ascribed to such groups. The reports which cover **Australia** and **New Zealand**, similarly, focus on knowledge held by the indigenous Aboriginal and Maori peoples:

“Settler peoples in Australia do not claim to be holders of traditional and indigenous knowledge systems, and therefore the Australian National Reports present a distinctly different situation from that found in the National Reports from the Asian region where national majorities can claim some legitimacy as traditional or indigenous knowledge holders.”

Australia, Asia and the Middle East UNEP/CBD/WG8J/INF/4

In the report on **South America** UNEP/CBD/WG8J/INF/10 too, traditional knowledge is addressed principally in terms of knowledge held by indigenous peoples. However, in **Central America** UNEP/CBD/WG8J/INF/6, traditional knowledge is *not* only associated with indigenous peoples, but also African American groups such as the Garifunas, who developed their own culture within the region following European contact.

The categories of “indigenous” and “traditional knowledge”, however, tend to be most controversial in **Asia** and **Africa**. **Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4 (citing Ferrari) reports the attitudes of **Southeast Asian** countries as well as **China** and **India**, who

“have argued that the term cannot properly be applied to their countries given that their majority populations can be considered 'indigenous' in that sense.”

The **Republic of Korea**, for example, does not recognise any groups as “indigenous people”, and considers the interests of no group legally differentiated from those of the nation state (**Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4). None the less, the regional report concentrates on the

knowledge and practices of particular marginalised or minority groups in each country, variously described as “indigenous cultural communities” in the **Philippines**, “hill tribes” in **Thailand**, “isolated and alien peoples” in **Indonesia**, “aborigines” of **Malaysia** and “tribals” or *adivasi* in **India**.

Like **Asia**, many **African** nations contest the use of these troublesome categories. Krugmann (**Africa** UNEP/CBD/WG8J/INF/3) explores the complexities of “indigeneity” in **Namibia**, ascribed as it is to successive migrants, from San to Bantu, who had settled in the area prior to European contact. In Zimbabwe, most strikingly, “indigenous” refers to Africans, or 98% of the population, while the remaining 2% are “Whites and Coloureds” (Zimbabwe n.d. 8 in **Africa** UNEP/CBD/WG8J/INF/3).

Ambiguity of definition does not merely make cross-cultural or global comparisons within the context of this report difficult. The example of **European** attitudes to “traditional knowledge” shows that certain knowledge and practices which might fall within the scope of Article 8(j) are excluded from consideration because the text of the article has been interpreted in a particularly narrow way. Examples from **Asia** and **Africa** show that “indigenous” can be more than a vague and unworkable category – it can be actually divisive, depending as it does *both* on “self-identification” *and* official recognition.

5.3 The idea of “indigenous”

Posey (1996:7) defines indigenous peoples as holders of traditional knowledge, and “embodying traditional lifestyles”. This definition does serve to an extent. However, it is somewhat problematic and tautologous (Ellen and Harris 2000:3). It also excludes the substantial numbers of self-identified indigenous people who live in urban, or “non-traditional” areas, as do almost half of **Russia’s** indigenous population (797,300 of 1,646,500 according to Russian Federation, in **Europe** UNEP/CBD/WG8J/INF/7). As has already been suggested, however, indigenous people do not always hold traditional knowledge or – and this must be one of the key indicators for knowledge retention, as will be discussed below – pursue traditional lifestyles.

Definitions of “indigenous” emphasise the *marginal* and *disadvantaged* status of indigenous peoples (rather than their “primordial” claims to territory). Frequently indigenous populations are minorities within the nation state (although practical and political difference between “indigenous” and “minority” status is demonstrated in the context of, for example, the Saami in **Norway**).

The IWGIA (International Working Group for Indigenous Affairs) emphasises the “disadvantaged” status of indigenous people alongside their primordality, being descended from the inhabitants of a country *prior to* colonial settlement or state formation. This definition explicitly differentiates certain groups “culturally” from the rest of the population. That this usually also means distinction from the majority of the population compounds the marginalised, disadvantaged status of indigenous peoples. Primordality is certainly a problem for many indigenous peoples. The San, for example, are from many perspectives the “indigenous” inhabitants of - or, perhaps, the “first” to arrive in – their ancestral lands in **Namibia**. Other groups, however, have also been resident in the same or adjacent territories for centuries prior to the colonial encounter and subsequent independence. Appendix 1 provides data on indigenous populations, drawn from the regional reports. Though incomplete, the table gives a sense as to the size of indigenous populations in particular countries and the relative importance of indigenous rights and traditional knowledge.

Equating traditional knowledge with marginalised, disadvantaged and culturally distinctive indigenous groups is a wholly valid connection. The necessity for a report such as this, and for the implementation of Article 8(j) and similar programmes, is that traditional knowledge is often seriously threatened. Where traditional knowledge holders are not marginalised, threatened and oppressed, traditional knowledge is less vulnerable. However, a situation in which indigenous people, their knowledge and lifestyles are secure can, perversely, decrease the likelihood that traditional knowledge, and the measures in place to protect, promote and develop it, can be documented and evaluated in reports such as this. Inuit account for 87% of the population of **Greenland**, which enjoys some degree of autonomy from the **Denmark**. As a result (Burgess 1999, in **Europe and Russia** UNEP/CBD/WG8J/INF/7:9), knowledge and practice which elsewhere might be termed “traditional” or “indigenous” are not known as such in Greenland. As in many European contexts, some of this knowledge can “slip through the cracks”.

Certain striking attitudes towards indigenous people, or traditional or local communities, and therefore of traditional knowledge, can be broken down as follows.

Europe and Russia UNEP/CBD/WG8J/INF/7 suggests that the situation in **Europe** is fundamentally different from other regions covered by the Composite Report. By and large, “traditional” knowledge is not regarded as relevant to a contemporary indigenous or cultural group, but as knowledge relevant to the *past*, and therefore implicitly obsolete, and in need of “preserving”. Because traditional knowledge holders do not fit into the image of them put forward in discussions of Article 8(j), their knowledge and practices are not regarded as relevant to the implementation of 8(j).

Australia, Asia and the Middle East UNEP/CBD/WG8J/INF/4 draws attention to the problem of persecution and lack of recognition of indigenous peoples, and other traditional knowledge holders, in **Asia**.

In the **Caribbean (South America)** UNEP/CBD/WG8J/INF/10, the indigenous people have been mostly wiped out, and account for less than 20,000 (0.05%) of the total population of 40,000,000. Yet here in particular – though also throughout **Latin America** – groups such as Afro-Americans, or Mestizo, Mulatto, Creole and Maroon peoples “are also communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity.... Today many of these groups have developed customary practices and cultural specificities, and have brought wide arrays of knowledge on natural resources.”

Recommendation 7

Working definitions of “indigenous” and “traditional knowledge” should be agreed.

Recommendation 8

The CBD should define conditions for traditional knowledge in the context of 8(j) to be considered “in use”.

6 State of retention of traditional biodiversity-related knowledge: categories

6.1 Knowledge categories

“The traditional knowledge is a really really valuable thing, because it's about the...it's knowledge about everything. Of food and material and storytelling, symbols, you name it, it's everything.”

Nilaas Somby, Sami, interviewed by Tero Mustonen, 2002

In general, the categories suggested within the notification, under which to consider the state of retention of TK did not prove to be the most useful, although they have been followed in each of the regional reports.

In this Composite Report, information on the state of retention of traditional knowledge is therefore presented according to headings and issues identified in the regional reports.

The difficulty in using ecosystem categories in particular was highlighted in most reports: TK, it is frequently argued, is a holistic system and does not fit in to such western scientific boxes. In a WIPO report on traditional knowledge in West Africa, that which we know as “traditional knowledge” and which is currently being exploited in the name of the conservation of the world’s biodiversity is described as a wholly more complex entity:

“[it] comprises both aesthetic (the arts) and useful (the technological, medicinal and scientific) elements, as well as tangible (such as medicinal plants) and non-tangible (such as medicinal knowledge) components.”

Africa UNEP/CBD/WG8J/INF/3

Similarly, knowledge of traditional medicine can often overlap with PGRFA or animals and microorganisms. Traditional knowledge has been characterised as holistic, and resistant to categorisation according to western scientific criteria. The implications of this for an assessment of the state of retention of traditional knowledge are self-evident: predominantly being problems of cultural translation. The implications for continued efforts in preserving and promoting traditional knowledge, however, and using it to assist our sustainable use of biodiversity, however, are rather more uncertain.

TK can be codified and categorised in very different ways. What Western science defines as ‘traditional ecological knowledge’ is, for example, distinguished by the Guanano in **Colombia** as ‘sacred’ knowledge (held by a shaman), ‘specialised’ knowledge, ‘women’s knowledge’ and ‘cross-sectional knowledge’ (produced by exchanges between neighbouring groups) (**South America** UNEP/CBD/WG8J/INF/10). Two lessons can be drawn from this example. Firstly, much TK is conceived of by its creators according to its *holders* – the people who use it – rather than its *subject matter* (what it is used for). This emphasises as well as any example the importance of the *people* involved, and highlights the divisive tension between ‘conservation’ and ‘development’. The second critical point is that the way knowledge and related practices are conceptualised by those who use them, and thus the way they are *managed* and *implemented*, can be very different to the manner in which NGOs and governments would proceed. The practical consequence is that any measure and initiative to protect, promote and facilitate the use of traditional knowledge will stand a much greater chance of success if it is designed and presented in terms which are meaningful to TK holders themselves.

Further examples illustrate the ‘alternative’ categories by which knowledge of the environment and natural resource use is conceived of and applied. The Achuar of the **Ecuadorian** Amazon have developed a complex taxonomic system and typologies of soil and landscape. They distinguish between five significant categories: the plains, the spreading plains of the Pastaza River, the plains and partly marshy recent alluvial terraces, the non-alluvial valleys and the hills (**South America** UNEP/CBD/WG8J/INF/10). Many indigenous groups have knowledge systems linking together all aspects of the environment with cosmology and religion. The environmental knowledge of the Fulani in **West Africa** transcends technical notions and carrying capacity and links ecology with cosmology and religious values. Land and its products are carefully utilised as a source of food, pasture and medicine to cure humans or animals from a range of diseases. Prayers for rain (*salati el istisga*) are often administered during drought, and it is a widespread view that any misuse of the trees, water and grass would induce droughts and epidemics, and alienate human beings from the gifts of nature (**Africa** UNEP/CBD/WG8J/INF/3). This image of a holistic system of knowledge is emphasised in the case of **South America** UNEP/CBD/WG8J/INF/10, which calls for a reevaluation of development and conservation approaches according to appropriate traditional concepts and categories. The example of the multifarious uses to which the corn plant is used show how our own categories are incompatible with those ‘on the ground’:

“All parts of the corn plant are used. The fruit is used for food, fresh leaves for wrapping and for forage, and the cane and dry leaves for forage and fuel. The plant is also used as medicine. Fresh leaves are used to cure wound, the cooked grains are given for malnutrition, and the hair is used as a diuretic.”

South America UNEP/CBD/WG8J/INF/10

It is necessary, according to the report, “to understand the relationship between indigenous culture and nature in order to understand their bond with nature.” Traditional knowledge is in fact a *part* of a complex, interwoven system that has been maintained for centuries. Such knowledge and practices ‘cannot be fragmented from everything that gives them sense and continuity’.”

6.2 The global scale

It is not possible to generalise as to the state of retention of traditional biodiversity-related knowledge on a global scale. Even within regions, and further down at the level of nation states and even within indigenous groups, there is often a high degree of variation. In **North America**, for example,

“Indigenous knowledge, innovation and practice in North America are simultaneously extinct, threatened, in decline, in recovery and thriving.”

North America UNEP/CBD/WG8J/3/INF/8

However, there can be no doubt that traditional knowledge faces a host of threats, from many different corners, and every region covered under this report produced examples of traditional knowledge having either disappeared, or at the risk of disappearing.

In **Niue**, for example, the government recognises a decline in traditional knowledge especially amongst young people (**Pacific** UNEP/CBD/WG8J/3/INF/9). This trend is echoed by Saami (**Europe and Russia** UNEP/CBD/WG8J/3/INF/7) and Maori elders (**Pacific** UNEP/CBD/WG8J/3/INF/9), as well as those of North American indigenous communities (**North America** UNEP/CBD/WG8J/3/INF/8).

The general picture in **Africa**, too seems to be that traditional knowledge is disappearing rapidly, and the damage done to the region’s rich biodiversity is widely linked with this (**Africa** UNEP/CBD/WG8J/3/INF/3). Systems of agriculture based on traditional knowledge, for example, are being gradually eroded, largely due to the adoption of “modern” farming methods and losing sight of the value of traditional knowledge and agrobiodiversity. Responding to international market forces, however, new high-yield hybrids, and exotic species have also been introduced, and commercial monocropping is having a disastrous impact on both biodiversity and the associated traditional knowledge and practices.

The greatest threats to traditional knowledge, raised in each regional report, are the loss of rights to land, and the decline in use of traditional languages. These issues are to be explored at length in Phase 2 of the composite report, and it is recommended to the Working Group on Article 8(j) that this urgent and massive task be begun as soon as possible, and guaranteed sufficient resources with which to meet its objectives.

Traditional knowledge continues to be the subject of much ridicule, from sceptics in government and conservation alike. This is a problem that is highlighted particularly in **Africa**, but lack of recognition of the special status of indigenous people and of the *value* of their knowledge is responsible for the rapid destruction of traditional lifestyles.

In **Asia (Australia, Asia and the Middle East** UNEP/CBD/WG8J/3/INF/4), the outstanding examples of encouraging the use of traditional knowledge relevant to the conservation and sustainable use of biodiversity are to be found in **China** and **India**. This is true particularly of traditional medicines and subsistence agriculture.

Europe is generally perceived as lacking in traditional knowledge which has not been integrated into “modern” systems of knowledge and practice. There are nonetheless many examples of traditional practices of landscape management, pastoral use and agriculture, which are proven to sustain a much greater level of biodiversity than the destructive intensive farming and industry which appears to predominate in the region. These practices, mostly limited to rural communities (variously considered more “traditional” or less “developed”) are in danger, as the communities themselves are facing disintegration (**Pacific** UNEP/CBD/WG8J/INF/7).

6.3 “Traditional” prohibitions and protected areas

One area of traditional practice which potentially enables the sustainable use, or conservation, of biodiversity is that of the imposition of traditional prohibitions, “fallow periods” and taboos. In many cultures, in most regions, traditional restrictions – which may or may not be accompanied by traditional sanctions – have the effect of restricting or prohibiting access to resources. Examples of such restrictions

include short- or long-term temporary prohibitions on certain species, such as Maori *rahui* in **New Zealand (Pacific UNEP/CBD/WG8J/INF/9)**. A similar (evidently related) concept in the **Cook Islands** is *ra'ui*, whereby chiefs imposed a ban on “fishing grounds and species they deemed to be threatened” (**Pacific UNEP/CBD/WG8J/INF/9**). Temporary restrictions can be expressed simply as “fallow periods”. In Fiji, farmers have scattered plots, (*teitei*), according to the type of land available and the quality of the soil. The crops which have the highest food value and which take the most from the soil are planted on the newly created areas. The lesser crops follow as the soil becomes less fertile until the time comes, after several seasons, when the land is left fallow to rest (**Pacific UNEP/CBD/WG8J/INF/9**).

Also in the Pacific, Solomon distinguishes between two forms of temporary restriction in **Niue**: *fono*, and usually longer term (sometimes permanent) restrictions known as *tapu* (Solomon:39). Often such *tapu* are imposed for “spiritual or sacred reasons”, and a sacred dimension frequently underpins these and other facets of traditional management.

Beyond the Pacific, throughout **Asia, North and South America and Africa**, certain species or certain areas are set apart from everyday use, or exploitation proscribed altogether, with the effect of preserving the local biodiversity intact. It has been proven that such traditions can be used in order to protect biodiversity, *while remaining sympathetic to local needs*, thus enhancing effectiveness (an incentive to participation).

6.4 Sacred sites

In **Africa and South America** there are numerous examples of sacred areas – most frequently forests or water bodies (lakes or rivers), access to which is restricted, or completely prohibited. **Africa UNEP/CBD/WG8J/INF/3** refers to the documentation of prohibitions and taboos surrounding “sacred” or “fetish” forests in numerous African countries, where the felling of trees is forbidden, and often ordinary people are forbidden from entering. Here, too, certain species are said to have certain divine or spiritual association, and thus revered, or avoided as malevolent.

Sacred sites are a key issue in all the regions covered: be they **Saami** archaeological sites, sacred groves in **Cameroon**, sacred mountains in **North America**, Aboriginal sites of cultural significance in **Australia**, cemeteries and cremation grounds in **Laos**, or Kichwa sacred rivers in **Ecuador**. Prohibitions and restrictions on access and exploitation may be permanent or temporary; long- or short-term, and may or may not be explicitly *intended* to conserve or manage the use of biodiversity. Two things are clear, however, from the global survey presented in this report:

Firstly, in almost every region, these traditional taboos are under threat. In Laos, community-managed sacred forests established with government sanction continue to be plundered by illegal logging operations (**Australia, Asia and the Middle East UNEP/CBD/WG8J/INF/4**). In **Niue**, *fono* and *tapu* are in decline “due to lack of awareness amongst youth, pressure to clear land and harvest resources, and poorly defined boundaries” (**Pacific UNEP/CBD/WG8J/INF/9**). In **Burundi** and **Zimbabwe**, sacred forests are less respected due in part to increased pressure on land as populations grow, coupled with a breakdown of traditional beliefs and customs.

This global trend is not only a concern because fragile ecosystems may be under threat, however. The loss of the existing balanced relationship between people and “their” environment is evidence of a more general cultural change. As has been said in regard to land rights and language retention, it is within more general (not simply “ecological” as western science defines it) traditions that the functions of these practices lie, and it is towards these that more efforts must be directed.

Secondly, there is evidence that the integration of “traditional” and “modern” or “western” systems of environmental protection do work. In the **Cook Islands**, a *ra'ui* banning exploitation of certain fish was supported by the government. It allowed the community to manage their resources without further draining government finances, and acted as an incentive for future involvement (**Pacific UNEP/CBD/WG8J/INF/9**).

In **Senegal**, three national parks have been established on sacred forests, providing an extra degree of legal protection (**Africa UNEP/CBD/WG8J/INF/3**). In **New Zealand**, Solomon describes two indigenous

conservation areas, managed by Maori communities according to their own principles (**Pacific** UNEP/CBD/WG8J/INF/9).

There are two considerations, however, to be borne in mind while recommending that such examples be replicated in other situations. Firstly, all contexts are different – article 8(j) is not simply dealing with traditional knowledge, but with traditional knowledge *holders* – any initiative, and particularly those involving legislation, must be fully sensitive to the feelings, needs, wants and expectations of the traditional, local or indigenous communities concerned. Given the profound disadvantages experienced by many indigenous peoples who have found their homes, livelihoods or culturally purposeful sites swallowed up by national parks, any incorporation of such sites into protected areas must be done with the full consultation, fully informed consent and subsequently the full cooperation of the indigenous community in question.

Furthermore, however – as cases such as that of the Laotian sacred forest protected areas show – such prohibitions, even when backed up by Government sanction and legislation, often fail because of lack of *enforcement*. Governments can provide considerable assistance, but this research has shown that they can just as easily make a bad situation worse, through intervention or through inactivity. Also, government support is not always feasible, particularly in developing nations lacking the necessary resources. Alternatives need to be found.

6.5 Traditional Medicinal Knowledge

Traditional Medicinal knowledge is one area of traditional knowledge which appears to be enjoying a healthy state of retention throughout the regions covered. Numerous sources (e.g. Zhang 2000) attest both to the continued practice of traditional medicine in developing countries and renewed, or new growth in the use of such traditional products in industrialised countries. Traditional medicine remains popular in **Africa** and **South America** because it is cheap, and western medicine is often less accessible:

“The major reason though for the probable ongoing stability of traditional medicinal knowledge is that it is likely to remain in constant use by the majority of the population. The World Health Organisation stated in 2000 that: “African Member States are aware of the fact that about 80% of the population living in the African Region depend on traditional medicine for their health care needs,”

(WHO 2000).

The holders of traditional medicinal knowledge differ dramatically within different indigenous communities. Different categories of knowledge, pertaining to different kinds of ailments, may be the specialities of different groups or individuals within a community. Some knowledge may be secret, treated as a family ‘heirloom’, the province of women, or shared by everyone. Studies by Geissler et al, and Cocks and Dold (**Africa** UNEP/CBD/WG8J/INF3) draw attention to the wide distribution of the preparation and application of traditional herbal medicine, highlighting the prevalence of self-medication, which is often missed by ethnographic studies:

“In some cases all members of the community may know how to treat a wide range of common diseases and only seek the advice of a traditional healer for advice on specific diseases when their own treatments have failed.”

Africa UNEP/CBD/WG8J/INF/3

However, it is unclear to what extent the popularity of this knowledge, and the large (and expanding) market for traditional medicinal products can be seen as conducive toward the aims of Article 8(j). In fact, many sources have commented on the damage that harvesters of traditional medicinal products are causing to biodiversity, where the product is collected from the wild. The popular examples of rhino horn and tiger flesh in traditional remedies and potions are of course well known. The trade in faunal products in other parts of the world, however is large and increasing:

*“In any case, in all the **Amazonian** countries there is an increasing trade of faunal products through the popular markets for medicines and amulets. This derives from an increased popularity of herbal medicine and zootherapy which have become part of the urban popular medicine, as alternative models to the official medicine.*

South America UNEP/CBD/WG8J/INF/10

/...

The popularity of traditional medicine in urban centres around the world is revitalising traditional knowledge, and increasing its profile, adding pressure on wild collected resources. However, commercialisation, and changing technologies of harvesting and production, such as the development of commercial cultivation of Devil's Claw *Harpagophytum* spp. in **Namibia** and **South Africa**, can also have a detrimental impact on both biodiversity and local communities, unless the process is sensitively managed (Krugmann in **Africa** UNEP/CBD/WG8J/INF/3).

The apparently “damaging” aspects of traditional knowledge in general will be discussed further below.

7 State of retention of traditional biodiversity-related knowledge: the need for a change in perspectives

7.1 Problems of romanticizing IK

TK excites a range of impassioned responses. Ellen & Harris (2000) refer, as do numerous other reports, to the tendency among academics, NGOs, Indigenous Rights organisations, journalists and some conservationists, to romanticise indigenous people. In particular, after the definition of indigenous people offered by Posey (1997:6, see above), indigenous people are characterised by their traditional knowledge and practices, and both are “close to nature” or “close to the soil”. Indigenous peoples’ activists claim a relationship of intimacy, reciprocity and respect with their natural environment, which involves their entire culture and lifestyle, embracing what Western conservationists are increasingly accepting as “traditional ecological knowledge” (TEK) within a holistic system. Such claims – to a special degree of expertise, and a traditional right (based on generations of experience) to care for and manage their own territories, are the basis of much of the activity of Indigenous rights activists, and form the bedrock of the work of the CBD in relation to Article 8(j).

Ellen and Harris, acknowledging as do many the vital importance of traditional knowledge in any “pragmatic development strategy”, nonetheless warn of the damages of an over-romanticised view of TK, and indigenous peoples:

“most of us will also accept that the claims made for the environmental wisdom of native peoples have sometimes been misjudged and naïve, replacing denial [of its efficacy] with effusive blanket endorsement and presenting an ‘ecological Eden’ to counter some European or other exemplary ‘world we have lost’”.

Ellen & Harris 2000:1

This romantic vision may very well be true to specific ‘indigenous’ conceptions of the relationship between humanity and nature. However, it does not make sound practical sense to, or convince many governments and other agencies in whose hands control currently rests. It is thus often repackaged and marketed in a way which makes more sense to a Western, development-focused, ‘practical’ conservationist ethos; in terms of ‘traditional *ecological* knowledge’. This perspective has little use for the other facets of a ‘holistic’ knowledge system, with its alien rituals, obscure religious and spiritual beliefs, shamans etc. The repackaging of TK highlights the persistent struggle which advocates of TK maintain against dismissive and even condemnatory attitudes. This struggle has important practical implications, and will be discussed through examples in the following section.

7.2 How to deal with perceived detrimental impact of IK/P

Traditional practices everywhere are open to condemnation on the grounds that they harm the environment, rather than protecting it. It appears that there is often evidence on both sides of the debate, and often the argument is as much political as it is ‘practical’, ‘ecological’ or ‘scientific’. Nonetheless, a brief discussion of some examples from the global survey highlights some key issues.

Traditional practices are evidently not always conducive to the sustainable use and conservation of biodiversity – the first criticism of the ‘ecological Eden’ tendency described above. In **Tanzania** and **Namibia**, two examples are presented (**Africa** UNEP/CBD/WG8J/INF/3) of indigenous perceptions of

fish stocks as limitless: while young cattle or eggs are rarely consumed to allow them to grow to maturity, “fish are somehow different from living things...they constitute a near-limitless ‘resource’.”

Deforestation in the **Democratic Republic of Congo** and in **Iran** is blamed upon local indigenous communities. The Iranian National Biodiversity Strategy and Action Plan (NBSAP Secretariat 2001:8, in **Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4) advocates the resettlement of the communities in question.

In a number of examples from Africa (and echoing accusations levelled at Saami and other reindeer herders in Europe and Russia), pastoralists are accused of over-grazing. In the Ngorongoro Conservation Area (**Tanzania**) in particular, a long battle has raged between officials and Maasai pastoralists, who accuse each other of destroying the local habitat. Some traditional practices are actively discouraged. Grazing is prohibited in certain areas.

Africa UNEP/CBD/WG8J/INF/3 refers to the pervasive colonial stereotypes of ‘backward’ livestock practices. If not actually destructive, traditional practices are all-too often perceived as inferior to ‘modern’ ‘western’, ‘scientific’ methods. In response, indigenous spokesmen attribute the destruction of biodiversity to years of colonial and postcolonial mismanagement.

What is the truth of all this, however? One type of traditional practice: ‘swidden’ or ‘slash and burn’ agriculture, is common to many of the regions covered in this report, and illuminates many of the issues raised so far.

7.3 The rights and wrongs of slash and burn

Swidden Agriculture, or ‘slash and burn’, has been practised in forest regions of **Africa, South America**, and elsewhere for centuries, its cyclical pattern ensuring balanced productivity and continued healthy levels of biodiversity. In **Ecuador**, the Amazonian (Achuar) system of ‘slash and burn’ (*roza y quema*) provides at least 100 species of food crop. Throughout **Central America** it is known by many names, whether “*milpa*” (Aztec) or “*col*” (Maya). In the **Philippines**, the Hanunoo plant rice and 300 other cultivars according to this method.

When used properly, it is suggested:

“This system has enormous advantages in the preservation of biodiversity since the space used as orchard is maintained for two to three years, after which the terrain is left to regenerate into a secondary forest.”

Central America UNEP/CBD/WG8J/INF/6

Carriere (2002, in **Africa** UNEP/CBD/WG8J/INF/3) characterises swidden cultivation by its effect of “creating an equilibrium between forest dynamics and crop cultivation in order to sustain food production over the long term.” All examples seem to show that swidden provides a relatively rich and varied supply of foodstuffs, as well as woods, fibres and medicines, in a way which maintains a balanced and biodiversity-rich environment. Examples such as Carriere’s study of Ntumu cultivation in **Cameroon** also show the integration of indigenous cosmologies and belief systems into an ostensibly subsistence activity: some trees are spared due to their cultural or spiritual significance, while in the Philippines, the Hanunoo avoid some taboo or sacred areas of the forest.

It would seem that this system is the classic example of TK/P which must be preserved. However, in some parts of the world, its advantages are not so readily recognised. **Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4 suggests that:

“swidden agriculture, or shifting agriculture, poses a threat to the ways of life of mountain dwelling peoples who use these practices, because of the high rates of biodiversity loss and soil infertility that result from the forest destruction entailed in this mode of production.”

Examples from Latin America, too, carry the warning that the system is not as productive as it should be. **South America** UNEP/CBD/WG8J/INF/10 blames this on an increase in the use of agrochemicals, encouraged by new rural development policies to meet increased demographic pressures. Carriere has warned that swidden is effective only in small populations, or low population density. Where swidden is seen to be damaging, one or both of two conditions seem to apply:

- 1) Pressure on land and natural resources have escalated to the extent that the increased population can no longer subsist by practising slash and burn as was traditionally done.
- 2) Economic pressures have forced people with little or no knowledge or experience of slash and burn cultivation to adopt such practices. One, most serious, consequence of this change is that areas of forest are cleared without regard to the knowledge that has informed such practices traditionally – to select only forest with 10-12 years growth, for example (fallow growth being an indication of soil condition) or selecting an appropriate time for burning.

Effectively, then, the dilemma regarding slash and burn agriculture is a matter of scale. As with many forms of traditional knowledge, swidden farming is best suited to small-scale agricultural production, pursued by smaller communities with low population density. It is when populations grow, or when (through forest clearance by industry or intensive farming) demand on the land otherwise becomes too great, that the problems arise.

To generalise: where traditional practices are held to be responsible for damaging local biodiversity, it is because the conditions of their application have somehow changed. In the example of over-fishing In **Namibia** and **Tanzania**, above, for example, the traditional understanding of fish as a limitless resource is based on a long period when fish were indeed so bountiful that they appeared limitless, while husbandry of land animals required more sensitivity. That this situation has changed speaks as much of the threat to the people themselves as to the river's ecosystem.

7.4 Issues of credibility vs. scientific knowledge

If one obstacle to the retention and promotion of TK is the perceived detrimental impact of many traditional practices, another – potentially less refutable – block is the sense that much TK is not viable because it is somehow ‘irrelevant’ or (echoing colonial attitudes to ‘primitive’ and ‘savage’ peoples) based on ‘superstition’ and folklore rather than scientific fact. Returning briefly to the problem of terminology, the description of TK as ‘folklore’ in much of **Africa** bears implicitly dismissive connotations of backwardness and superstition (Kongolo 2001: 356 in **Africa** UNEP/CBD/WG8J/INF/3).

The credibility of TK with respect to ‘scientific’ knowledge is questioned in terms of either its efficacy or its ‘rationality’. We shall discuss the question of rationality first:

7.5 Religion and rationality

The Waitangi tribunal was established to consider Maori claims relating to the Treaty of Waitangi which has, since 1840, regulated European settlement and Maori land ownership in **New Zealand**. In a landmark claim from the early 1990s concerning the Whangami River, the Tribunal found in favour of a Maori claim (Wai167) that the Crown had violated the terms of the Treaty, violated Maori traditional knowledge, and acted inappropriately. In doing so, it supported the traditional belief system of the claimants: that the River was a “single indivisible entity” and a “living being” (Solomon 2003).

Such sensitivity (albeit overdue) to indigenous belief systems is rare however. It has been stated repeatedly that traditional knowledge does not fit into Western categories; that indigenous understandings of the world, of nature are broadly holistic, and cannot be judged in terms of categories with which we are

comfortable (**South America** UNEP/CBD/WG8J/INF/10). In many countries (**Europe and Russia** UNEP/CBD/WG8J/INF/7) TK has been the subject of ridicule, considered unscientific, irrational and thus worthless. Such discrimination is a clear threat to the retention of TK.

In the context of traditional medicine, for example, the spiritual dimension of medicinal practice appears to be of less obvious interest in terms of biodiversity protection and is therefore ignored. **Saami noiades**, or spiritual leaders (often described as “shamans”) used plants and animal products in their medicine but, should diagnosis be uncertain, would seek advice from the spirit world using a shamanic drum (Brenna, in **Europe and Russia** UNEP/CBD/WG8J/INF/7). Similarly, in **South America** practitioners of traditional medicine, shamans, faith healers and *yachacs* are a link between the natural and supernatural (**South America** UNEP/CBD/WG8J/INF/10). It is in the use of categories to conceptualise the natural environment that the difficulty seems most widespread: local and indigenous categories do not fit easily with those of conservationists and development workers:

“In the Afro-Americans of El Chocó, “fright” can be classified as: hill, water, alive and of high hill. These phobias can only be cured with vegetables and elements characteristic of those high places or situations. If a person is frightened of the “high hill” or deep forest, the faith healer should pick the healing vegetables in those places.”

South America UNEP/CBD/WG8J/INF/10

Fundamental cultural frameworks such as religious systems or systems of traditional medicine can and do play a vital role in the retention of biodiversity-related knowledge systems. In fact, as pointed out in **Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4, there is great potential in the engagement of religious institutions in activities aimed at the maintenance of such knowledge systems.

Dismissive and derisory attitudes to traditional knowledge must be reassessed if the principles and goals embodied in Article 8(j) are to be successfully enacted. Equally traditional knowledge cannot therefore be split up and repackaged in terms of “TEK”, TM or even knowledge of PGRFA or ecosystem management, without losing touch with the guiding beliefs and principles which inform that which we find most valuable.

Recommendation 9

Interpretations of Article 8(j) should be clarified in such a way as to determine the relevance of traditional knowledge which is apparently unrelated to biodiversity management.

7.6 Effectiveness

It is more common to find TK dismissed as inapplicable or ineffective: that it is inferior to modern, scientific knowledge. In **Niue**, for example, the NBSAP considers traditional knowledge and practices insufficient to manage biodiversity in their own right, unless enforced and supplemented through “modern management methods” (Solomon 2003).

Where TK is recognised as potentially useful by governments, it is often considered subordinate to (and can therefore be overruled by) what **Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4 call “Western technoscience”. In **Australia**, for example, TK is often identified as:

“something to ‘take into account’ within the existing technoscientific policy framework rather than as a serious, legitimate, comprehensive and workable system of sustainable environmental governance and management that has been practiced for millenia to maintain Australia’s biodiverse resources and environments.”

Australia, Asia and the Middle East UNEP/CBD/WG8J/INF/4

Yet it is often the case that traditional methods can be just as effective in terms of sustainability and productivity as ‘modern’ methods. **Ethiopia**, for example, is the tenth largest producer of honey and fourth of beeswax. Such high levels of productivity are achieved by predominantly traditional production techniques (Russo 2000 in **Africa** UNEP/CBD/WG8J/INF/3).

TK is threatened as long as it is undervalued. A first step in securing TK and its practitioners is to raise its profile and increase acceptance of it as a viable management strategy. This can be achieved through a closer engagement between TK and Western science. In **North America** UNEP/CBD/WG8J/INF/3, the value of TK is noted as being already proven by numerous examples of indigenous peoples having “shown up the mistaken assumptions of non-indigenous scientists.” By strengthening TK’s credibility, such experiences encourage further participation of indigenous people in activities to which they can bring such knowledge. In addition to encouraging TK-holders to share and apply their TK, however, improving the image of TK can reverse a damaging trend whereby young indigenous people are forsaking, not applying, or even never learning, the traditional environmental wisdom of their communities – seduced by western education and its promise of a modern, urban, affluent lifestyle. This trend can only be reversed by lifting TK from its current inferior position.

One way to enhance the image of TK has been demonstrated by a number of African nations in relation to Traditional Medicine. Traditional herbal medicine is being used in hospitals in **Ghana** to treat malaria as well as ‘lifestyle’ diseases like hypertension, diabetes and arthritis. In **Mali**, traditional remedies are being used in the fight against HIV and AIDS. Medicinal Gardens throughout **Africa** (numerous examples are also documented in **South America** and **Europe**) not only provide *ex situ* conservation but also resources with which to educate TMK consumers and practitioners, advertising TM to communities very much in need of accessible, affordable health care. As well as enhancing popularity of TK among the public, however, there are examples of efforts to enhance the profile of TK in the scientific community. Testing of traditional medicinal formulae by the centre for scientific research into herbal medicine in Mampong, **Ghana**, has proven the clinical effectiveness of over 200 medicinal plants. However, scientific approaches and traditional knowledge system are not always compatible and as always, TK holders must be in a position of control.

7.7 Consequences of past persecution

The example of traditional medicine in **North America** UNEP/CBD/WG8J/INF/8 in particular demonstrates that past, and sometimes enduring, persecution of traditional healers can lead to a reluctance on the part of today’s traditional medical practitioners to discuss traditional medicine. The task of determining the current state of traditional medical knowledge is thus made more difficult. To combat this tendency, this distrust, and make the CBD’s programme of work in this area more manageable, efforts must be made to “win the hearts and minds” of peoples who have been systematically abused for generations.

Traditional medicine has been particularly vulnerable to western religious proselytizing, as its *practice* has often involved explicit interaction with spirits (see above). Its connection to biodiversity is thus perhaps not so obvious, except for the fact that many of the plant and animal ingredients are harvested (sustainably or otherwise) from the local environment. Traditional Medicinal practices tend to be most frequently perceived in terms of their *detrimental* impact on the environment. This perceived impact, however, is perhaps linked to (and at the same time makes TM more vulnerable to) increased exploitation by non-TK holders. Whereas other forms of knowledge are being exploited with the emphasis on how they can be sustained, in this case knowledge is often sought in order that it might be plundered.

7.8 Impact of market forces and “free trade” (and trade agreements)

Whether in the form of a flood of new commercially produced products into local markets, the advent of new industries bringing changes to the local job markets, or the promise of economic security through western education, market forces are having a profound effect not only on local economies, but on the cultures and traditional practices of indigenous peoples and minorities.

South America UNEP/CBD/WG8J/INF/10 discusses the problem of migration from local and indigenous communities in the Andean region of **South America** to urban centres.

“The phenomenon of migration has had an effect on the traditional knowledge on biodiversity. Some of the systems that harvest rainwater on hillsides have been abandoned because of the loss of manpower required for its maintenance. Traditional knowledge is not passed on to the next generation because the youth leave to work as labour.”

Similarly, in **Kiribati**, where fishing is the second largest source of foreign exchange, “instead of learning how to fish people are focusing on obtaining a western style education or learning other occupations” (**Pacific** UNEP/CBD/WG8J/INF/9). Fish traps and other fishing practices are being abandoned as people are pursuing other activities such as education, working abroad, and using the money to buy tinned fish.

Elsewhere in the Pacific, economic and cultural intervention by larger states is bringing changes to traditional consumption patterns, and thus has an indirect impact on traditional agricultural and culinary practices. The **Federated States of Micronesia**, for example, has entered into a Compact of Free Association with the **USA**. There is a noticeable shift to western-based values and practices, which have been linked directly to an over-reliance on associated aid programmes and increased urbanisation, and the wider availability of imports from Western countries (**Pacific** UNEP/CBD/WG8J/INF/9).

Another sphere in which international market forces have impacted upon traditional practices, and thus upon the balance of local biodiversity, is that of agriculture. For instance, monocropping in the **Andes** has had a significant impact on the production of potatoes, which had an immense ritual significance for the Incas. The introduction of industrialised and homogenous plant cultures dramatically accelerates the loss of genetic patrimony, and breaks the continuity of traditional knowledge, as well as generating greater dependency in the market as traditional, locally-produced, are no longer available (**South America** UNEP/CBD/WG8J/INF/10).

Although this report has not been concerned with the intricacies of intellectual property rights or, more broadly, the commercialisation of indigenous and traditional knowledge, Article 8(j) is itself an example of the increasing “marketability” of traditional knowledge. Concerns have been raised that *potential* commercialisation threatens the security and sustainability of traditional knowledge. Examples from **India** and the **Philippines** (e.g. Peoples’ Biodiversity register) provide the means to register and thus preserve to some extent TK systems, *but also have the potential to make them vulnerable to commercialisation, without the consent of TK holders*. However, instances where traditional medicine, for example, is being commercially produced – even when benefit-sharing agreements have been worked out – pose other dangers:

“If the potential for commercialisation becomes the key criteria for promoting, protecting and facilitating the use of traditional and indigenous knowledges, then the aspects of these knowledge systems of, for example, natural resource management that are not amenable to commodification and commercialisation will be placed in jeopardy, not least because sui generis protective measures will not be developed or extended to them.”

UNEP/CBD/WG8J/INF/4

8 Research, documentation and assessment

8.1 Indicators

The need to establish reliable and clear indicators, both for the assessment of the state of retention and traditional biodiversity-related knowledge, and to assess and evaluate measures and initiatives to protect, promote and facilitate the use of traditional knowledge, is voiced in each of the regional reports.

The various consultants who compiled these reports encountered a series of practical and conceptual difficulties, with regard to which several recommendations have been made for future action. These obstacles to the successful implementation of Article 8(j) should, we suggest, be tackled as a matter of urgency, and ideally before work commences on Phase 2 of the Composite Report.

The absence of clearly defined and reliable indicators constitutes both a practical and conceptual problem. **North America** UNEP/CBD/WG8J/INF/8 expresses concisely the dilemma with respect to Part I of this report:

“as with determining one’s physical well being, determining the health of traditional knowledge could be deduced from the existence or not of particular symptoms. While we have a general understanding of concepts of health in one’s corporeal body, there is no agreement on what may constitute a healthy body of traditional knowledge, innovation or practice. What are the indicators of health? Examples might include the degree of language retention, degree of access to traditional territories, social health of communities, duration and degree of contact with non-indigenous communities, extinctions of species, etc.”

Agreement on the most reliable indicators of a healthy state of traditional knowledge, innovation and practice, she continues, will facilitate the preparation of future reports particularly by defining a baseline of health.

Australia, Asia and the Middle East UNEP/CBD/WG8J/INF/4 proposes four indicators “to gauge the existence of traditional biodiversity related knowledge amongst indigenous peoples and local communities”:

1. Recognition of the land and sea upon which indigenous peoples and local communities rely for subsistence;
2. The extent of the dependence of human populations on traditional knowledge for subsistence
3. The extent of language diversity
4. The persistence of religious beliefs and practices

In addition to these four points, they also include a fifth, supplementary indicator:

5. Recognition of Traditional Medicinal Knowledge

Each of these potential indicators have been discussed in this report. Two in particular – land rights and linguistic diversity – have received considerable attention.

Central America UNEP/CBD/WG8J/INF/6 suggests language retention as a reliable indicator of retention of traditional knowledge in the region, highlighting the often detrimental impact of language loss:

“It appears that acquiring a superior command of the Spanish language also contributes significantly to diminishing the knowledge of plant names and plant-naming competences, which are indicators of correct knowledge of use.”

Maffi (1998), cited in **Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4 complements this claim, and in doing so highlights the close links between linguistic and cultural diversity and biodiversity:

“Countries with large numbers of languages are those with the most forests, are nearer the tropics and with mountain ranges.”

Language retention is also regarded as a priority in the reports on **Europe** and **Africa**. In reference to Africa, traditional knowledge is described as particularly vulnerable to change by its very nature, both because it is retention is dependent upon continued practice on the land where it was developed, and because it is rarely written down and recorded. In both circumstances, language is of major importance. Without continued practice on traditional lands, and without adequate (*ex situ*) recording of knowledge no longer practiced, language becomes more and more essential:

“Out of the context of the language within which it developed, knowledge is easily distorted and lost.”

Africa UNEP/CBD/WG8J/INF/3

There are few examples of such indicators being used in the planning of measures and initiatives to protect, promote and facilitate the use of traditional knowledge in relation to biodiversity. One such example, however, is the call made by the National Aboriginal Forestry Association (NAFA), **Canada**, for inclusion of specific indicators for the pursuit of traditional practices in sustainable management (**North America** UNEP/CBD/WG8J/INF/8). These include

- opportunities for the practice of cultural and spiritual activities;
- the extent to which traditional knowledge been used in forest management planning;
- the overall economic well being of Aboriginal communities, including the continuation of traditional Aboriginal economic activities;
- and, traditional land use through traditional land use studies

Such indicators, however, are expressed in terms of indigenous peoples. **Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4 argues that there should be recognition of the difference between “indigenous people” and “local communities”, and we have already mentioned the differences between traditional knowledge in “Western”, “industrialised” countries and developing countries. In view of these distinctions, these indicators may not therefore be applicable.

More work needs to be done in determining a coherent and reliable list of indicators. Without appropriate indicators of health, the state of retention of traditional biodiversity-related knowledge cannot be adequately assessed. Such an assessment is the baseline necessary for planning future measures and initiatives to maintain, or reverse, current trends in the state of retention of traditional biodiversity-related knowledge.

There is one more issue which has not been adequately considered in the commissioning of this report, and is not explicitly dealt with in the completed reports. The problems it creates, however, are evident in the bewildering array of examples presented. The issue is best expressed in the following questions: when can traditional knowledge be said to be related to biodiversity? How is this relationship to be determined? When, if ever, is traditional knowledge irrelevant to biodiversity? What aspects of traditional knowledge fall within the scope of Article 8(j), and of this report? Furthermore, when is such traditional knowledge to be considered “in use”? The answers to these questions are far from clear, and yet they *must* be answered if the mammoth task conferred upon Article 8(j) is to be remotely achievable.

Recommendation 10

Establish baseline indicators for the *state of retention* of traditional, local and indigenous knowledge

Recommendation 11

Establish baseline indicators to assess the *success or failure* of measures to promote or preserve traditional knowledge and practices

Recommendation 12

A table presenting population data on indigenous peoples worldwide, comparing this information with Parties’ statements on the importance of traditional knowledge, and ratification of relevant international

conventions, has been included in Appendix 1. It is recommended that this work be continued, and kept up to date, as a representation of indicators of the state of retention.

Recommendation 13

A table listing legislative measures to protect, promote and facilitate the use of traditional knowledge, as drawn from the regional reports, is presented in Appendix 2. It is recommended that this work be continued, and kept up to date.

8.2 Need for further research

The need for further research into many of the questions posed by the Working Group has been echoed in each report. The original timeframe in which this report was to be completed was tight enough. The time and resources ultimately available for the project have made the completion of an “accurate and comprehensive assessment”, as called for by the CBD Secretariat in Decision VI/10.

One recommendation for further research is that the CBD Secretariat facilitate the flow of information on traditional lifestyles and biodiversity use by producing and circulating a new Thematic Report on Article 8(j) and related provisions. There is an incredibly diverse range of groups and interests involved in issues surrounding Article 8(j), and indeed the need for this report and the Article as a whole is occasioned by the relatively poor state of integration of indigenous interests with the structures of biodiversity conservation. This situation has not changed sufficiently, and there is a need for greater effort on the part of the CBD to facilitate communication with the groups involved. This brief survey has demonstrated that many of the most effective instances of the integration of traditional knowledge with the conservation and sustainable use of biodiversity are small, community-focussed, resource-limited enterprises. Channels of communication with such groups, particularly in developing countries, require further development. There certainly needs to be more accommodation of the needs of these groups. Connections and relationships must be built up and maintained over time, and information allowed to flow *in both directions*, before another survey exercise such as this can be effective.

While there is doubtless a need for further targeted research, both empirical and secondary, as called for by each of the consultants, there are important qualifications to consider prior to any recommendation. These concern the sensitivities surrounding documentation and access to registers, and the need for a code of research ethics.

8.3 Documentation issues

“The nature of traditional knowledge is such that more of it is transmitted orally than written down”

Daryl Posey 1996:81

Most of what we consider to be “traditional knowledge” is transmitted orally. As such, it is rarely documented in a form which is recognizable or useful to conservationists. This lack of written record also makes traditional knowledge more vulnerable to permanent loss.

The situation is lamented in a statement by the **Cameroon** national focal point (in **Africa** UNEP/CBD/WG8J/INF/3). In a situation similar to most of the world’s developing countries, it is claimed, lack of inventory of traditional knowledge and practices, along with lack of appropriate protective legislation or clearly defined benefit-sharing mechanism, is “a major handicap” which prevents “the government from benefiting from this rich heritage”

Documentation of traditional knowledge would, then, appear to be an unquestionably good thing. Yet the quotation above demonstrates one of the primary concerns raised in opposition to documentation projects such as traditional knowledge registers and databases. Discussing the lack of detailed information in the available literature from which their report was compiled, **Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4 emphasises that theirs is not simply a methodological concern. Rather, it concerns the future retention of traditional biodiversity-related knowledge:

/...

“As national education systems are extended to rural and remote populations, the documentation of this knowledge may be critical to the capacity of future generations of indigenous peoples and local communities to access that knowledge.”

However, as hinted at by the above example from Cameroon, the intended beneficiaries of such traditional knowledge documentation are not always the holders of such knowledge, or indeed their descendants. The general issue of intellectual property rights, which pervades so much of the discussion on access and benefit sharing is the subject of an ongoing assessment of the mechanisms for the protection of traditional knowledge, carried out by the World Intellectual Property Organization (WIPO), in collaboration with the CBD and is outside the scope of this report. However, the issue of access to knowledge, and in particular who has the right to regulate access to documentation or traditional knowledge registers, and protect against external exploitation (e.g. biopiracy), is fundamental here.

In addition to its role in physically preserving knowledge that is somehow at risk of disappearing, another vital purpose of sound documentation of traditional knowledge is the *recognition* of that knowledge, its use, and of indigenous people as its holders:

“A community cannot build its capacity to mobilise its knowledge if there is no recognition that it is owned by them.”

Australia, Asia and the Middle East UNEP/CBD/WG8J/INF/4.

Traditional knowledge must be recognised as credible and useful, but the rights of ownership of its holders must also be ensured. For example, increased interest in the traditional knowledge of Inuit in **Greenland** has put them in a difficult position:

“On the one hand, they are eager to have their knowledge integrated into research and policy making which for so many years have ignored or looked down upon their knowledge. On the other hand, they do not want to separate knowledge from context.”

Sejersen 1998:41, in **Europe and Russia** UNEP/CBD/WG8J/INF/7.

Similarly, in the case of **North America** the potential benefit is seen of the current high levels of academic interest in traditional knowledge, but warns that this is not guaranteed to translate into benefits for indigenous people:

“The interest of the academic world in traditional knowledge may help to secure the knowledge, even if the interest does not extend to the practice and innovations related thereto. The many activities underway presently to record traditional knowledge may at the very least provide future generations with a record of the knowledge. Whether the knowledge is ever put into practice will in large part decide whether it remains fresh, vibrant and relevant or becomes mere fodder for the academic machine.”

North America UNEP/CBD/WG8J/INF/8

In Africa, the recording of traditional medicinal knowledge is often part of initiatives to promote and protect traditional medicinal knowledge. This is frequently a contentious issue, since once indigenous knowledge of any kind is recorded, it is felt to be in more danger of exploitation, for example by

pharmaceutical companies. One possible solution to this dilemma is presented by organisations such as Terrawatu, an NGO working in **Tanzania**. Terrawatu's *Medicinal plant use and conservation scoping project* compared and contrasted a rural and a peri-urban community, to investigate the influence of urbanization on patterns of plant use. It ground-truthed the widespread perception that supplies of priority plant species are decreasing in the district, and identified the threats to their preservation from both inside and outside the communities.

The research produced a list of species (including both local and scientific names), habitats and uses, and a description of the patterns of use (medicinal, ritual, nutritional, cosmetic, hygienic, construction, fuel, fodder, etc.), importance, cultural significance, perceived availability and sustainability of harvest. The notable aspect of this project was the dissemination of its findings. A summary paper was published, presenting broad trends and a discussion of methodology, so as to enable replication of the project elsewhere. The more comprehensive data on plant names, their growing conditions and use, for example, was retained by the communities involved.

Thus the principal issue governing documentation of indigenous knowledge concerns access to the results; Who gets to see it, and use it? Who, equally importantly, does not?

8.4 Access to registers

Regulation of access to traditional knowledge, once it is written down or documented in some other form, is a problem common to indigenous people in a many regions. In **South America** as elsewhere, there is a tendency to assume

“that common property is synonymous with open access, ignoring the fact that many local communities do in fact regulate access to common property resources to ensure that they are developed fairly, properly, and in a sustainable way. Traditional knowledge is passed on to those people who fulfil the conditions to properly use and manage it.”

South America UNEP/CBD/WG8J/INF/10

The warning is clear: open access (by outsiders or members of the community in question who do not otherwise have rights of access) can, and often does, cause the collapse of traditional resource management systems:

“An unsuitable access to traditional knowledge may even cause the destruction of the cultural systems and their productive mechanisms.”

Australia, Asia and the Middle East UNEP/CBD/WG8J/INF/4 warns against the misuse of traditional knowledge registers, using as an example the Apatanis of Arunachal Pradesh (**India**), who practice settled agriculture in the Apatani Valley, Lower Subansiri district:

“The Apatanis are concerned about the loss of local varieties of paddy rice, the effects of population growth on their agrarian resource base, and the need to expand education and employment opportunities in their communities. In response to WWF suggestions that the Apatani peoples institute biodiversity registers, the Apatani leaders insisted that traditional boundaries and resource distributions are known and recognised within their communities and expressed concerns that a register may be misused by government to assume control of land.”

Traditional knowledge registers do play a vital role in raising the profile of the knowledge and practices and their holders. They can demonstrate the relationship between traditional knowledge and conservation of biodiversity, where such a link has previously been in doubt. A project to document Karen traditional knowledge in Northwest **Thailand**, for example, demonstrated their positive contribution to the local environment in the face of threatened evictions (**Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4). However Ingold and Kurtilla (2000:186, in **Europe and Russia** UNEP/CBD/WG8J/INF/7) warn against potential pitfalls of a strategy which assumes that “to ensure the continuation of valuable traditional wisdom, it is argued, no more is needed than adequate institutional mechanisms for its storage and replication.” At worst, such a perspective can justify the very state

policies they hope to evade, removing indigenous peoples from their land. Knowledge can be preserved in libraries and museums, but it is without value unless it continues to be practised.

Another example from **India**, however shows how arrangements can be made between researchers and knowledge-holders to enable traditional knowledge to be used for conservation or other projects, and yet be safe from indiscriminate exploitation *without the people's consent*. In 1995, Kalpavriksh and the Beej Bachao Aandolan (Save the Seeds Campaign), in collaboration with the villagers in Jardhar of the Teri Garhwal district of Uttar Pradesh, initiated an exercise to document the various bio-resources used by the community and their conservation practices. The members of the Beej Bachao Aandolan, a network of local farmers who have been involved for a number of years now in reviving and spreading indigenous crop diversity, actively collaborated with the Kalpavriksh members. By mutual agreement between Kalpavriksh and the villagers, it was decided that a copy of the register will be kept in the village and another copy would be kept by Kalpavriksh, and that all the information in the register can be used and distributed only with the consent and knowledge of the villagers (**Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4).

8.5 “Secret knowledge”

The discussion in the previous sections has reinforced the point that not all traditional knowledge that appears to be held in “common ownership” is in fact in the public domain. The warning from South America reminds us that all intervention (for it must be realised that documentation and research *are* forms of intervention) must show sensitivity to the traditional structures within which such knowledge is held. The problem of “secret knowledge”, however, presents a yet greater dilemma.

Oral transmission leaves traditional knowledge more vulnerable to change, or (more optimistically) gives it greater potential to adapt and develop. However, it could be argued that knowledge which is not written down is easier to keep secret. Not all knowledge is intended to be for public consumption. It might realistically be asked: does “secret knowledge” in fact constitute a *sui generis* system of protection? In **Kiribati (Pacific)** UNEP/CBD/WG8J/INF/9), traditional knowledge of fishing, weather forecasting, navigating, building canoes, cultivation and traditional medicine are family heirlooms, which amongst other things have a tradable value:

“These skills are kept within the family and can be transmitted to strangers or others outside the family for special favours. Even when this happens not all the skill is revealed. The rest of the skill is imparted at the deathbed to the carer. Sometimes the carer who may not be family may publicly challenge the rightful heirs to claim that he or she gain full knowledge of the skill.”

The Kiribati example illustrates the importance to indigenous peoples of retaining the right to control trade of, and access to, such knowledge. It suggests that knowledge, and particularly ownership of knowledge, should be treated much more sensitively than is often the case, taking full account of the power relationships involved in registers compiled by outside (western) groups. Traditional knowledge registers are potentially useful, but also potentially dangerous. Ways of documenting and preserving knowledge without infringing rights of ownership, undermining secret knowledge or denying the knowledge-holders and their communities’ access to benefits have been developed in many instances.

In **Tanzania**, for example, Aang Serian and Terrawatu’s medicinal plant documentation project produced a register of medicinal plants, access to which was controlled by the communities in question. A public report provided some details of the research carried out, and the findings, but data which could conceivably be of use to the community (and to outsiders) was excluded. This is an excellent example of how research can illuminate the state of retention of traditional knowledge without disadvantaging the source community (and can in fact benefit knowledge-holders and their communities). It also shows the way for future ethical research in the area.

The benefit-sharing initiative between the Tropical Botanical Garden and Research Institute and the Kani community in Kerala, **India** (Kerala Kani Samudya Kshema Trust), is a good example of the importance

of goodwill on the part of the Research Institute, who informally shared receipts with the Kanis prior to the formal establishment of a benefit-sharing arrangement. It does, however, raise concerns about traditional knowledge registers:

“Intellectual property questions to be resolved for the creation of such a register include who operates the register, who provides access to its contents to which parties on which terms, who conducts documentation of the knowledge, who has the right to authorize documentation on behalf of the tribes, which knowledge elements will be documented in which format, how to deal with local language documentation in relation to national and international use of the register, etc. The role of the Plathis as an informal association of healers which hold rights to the use of certain traditional medicinal knowledge was not recognized by the benefit sharing arrangements in this case. Building on existing and accepted institutions of traditional knowledge holders can be an important tool to structure their participation and ensure the acceptance of the communities for benefit sharing arrangements.”

Pacific UNEP/CBD/WG8J/INF/9

Maroon traditional healers in **Suriname** were initially reluctant to participate in an International Cooperative Biodiversity Group project because “it challenged Maroon tradition for healers to sell knowledge about medicines to outsiders, or even to share it with them.” As ethnobotanical collecting continued to develop, however, the traditional healers expressed a preference for being paid approximately five dollars a day to participate as guides, rather than to “sell” their knowledge, *per se* (**South America** UNEP/CBD/WG8J/INF/10).

Traditional knowledge may be held in secret, by members of one family, kin-group or age set, or by one gender in secret from another, or it may be held in common between all members of a community. The issue of secret knowledge may be frustrating to conservationists, who wish to use the specialist knowledge of an indigenous people or local community to better conserve or sustainably use biodiversity. It may be frustrating to development workers who want to ensure the preservation of the knowledge in question. It is doubtless frustrating to bioprospectors or any group which seeks to exploit traditional knowledge to its own ends. No outsider has the right to demand access to knowledge held by anyone, or demand that it be shared with anyone else, even if it is deemed to be in the knowledge-holders’ best interest. Moreover, access to knowledge may be restricted within a community. It should be appreciated that researchers are able to access knowledge only with the consent of knowledge holders. Sometimes this will be given freely, as in the case of the Maroon traditional healers of Suriname, other times it will be closely guarded. Outsiders must respect the rules, and negotiate sensitively with the other factors, which govern access to knowledge.

8.6 Research ethics

“The accelerated rate of Western research on Indigenous knowledge is deemed, at this point in time, more of a threat to Indigenous peoples than a benefit for them.”

South America UNEP/CBD/WG8J/INF/10

“In Cameroon, the indigenous people or villagers constantly have the apprehension that any researcher or exploiter coming into contact with them is likely to unfairly exploit their knowledge.”

Bokwe *et al* in **Africa** UNEP/CBD/WG8J/INF/3

While it is acknowledged that an increasing amount of research is being conducted among indigenous people, and particularly relating to traditional knowledge, the consultants responsible for the regional reports have each called for more research to be done. In particular this should be targeted research, geared to better answer the questions posed in the outline of the Composite Report. Yet despite the calls for more research, there has been a signal failure in most of the reports to adequately deal with the crucial topic of research ethics.

The regional reports on **Africa** and **South America** each refer to deep anxiety among indigenous people about research conducted by outsiders within their communities. Indigenous people in **North America**, too, have expressed concern that they are being exploited by anthropologists and other researchers, and have taken action (as covered below).

The need for the development *and enforcement* of ethical guidelines on such a policy is clear. However, there is no information from National Focal Points on the development of such policies. Where such policies have been drawn up, they themselves often give inadequate attention to the needs of indigenous peoples themselves.”

Professional and research Codes of Ethics have been adopted by numerous organisations, e.g. the International Society for Ethnobiology and the American Association of Social Anthropology, although the extent to which indigenous peoples are officially consulted in drawing up such ethical policies is variable at best.

A number of indigenous and non-indigenous institutions in **Canada** have developed protocols to address concerns about unethical research practices in indigenous communities. **North America** UNEP/CBD/WG8J/INF/8 mentions the Mi'kmaw people's Mi'kmaq Ethics Watch (2000), the *Ethical Principles for the Conduct of Research in the North*, produced by the Association of Canadian Universities for Northern Studies (1998) and the *Yukon North Slope Research Guide*, produced by the North Slope Wildlife Management Advisory Council (2001).

Key principles to be borne in mind by potential researchers, as drawn up by the Mi'kmaw Grand Council include:

- Mi'kmaw people are the guardians and interpreters of their culture and knowledge system- past, present and future.
- Mi'kmaw people have the right and obligation to exercise control to protect their cultural and intellectual properties and knowledge.
- Any research/study or inquiry into collective Mi'kmaw knowledge, culture, arts, or spirituality which involves partnerships in research shall be reviewed by the Mi'kmaw Ethics Watch. (Partnerships shall include any of the following: the researchers, members of a research team, research subjects, sources of information, users of completed research, clients, funders, or license holders.)
- All research, study or inquiry into Mi'kmaw knowledge, culture, traditions involving any research partners belongs to the community and must be returned to that community.

In addition, there are assertions that Mi'kmaw knowledge is “collectively owned, discovered, used and taught” and that each ‘community’ has the right to knowledge and control over their ‘community knowledge’, while also acknowledging that some knowledge will have ‘traditional owners’ such as families, clans or associations. These traditional owners must be determined in accordance with the customs, laws and procedures of the people. Authority to engage in negotiations is vested in the Mi'kmaw Ethics Watch by the Mi'kmaw Grand Council, whose authority is asserted in the document (**North America** UNEP/CBD/WG8J/INF/8).

The Mi'kmaw Ethics Watch is an excellent example of an indigenous people claiming for themselves, and exercising, the right to protect their own interests and to manage access to their traditional knowledge and other resources as they see fit. However an example from **Cameroon** demonstrates the need for adherence to the principle of full, informed consent. Poachers, illegal research and other illegal exploitation of natural resources can in fact be facilitated by local populations. It is precisely as a result of the prevailing insecurity endured by local populations that they enter into such damaging partnerships with illegal exploiters, at the expense both of their quality of life and the surrounding biodiversity. Giving disadvantaged groups the authority to make their own decisions, without providing them with the means (the capacity in terms of education, experience, or the material comfort to make *choices*) to make an informed decision.

A fair and equitable system of knowledge extraction must involve *mutual* benefit. All too often the definition of one community or group as “indigenous” or holders of traditional or indigenous knowledge can be used as an excuse to deny them access to “modern” or “scientific” knowledge and resources on the

grounds that indigenous knowledge will be lost. Finding a *balance* between conservation and development demands that indigenous or local communities are treated fairly and equally, and not as living museum pieces.

Recommendation 14

A code of ethics governing research should be formulated, or adopted.

9 Identification and Assessment of measures and initiatives to protect, promote and facilitate the use of traditional knowledge

Though intended to be the more substantial of the two Parts of this Composite Report (according to the notification providing for this report), Part II, is less comprehensive than Part I. This reflects the relative scarcity of examples of measures and initiatives *specifically designed* to protect, promote or facilitate the use of traditional knowledge. To compensate for this lack of information, this section includes relevant measures and initiatives which result, perhaps as a side-effect, in the protection, promotion or facilitation of the use of traditional knowledge, even if this was not the main intention.

The authors of **Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4 admit that the information available on these questions in the Middle East was negligible both in volume and detail. As stated in the introduction to Part I, many of the comments made in the various reports from National Focal points were little more than generalised statements of intent. Some projects were referred to very generally, or without sufficient detail for the authors of the regional reports to identify them.

There are a number of points to make at this stage, before discussing in some detail the findings of the reports. Firstly, from the information at hand to the authors, it is possible to give some idea of general trends at the regional level. Measures and initiatives to protect, promote and facilitate the use of traditional knowledge appear to be particularly undeveloped in the Middle East and the Pacific. There are many projects to restore and preserve traditional knowledge in Europe, from language programmes to folk museums. It is fair to say, however, that the conservation or sustainable use of biodiversity is rarely a priority in the planning of such activities. This is in fact a common theme throughout the regions. Measures are rarely intended to impact upon biodiversity conservation. There is often an understanding that such an effect may be incidental, however. For example, the Municipality of Kautokeino autonomous municipality project (Finnmark, Norway), did not prioritise biodiversity in dealing with local communities and traditional management. Conversely, most projects which do prioritise biodiversity in Europe (and elsewhere) do not prioritise TK.

International conventions such as the CBD and ILO 169 (the International Labor Organization's Convention concerning Indigenous and Tribal Peoples in Independent Countries, which will be discussed in some detail below) may not always be the most effective tool in addressing the problems faced by indigenous peoples. Thailand, for example, although evidently more active than many other countries on these issues, has yet to formally ratify the CBD. Ratification has been opposed by local NGOs due to the CBD's perceived potential to weaken the nation's strong position on ownership and control of biological resources and related knowledge UNEP/CBD/WG8J/INF/4.

South America UNEP/CBD/WG8J/INF/10 makes the most important point in relation to South America, but it is applicable to traditional knowledge and indigenous peoples worldwide:

“Protecting and preserving the Traditional Knowledge of Indigenous people necessarily entails consolidating the fundamental axis of identity-territory-autonomy which allows the generation and perenniality of this knowledge.”

Without legal/constitutional recognition of their right to exist, and their right to exist as a culturally distinct group within the nation state, and without the legal and practical right to live on and manage their lands, indigenous people, and the traditional biodiversity-related knowledge they hold, cannot thrive. Later sections begin to summarise the state of progress with regard to the granting of these rights in the countries and regions covered by the report.

9.1 Incentive Measures & Capacity-Building

Documentation of information, in any format, can be considered a form of capacity building and there is obviously a wealth of material, although this may frequently be difficult or impracticable to access. Even when published, highly relevant material may be effectively inaccessible due to problems of literacy, language and cost. However, documentation is clearly critical in recording TK that may otherwise be lost, if, for example the biodiversity it relates to is lost or less abundant.

A large number of projects involving incentives and/or capacity-building measures in order to conserve and enable the sustainable use of biodiversity, and to incorporate – and thus sustain – relevant traditional knowledge and practices, are mentioned in the regional reports.

Clearly, the best projects are those which combine incentive measures and build the capacity of existing and potential participants, and all such initiatives should be tailored to the specifics of each situation. However, although the needs of indigenous people and local communities will vary dramatically, it is possible to identify some frequently recurring themes.

Many incentives are economic. This is not always the most practical or desirable option. One factor in ensuring participation in existing or future activities is to ensure that the promises made to stakeholders are fulfilled. The failure of the Laotian government to protect the sacred forests and culturally significant sites of local communities from illegal loggers has discouraged local people from participating in any such programme in the future, for even the most central benefit that was promised – continued protection of their traditional lands – has not been delivered.

Again, land is a major issue, and the guarantee of title or access to traditional territories is possibly one of the best examples of both incentive measures and capacity-building. Access to land is one of the most fundamental claims made by indigenous rights activists worldwide, and in many cases insufficient progress has been made in providing people with the land on which their subsistence and cultural survival depends. Each of the reports emphasised the importance of land in maintaining traditional knowledge and practices, and this issue is discussed at length below. However, at this point it should be pointed out that the granting of land-use rights both acts as an incentive for involvement (providing what people want most) and builds the capacity of participants (by providing land upon which to subsist and thrive).

In Africa (**Africa** UNEP/CBD/WG8J/INF/3), there appear to be very few existing direct incentive measures that encourage holders of traditional knowledge to keep it and to apply it. The majority of measures involve *indirect* incentives, such as recognition of customary systems of land tenure. There are a number of incentives, offered by sources such as the World Bank, the EU and international development agencies, available to anyone who plans to document traditional knowledge, and such projects have been mentioned in this report.

One serious criticism of incentive measures in Africa is that donors seem very rigid in offering incentives which suit their own purposes, and not necessarily the needs of the potential recipients (**Africa** UNEP/CBD/WG8J/INF/3).

An excellent example of a project which is apparently both providing incentives to continued participation and building the capacity of participants to preserve the traditional knowledge of their people is the Aang Serian Community College in Arusha, Tanzania. The college provides a course on local traditional knowledge developed by and for indigenous youth from a variety of ethnic groups, in collaboration with the college, and encourages students to carry out their own research, discussing their culture and history with their elders, and thus help bridge the “generation gap” between young and old. Students produce a booklet on their research and what they have learned, a copy of which is retained by Aang Serian as part of an archive of indigenous knowledge from various ethnic groups. Access to the archive will be restricted, in order to benefit the indigenous people concerned, rather than leaving them and their knowledge vulnerable to exploitation.

Recommendation 15

Strengthen existing indigenous organisational structures.

Recommendation 16

Best practice guidelines should be developed, to support the planning of measures and initiatives to protect, promote and facilitate the use of traditional knowledge.

9.2 Women as holders of traditional knowledge

“Gender and knowledge are linked in many ways, women and men often hold very different skills and different knowledge of local conditions and everyday life.”

Central America UNEP/CBD/WG8J/INF/6

Women continue to occupy a marginal position in many initiatives designed to promote, facilitate or even document traditional knowledge and local biodiversity use. There is little or no mention of women in the reports on Europe and North America. A collaborative project by the Gwich'in Social and Cultural Institute and the Prince of Wales Northern Heritage Centre, in **Canada**, has documented and publicised women's traditional skills in manufacturing clothes (**North America** UNEP/CBD/WG8J/INF/8). There is no mention of the knowledge or practices of women in relation to biodiversity at all, however.

Women do not feature in the regional report on the **Caribbean** UNEP/CBD/WG8J/INF/5. In **Central and South America**, there are a number of examples of studies and projects which have specifically involved female holders of traditional knowledge. Emphasis is placed upon the value of traditional biodiversity-related knowledge held by women, and the use of 'heirlooms' and 'female oriented natural heritage for cultural conservation' by the Jardín Etnobotánico Comunitario in the Pisac valley, **Cusco, Peru** (**South America** UNEP/CBD/WG8J/INF/10).

Many societies follow (to some extent) a gendered division of labour. In the traditional lands of the Piaroa, in southern **Venezuela**, men perform the bulk of forest foraging and are more knowledgeable about high forest plants, while agriculture is generally the preserve of women, who are as a result more knowledgeable about garden flora (**Central America** UNEP/CBD/WG8J/INF/6). This pattern is evident elsewhere. For example, women often play a key role in agroforestry in parts of **Africa** (**Africa** UNEP/CBD/WG8J/INF/3), and in the management of home gardens in **Thailand** (**Australia, Asia and the Middle East** UNEP/CBD/WG8J/INF/4).

In a number of examples from **Central America** UNEP/CBD/WG8J/INF/6, men tend to dominate management of commercial cropping (e.g. coffee) and women maintain traditional and medicinal plant cultivation. Economic imperatives have led to the allocation of the best land to the commercial crops, and the traditional economic activities of women – and with them their knowledge and status in the community – are threatened.

Samoan women are involved in the collection of shell-fish, while men dominate deep-sea fishing. In **Kiribati**, too, reef-fishing and collection of shallow-water seafood is done by women, and deep-sea fishing by men (**Pacific** UNEP/CBD/WG8J/INF/9). Women have traditionally been integral to fishing activities in fishing communities in **Pakistan**. However, they are marginalised in traditional agricultural communities who now depend on fishing as a higher proportion of their income.

Many practitioners of *Rongoa Maori*, or Maori Traditional Medicine in **New Zealand** are older women (**Pacific** UNEP/CBD/WG8J/INF/9). Research projects carried out in **Africa** interviewed female informants, recognising the important role women play as custodians of traditional medicinal knowledge in particular. Kokwaro (in **Africa** UNEP/CBD/WG8J/INF/3) notes that some medicine men passed on their knowledge to their first wives, and more generally indigenous women and those in local communities tend to dominate the fields of child disease and female medicine. Such dominance is reflected in the following description of “women's knowledge” as it is conceived by the Guanano in **Colombia**:

“Women's knowledge ... is reserved to the female world; so that only women have access to it; we could assert that it is a consequence of the respect to privacy. Its origin is attributed to the great Hycho mother

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(grandmother of the Guananos), who in former times led women to attain the power to govern men. The function of the knowledge of women relates to giving birth, to the production of cloth and utensils for the kitchen, to secrets on the optimal conditions to handle seeds, their resistance to means and the maximization of the production, to handle the taxonomy of wild plants that can be used by the community, and the handling of the different paintings that serve as additives for the decoration of dresses and the woman's body."

South America UNEP/CBD/WG8J/INF/10

In many cases, it is women who retain valuable knowledge, due to their active role in decision making for the household. Women, therefore, may be the major reserve of information relating to traditional medicines, crop varieties, animal products, fuel, fibre and food plants and many other biodiversity-related areas. Women often hold knowledge that men do not. Wherever women are marginalised, so too is the traditional knowledge of which they are custodians under threat of being marginalised or lost completely. As a result it is important to remember to include women equally in any initiative that takes place.

Recommendation 17

Specific capacity-building activities should be targeted at indigenous women in rural or otherwise marginal communities, and the traditional knowledge and practices that continue to be held by them.

9.3 Education

Education can play a vital role in building the capacity of a community to further participate in conservation, and in development. Rather than projects which seek to instruct indigenous peoples in "best practice" - "modern" or "scientific" methods of environmental management – however, any effort to implement Article 8(j) must begin from the position that the practices of indigenous peoples can be *at least* as valid and beneficial as the "modern" knowledge of conservationists. Education, therefore, may be considered in one of two ways; either using Western science and learning to *complement* and support traditional knowledge, or prioritising traditional knowledge in the curriculum – whether that curriculum be based on formal western structures or an indigenous model – to teach indigenous people about their traditional knowledge and to help ensure its survival.

Provision of education within a formal western system is not always beneficial to indigenous people. Centres of education are often far from traditional lands – who almost by definition live in remote regions. Thus students have to travel long distances, and often spend considerable time away from their lands, their communities, their elders and their knowledge. If they return, they are often less knowledgeable than they would have been if they had stayed. The danger that young people will lose touch with their knowledge, their cultures and traditions while away, and perhaps never return, is a serious one.

To combat this trend, educational institutions can be established in areas populated by indigenous peoples, which are accessible to their children, stemming the flow of migrants to the cities. The Saami University College was established in Guovdageaidnu, **Norway**, in 1989 and is the only Saami institution offering higher education. In **Russia**, schools have been established in remote regions to cater for the local indigenous populations. Since the collapse of the Soviet Union, however, the economic crisis has hit these schools badly, and many are unstaffed or otherwise in decline. It has always been the case, however, that indigenous people in Russia and elsewhere have to travel to the nearest city obtain higher education. In **Sweden**, the Saami School Board administers the National Saami Schools, established under the Saami School ordinance.

Another solution is to integrate indigenous knowledge into mainstream education. Langton and Ma Rhea treat such initiatives with some degree of scepticism, which seems to be echoed by indigenous people in other regions (e.g. **North America**, UNEP/CBD/WG8J/INF/8). Western-based education has in the past been criticised for dismissing and attempting to supplant indigenous knowledge. It is therefore, they

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suggest, pertinent to ask why the same western systems now want to incorporate aspects of indigenous knowledge into their curricula UNEP/CBD/WG8J/INF/4):

“Indigenous people might welcome the increased interest as an opportunity to preserve their knowledge systems, and have their rights acknowledged under international legal protocols. However, they are also (with good reason, perhaps) suspicious of “business people, scientists, teachers and government officers — whether foreign or local — trying to elicit their traditional ecological knowledge, for example, while refusing to recognize their fundamental human rights.”

Such understandable scepticism notwithstanding, however, some attempts to integrate traditional knowledge within a common system and a common curriculum seem to date to have been unsuccessful. A survey conducted by Education International (1999), reported that in Europe, only **Sweden** and **Greenland** provided for indigenous education in the form of “Indigenous schools, classes, faculties or other educational services” available to even a proportion of the indigenous community. Indigenous control of such institutions, however, was said to be limited (UNEP/CBD/WG8J/INF/7).

Elsewhere, however, a different, more directed form of educational initiative has been proposed, and in some cases has proven successful. McGowan (2000, in UNEP/CBD/WG8J/INF/9), calls for the establishment of a system to facilitate the teaching of *rongoa Maori* (Maori Traditional Medicine) in **New Zealand**. He emphasises, moreover, that such teaching should (like the knowledge system itself) be *holistic*, covering “not just the knowledge of rongoa, but the experience of working with the people to whom the medicine belongs, those who need the healing it may provide”. In African countries, for example **Nigeria**, something like this is provided by traditional medicine hospitals, which not only provide healthcare, but also often act as centres for exchange and preservation of traditional medicine (**Africa** UNEP/CBD/WG8J/INF/3).

Recommendation 18

Where appropriate, indigenous knowledge should be integrated into formal, local or national systems of education, which are directed towards local or indigenous communities

Recommendation 19

Offer appropriate education and training to indigenous and local communities that can enable sustainable development while being compatible with their traditions

9.4 Land rights

“Participation in land management is integral to the overall wellbeing of indigenous peoples and local communities.”

Australia, Asia and the Middle East UNEP/CBD/WG8J/INF/4

“The fundamental requirement for the existence of these people, their cultures and knowledge, is their association with the territory. Their survival and continuity are indissoluble of their territoriality and socio-economic processes and policies have affected them in different degrees and with specific local characteristics.”

South America UNEP/CBD/WG8J/INF/10

Each regional report echoes the same point: that access to the land upon which traditional knowledge is based, together with the opportunity to practice it, is the absolute minimum required for retention of traditional biodiversity-related knowledge. Yet most of the world’s indigenous people live on land to which they have no legal title (Galaty & Ole Munei 1999, in **Africa** UNEP/CBD/WG8J/INF/3).

The African regional report suggests that the state of recognition of customary land rights in that continent is very poor. Post-independence land legislation in a number of African countries has placed legal title of all previously “common” or “tribal” lands into the hands of the State, abolishing (in the eyes of the law) traditional systems of land tenure. This once again places the interests of the state above those of indigenous people and local communities (UNEP/CBD/WG8J/INF/3).

In part this lack of legal recognition, and the serious practical difficulties which result, stem from the fact that the “modern” system of land tenure adhered to by the state seems inapplicable to the “traditional” model. Customary land rights tend to be collective, ambiguous and negotiable; they are less *certain* than formal registration and title (Galaty & Ole Munei in **Africa** UNEP/CBD/WG8J/INF/3), and thus frequently incompatible with national systems. Traditional systems of land tenure are often conceptually very different from the legal systems adhered to by many modern states, whether industrialised or developing. The Maasai notion of *e-rishata*, for example, divides land and resources, but boundaries are more “zones” than “lines”: families with rights derived from those of the community mingle together on land they use in common on the basis of negotiation, which can lead to conflict. In the 1960s the **Kenyan** government began to divide Maasai pastoral regions into “ranches”, the titles to which were held by groups. These groups split up over time, encouraging claims that land be officially subdivided among them, thus destroying the traditional system (**Africa** UNEP/CBD/WG8J/INF/3).

In the Arctic and North America, indigenous peoples’ rights to land are often recognised on the basis of traditional and continued *use*. In Canada, the Nisga’a Final Agreement provides them with the right to harvest wildlife in the Nass Wildlife Area in a manner consistent with their traditions (UNEP/CBD/WG8J/INF/8). In Russia, “territories of traditional natural resource use” are guaranteed under a law passed in 1999, but most applications for this status have been declined, and the two that have been accepted have since been annulled (UNEP/CBD/WG8J/INF/7). Under the terms of the Treaty of Accession of Austria, Sweden and Finland to the European Union (1994), Saami in Finland and Sweden are guaranteed exclusive rights to reindeer herding, though this does not explicitly confer access to or control over traditional pastures (**Europe and Russia** UNEP/CBD/WG8J/INF/7).

Most of the Amazon countries, with the exception of Suriname, have initiated processes of demarcation, reparation and entitlement of lands. Large areas have been formally recognised in countries like Bolivia, Brazil, Colombia and Ecuador. Colombian law recognises “collective entitlement to territories” (**South America** UNEP/CBD/WG8J/INF/10). Yet there are serious gaps in the legislation which grants land-use rights to indigenous peoples in South American countries:

“unless its application is judicially requested, it is not currently possible to allocate land titles to indigenous people within protected areas, in a way that would allow them to pursue their practices.”

South America UNEP/CBD/WG8J/INF/10

Even more seriously, once a protected area is declared, official jurisdiction takes precedence and allocates exploitation rights to “untapped” resources to outside groups.

The Australian Native Title Act (1993) is intended to accommodate Aboriginal systems of land tenure. However, changes, made to the Act in 1998 deny property rights to indigenous peoples, and has raised serious concerns over its constitutionality.

Few laws in Asia appear to confer full legal title to land upon indigenous people. In Laos PDR, legislation on Customary Rights and the Use of Forest Resources secures legal rights for local people. Yet as discussed in previous sections, the enforcement of this legislation is insufficient. Elsewhere, loopholes in the Philippines Mining Act allow mining companies to circumnavigate local governing bodies of Indigenous Cultural Communities (ICCs). Resistance to such encroachments has sometimes led to militant action, as communities demand land and resource rights.

Local laws in China cover land use issues. India’s Wildlife Protection Act confers hunting rights to Scheduled Tribes. Though somewhat ambiguous in terms of implementation and enforcement, Forestry and Local Government legislation in Indonesia seems to afford legislative protection to customary land tenure.

Similarly, in Sarawak, **Malaysia**, the Sarawak Land Code recognises customary land rights, though these are poorly defined on the ground. The Constitution of **Thailand** provides grants local communities a

substantive role in the management of their own resources, and legislation passed in 1996 (though not yet enacted) *would* strengthen indigenous peoples' traditional management structures in forest areas. As with the bulk of such legislation in Asia, however, it is not explicitly intended to provide for indigenous systems of land tenure, or indigenous peoples' rights to land.

Protected areas

Access to traditional lands and territories is all-too often denied to indigenous peoples by the creation of Protected Areas on such sites. There are examples from all over the world of the creation of protected areas leading to increased alienation of indigenous people from their lands, their livelihoods and their traditional knowledge and practices. Where indigenous people have been permitted to remain within the boundaries of national parks, for example, their experience has often been negative, seeing restrictions imposed upon their lifestyles which either preclude the exercise of traditional knowledge and practices or, equally damaging, force them into a stereotyped mould of what park authorities think of as "traditional". Often, the very premise for the establishment of protected areas has been antagonistic towards traditional practices. The Ngorongoro Conservation Area, in **Tanzania**, is one example, where the priority of conservationists to protect the area's wildlife has led to prohibitions on grazing, hunting and cultivation by the people who live within its borders (**Africa** UNEP/CBD/WG8J/INF/3).

Flexibility is required above all in the management of national parks or other protected areas in which indigenous people and local communities live. Protected areas in **Italy**, subject to local planning regulations, allow for experimental models for conservation and sustainable development. Incentives are provided to traditional production activities with acknowledged compatibility with the local ecosystem.

Biosphere Reserves, established under the "Man and the Biosphere" (MAB) Programme, were officially launched by UNESCO in 1970 are of particular relevance. Biosphere Reserves are areas where people can maintain their traditional land use practices, as well as improve their economic well-being through the use of culturally and environmentally appropriate technologies. Such traditional systems are highly useful for conserving ancient breeds of livestock and old land races of crops, which are invaluable gene pools for modern agriculture.

Even where such flexibility is assured, however, the most effective course is close and equal cooperation between local populations of protected areas and the managing authorities, if not guaranteeing local populations a full and effective role in the management of protected areas. There are varying degrees to which access to traditional lands can be granted to indigenous peoples and local communities, and traditional knowledge thus maintained and *balanced* with the demands of local biodiversity.

Recommendation 20

The CBD should actively encourage Parties to recognise the land and sea tenures of indigenous peoples and local communities.

Recommendation 21

Actively involve local communities in the management of protected areas.

Recommendation 22

Incorporate restrictions of use and access to “sacred” or otherwise culturally significant sites into appropriate local or national legislation

9.5 Repatriation

The repatriation of culturally purposeful objects from museums has been an important issue in relationships between western museums and indigenous peoples in particular, and remains a contentious issue, although much progress has been made. A variety of artefacts have been returned by **European** museums to originating communities overseas. In the main, however, these repatriations have involved sacred objects, human remains or otherwise sensitive objects (**Europe and Russia** UNEP/CBD/WG8J/INF/7; see Simpson 1997)

The collaborative project between the Gwich'in Social and Cultural Institute and the Prince of Wales Northern Heritage Centre in **Canada** has helped to repatriate skills and knowledge no longer practised in the Gwich'in Settlement Area” (**North America** UNEP/CBD/WG8J/INF/8).

Any repatriation of *objects* that has been documented, however, appears to have little direct relevance to the preservation or promotion of traditional *biodiversity-related* knowledge. Repatriation of information is ongoing, and there are a number of recent examples presented in the regional reports, although the frequency of such activities is difficult to determine.

9.6 Problem of enforcement in developing countries

There are all too many examples of legislation which has been introduced that appears to offer much to indigenous peoples and traditional knowledge, but for one reason or another fails to deliver. The most common reason seems to be a lack of *enforcement* of existing legislation. It has already been stated that the vast majority of indigenous peoples live in developing countries, just as developing countries boast the highest levels of biodiversity, and it is clear that the issue of traditional knowledge among local communities is most pertinent to those communities which have not yet “fully developed” (i.e. forsaken their traditional knowledge in favour of western, scientific knowledge).

One significant problem for developing nations is the lack of resources available to governments. It is an unfortunate reality that the rights of indigenous peoples are not high priorities for many governments, and distance – both physically and socially – from the centre of power lessens the effectiveness of legislation in the relatively few instances in which it has been introduced.

It is estimated, for example, that nearly one hundred uncontacted peoples continue to live in the **Amazon Basin**, many of them having populations of less than 300 and under high risk of extinction (**South America** UNEP/CBD/WG8J/INF/10). The environment upon which these peoples depend is being lost at a dramatic rate, and yet the potential to provide aid remains severely limited as long as they are uncontacted.

In the context of **Africa**, (**Africa** UNEP/CBD/WG8J/INF/3) it is conceded that, while it is in many ways desirable to confer responsibility for *in situ* conservation on local/indigenous populations, these communities may not have the capacity to protect their lands from threats such as illegal exploitation from outsiders.

Recommendation 23

Legislation to protect, promote or facilitate the use of traditional knowledge must be enforced and enforceable in order to be effective.

There is a fine balance to be negotiated here. State intervention can be necessary to enforce legislation or customary law in the face of external encroachment. However, the state itself may not always be in a position to provide such support. Where such intervention is possible, moreover, it may not always be the

best option. In fact, examples from all regions show that the state of retention of traditional knowledge, and its impact on the local biodiversity, can be quite healthy. In such a situation intervention is *unnecessary* and, especially when it involves greater involvement of government or outside agencies, even *counterproductive*.

9.7 Legislation

Appendix 2 provides an outline of existing legislation which impacts on issues relevant to Article 8(j), as it has been documented in the regional reports.

In Europe as a whole, *specific* legislation directed towards traditional knowledge has not been implemented or even drafted. A number of Parties emphasise that, although no specifically targeted legislation has been developed, some legislative provision does deal with traditional knowledge indirectly. A substantial number of European Parties have expressed enthusiasm for the development of *sui generis* systems to protect traditional knowledge in principle. However, most do not consider such measures relevant to their own national context. Worldwide, from the information provided in the regional reports, the development of *sui generis* systems of protection remains in its infancy, and an assessment of processes claimed to be currently underway is not possible as yet (**Europe and Russia** UNEP/CBD/WG8J/INF/7).

9.8 Rights and legal recognition

Indigenous peoples' right to exist as a culturally distinct group within the nation state receive insufficient recognition throughout the world. The International Labor Organization's *Convention (No. 169) concerning Indigenous and Tribal peoples in Independent Countries* recognises indigenous people's rights to existence as a culturally distinct population within a nation state, to retain their customs, traditions and "customary laws". It recognises, moreover, the right to "self-determination", i.e. that indigenous identity is something that a group can take upon themselves.

ILO 169 is the only legally binding piece of international legislation on indigenous people's rights. It's predecessor, ILO 107, the *Indigenous and Tribal Peoples Convention 1957*, was ratified by only 27 nations. In what would appear to be a somewhat retrograde step, ILO 169 has to date been ratified by only 17 nations: **Argentina, Bolivia, Brazil, Colombia, Costa Rica, Denmark, Dominica, Ecuador, Fiji, Guatemala, Honduras, Mexico, Norway, Paraguay, Peru, the Netherlands and Venezuela.**

The **Venezuelan** Congress endorsed the ILO 169 in December 2000, but the full legal procedures have yet to be followed bringing this into law. The USSR signed ILO convention 169 in 1989, and since then has taken steps such as convening a Congress of Northern Indigenous Peoples (in March 1990), and drafting several federal laws on the rights of Indigenous people (Murashko 1999). However, the **Russian Federation** has not yet informed the ILO of its adherence to the convention. In terms of domestic legislation, too, many draft laws have been rejected by the Russian parliament, the *Duma* (UNEP/CBD/WG8J/INF/7).

The regional report on **South America** discusses the fragility of indigenous people's legal status, referring specifically to the great disparity in recognition of indigenous people, and lack of legal provisions for transboundary ethnic groups. This fragility affects the implementation of measures which seek to protect indigenous peoples interests and rights, including those over their traditional knowledge and practices. Addressing the parlous state of indigenous peoples' legal recognition thus must be seen as a priority if Article 8(j) is to be successfully implemented (UNEP/CBD/WG8J/INF/10).

Recommendation 24

The Working Group should encourage Parties to ratify ILO 169

We have not data on the legal recognition of minorities or indigenous people in the **Middle East**. The Constitution of **Australia** (UNEP/CBD/WG8J/INF/4) confers no special status on indigenous people.

In **Africa**, the constitutional recognition of indigenous peoples' rights is rarely assured. No African state has ratified ILO 169, although a number of states (**Angola, Egypt, Ghana, Guinea-Bissau, Malawi and Tunisia**) are signatories to ILO 107. However, the African report also highlights that even where "indigenous" status *is* recognised, such recognition can be equally damaging when not accompanied with respect for their *rights*. Pastoralists such as the Maasai have been accused by successive colonial and post-colonial governments of damaging the environments in which they live, such accusations serving to justify gradual erosion of their traditional activities and in some cases expropriation from their traditional lands.

9.9 International activities

International organisations undertaking activities of particular relevance include BGCII (e.g. conservation of medicinal plants), FAO (e.g. forest conservation), IPGRI (e.g. conservation of underutilised crops), UNEP-WCMC (e.g. biodiversity information management), UNESCO.

UNESCO's *Preliminary Draft International Convention for the Safeguarding of the Intangible Cultural Heritage* has the potential to make a dramatic impact on the control of access, and therefore the retention of, traditional knowledge. The Convention will stress the safeguarding of oral traditions and expressions, including language as a vehicle of the intangible cultural heritage, performing arts, social practices, rituals and festive events, knowledge and practices about nature and the universe, and traditional craftsmanship. It will also stipulate the drawing up of national inventories by States Parties and the establishment by UNESCO of a Representative List of the Intangible Heritage of Humanity and of a second list of Intangible Cultural Heritage in Need of Urgent Safeguarding. This concerted action by the international community should ensure better visibility and improved safeguarding of this particularly vulnerable heritage. Currently little information is available on this draft convention but it has the potential to be highly relevant.

A comprehensive study of existing relevant activities undertaken by these organisations could lead to improved synergy between these.

The Global Strategy for Plant Conservation, an international initiative endorsed by the CBD provides a framework for actions to be undertaken by a wide range of implementing agencies and includes targets relevant to this project, including:

- Target 9. 70% of the genetic diversity of crops and other major socioeconomically valuable plant species conserved, and associated indigenous and local knowledge maintained
- Target 13. The decline of plant resources, and associated indigenous and local knowledge, innovations and practices that support sustainable livelihoods, local food security and health care, halted

This could be considered as a model for development of a comparable Global Strategy to support implementation of activities covered by Article 8j. Alternatively or additionally, the Working Group on 8j could consider offering to act as the lead or co-ordinator on implementation of these two targets.

Recommendation 25

Undertake survey of current activities of International organisations relevant to 8j, with view to developing synergy (also mentioned as the subject of Phase II, activity 6.1)

Recommendation 26

Develop a Global Strategy to support the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biological diversity

Recommendation 27

Working group to act as, or identify candidate to lead or co-ordinate implementation of targets 9 and 13 of the Global Strategy for Plant Conservation

10 Summary – Assessment, Feasibility, And further recommendations

One question which this composite report was intended to tackle was the *feasibility* of using traditional knowledge and practices to enhance existing efforts by non-traditional knowledge holders to sustainably use and conserve biodiversity. It would seem that this question divides into two: on one hand, is it *practically* feasible to employ – and perhaps adapt - such knowledge, whatever the ends? On the other hand, is it *ethically* or *morally* appropriate to “use” or “exploit” such knowledge in this way?

Issues of compatibility have been repeatedly raised in this report. In the case of traditional medicine in particular, there is an argument that the transfer of traditional medicinal knowledge across communities could be irrelevant, or even harmful, outside its original contexts. Western science, it is argued, cannot appreciate traditional cultures. Without clear understanding, attempts to record, document and transfer TK could disempower indigenous people (**South America** UNEP/CBD/WG8J/INF/10).

The final qualification to all the examples and recommendations presented in this report is that situations vary from region to region, country to country, people to people and even within ethnic groups and communities. An approach that would be of use in one instance may be ineffective, even disastrous, in another. It is essential, therefore, that initiatives remain local in focus, and are tailored to specific communities rather than relying on generalised approaches.

11 Recommendations relating to subsequent phases of the composite report

The Notification requested that this Phase 1 Composite Report should include recommendations if necessary, to revise the outline of the subsequent phases of the report as contained in Annex I of decision VI/10. The work undertaken so far does not suggest that any of the topics proposed for subsequent phases are redundant.

In Phase 1, access to and ownership of land has been discussed as a major issue in relation to traditional knowledge, and particularly that which is related to biodiversity. This is a large, complicated and contentious issue which requires further research and consideration. It is suggested that it will form a significant part of the work of the next phase.

The importance of language retention as an indicator of traditional knowledge retention, and as a means toward preserving and promoting traditional knowledge use, has also been highlighted in Phase 1. This is also a broad and complex topic, which will require further detailed investigation in the subsequent phase of this report.

One further suggestion regarding the structure of the Phase 2 reporting is that attention be paid to traditional knowledge, folklore and cultural practices which do not appear to be directly relevant to the conservation and sustainable use of biodiversity. It has been argued in this report that such beliefs and practices constitute indicators of the retention of other forms of traditional knowledge. Moreover, they are often a facet of holistic knowledge systems, without which “traditional biodiversity-related knowledge” cannot be properly understood. It is therefore suggested that such information be included within the next phase of the Composite Report.

Appendix 1: Countries by region with data from Regional Reports

Country	Party to CBD	Signatory to ILO 169 or ILO 107	Priority given to implementation of Article 8(j) ¹	Indigenous population	Indigenous Peoples
Africa					
Algeria	ratified				
Angola	ratified	107			
Benin	ratified		High		
Botswana	ratified				
Burkina Faso	ratified		High		
Burundi	ratified				
Cameroon	ratified		High		
Cape Verde	ratified				
Central African Republic	ratified				
Chad	ratified				
Comoros	ratified		High		
Congo	ratified		High		
Côte d'Ivoire	ratified				
DR of Congo	ratified		High		
Djibouti	ratified		High		
Egypt	ratified	107			
Equatorial Guinea	accession				
Eritrea	accession				
Ethiopia	ratified		High		
Gabon	ratified				
Gambia	ratified				
Ghana	ratified	107			
Guinea	ratified				
Guinea – Bissau	ratified	107			
Kenya	ratified				
Lesotho	ratified				
Liberia	ratified				
Libyan Arab Jamahiriya	ratified				
Madagascar	ratified		High		
Malawi	ratified	107	High		
Mali	ratified				
Mauritania	ratified				
Mauritius	ratified				
Morocco	ratified		High		

¹ According to Second National Report to CBD

Country	Party to CBD	Signatory to ILO 169 or ILO 107	Priority given to implementation of Article 8(j) ¹	Indigenous population	Indigenous Peoples
Mozambique	ratified				
Namibia	ratified		High		
Niger	ratified		High		
Nigeria	ratified				
Rwanda	ratified				
São Tomé and Príncipe	ratified				
Senegal	ratified				
Seychelles	ratified				
Sierra Leone	accession				
Somalia	x				
South Africa	ratified				
Sudan	ratified				
Swaziland	ratified				
Tanzania	ratified				
Togo	acceptance				
Tunisia	ratified	107			
Uganda	ratified		High		
Zambia	ratified				
Zimbabwe	ratified				
Asia, Australia and Middle East					
Afghanistan	ratified				
Armenia	acceptance				
Australia	ratified			2.2%	
Azerbaijan	approval				
Bahrain	ratified				
Bangladesh	ratified	107			
Bhutan	ratified				
Brunei Darussalam	x				
Burma	ratified			11 million (30%)	60 groups
Cambodia	accession			1%	
China	ratified		High		
Democratic People's Republic of Korea	approval				
India	ratified	107	High		
Indonesia	ratified			3 million (1.5%)	300 groups
Iran (Islamic Republic of)	ratified				

Country	Party to CBD	Signatory to ILO 169 or ILO 107	Priority given to implementation of Article 8(j) ¹	Indigenous population	Indigenous Peoples
Iraq	x	107			
Israel	ratified				
Japan	acceptance			24,000	Ainu
Jordan	ratified				
Kazakhstan	ratified				
Kyrgyzstan	accession				
Lao PDR	accession			0.8 million (23%)	67 groups
Lebanon	ratified		High		
Malaysia	ratified			2 million (11.1%)	71 groups
Maldives	ratified				
Mongolia	ratified				
Nepal	ratified				
Oman	ratified				
Pakistan	ratified	107			
Philippines	ratified			6.5 million (16%)	50 groups
Qatar	ratified				
Republic of Korea	ratified				
Saudi Arabia	accession				
Singapore	ratified				
Sri Lanka	ratified		High		
Syrian Arab Republic	ratified	107	High		
Tajikistan	accession				
Thailand	(signed)			0.5 million (1%)	23 groups
Turkmenistan	accession				
Uzbekistan	accession				
Viet Nam	ratified			9 million (13%)	54 groups
Yemen	ratified				
Caribbean					
Antigua & Barbuda	ratified				
Bahamas	ratified				
Barbados	ratified				
Cuba	ratified	107	High		
Dominica	ratified			5,000	Carib
Grenada	ratified				
Haiti	ratified	107			
Jamaica	ratified				
Saint Kitts & Nevis	ratified				

Country	Party to CBD	Signatory to ILO 169 or ILO 107	Priority given to implementation of Article 8(j) ¹	Indigenous population	Indigenous Peoples
Saint Lucia	accession				
Saint Vincent & the Grenadines	accession			6,000	Carib
Trinidad & Tobago	ratified				
Central America					
Belize	ratified			27,300 (13.65%)	Maya (10.6%), Garifuna (6.1%)
Costa Rica	ratified	169		24,300 (0.75%)	Guayami (Ngobe)
Dominican Republic	ratified	107			
El Salvador	ratified	107		88,000 (1.69)	Amerindian
Guatemala	ratified	169		4,945,511 (48.01%)	Maya
Honduras	ratified	169		630,000 (11.88%)	Garifuna
Nicaragua	ratified			326,000 (7.59)	Amerindian
Panama	ratified	107	High	194,719 (7.78%)	Guayami (Ngobe)
Europe					
Albania	accession				
Andorra	x				
Austria	ratified				
Belarus	ratified				
Belgium	ratified	107			
Bosnia & Herzegovina	accession				
Bulgaria	ratified		High		
Croatia	ratified				
Cyprus	ratified				
Czech Republic	approval				
Denmark (Greenland)	ratified	169	High	56,000 (87%)	Inuit
Estonia	ratified				
Finland	acceptance		High	6,500	Saami
France	ratified		High		Basque
FYROM (Macedonia)	accession				
Georgia	accession				
Germany	ratified		High		
Greece	ratified				

Country	Party to CBD	Signatory to ILO 169 or ILO 107	Priority given to implementation of Article 8(j) ¹	Indigenous population	Indigenous Peoples
Holy See	x				
Hungary	ratified				
Iceland	ratified				
Ireland	ratified				
Italy	ratified				
Latvia	ratified				
Liechtenstein	ratified				
Lithuania	ratified				
Luxembourg	ratified				
Malta	ratified				
Moldova	ratified				
Monaco	ratified				
Netherlands	acceptance	169			
Norway	ratified	169		60,000	Saami
Poland	ratified				
Portugal	ratified	107			
Romania	ratified		High		
Russian Federation	ratified	No ²		1,646,500	86 groups
San Marino	ratified				
Serbia & Montenegro	ratified				
Slovak Republic	approval				
Slovenia	ratified				
Spain	ratified		High	2,123,000	Basque
Sweden	ratified			20,000	Saami
Switzerland	ratified				
Turkey	ratified				
UK	ratified				
Ukraine	ratified				
North America					
Canada	ratified			976,305 (3.3%)	
Mexico	ratified	169	High	8,701,688 (9.47%)	Maya
USA	(signed)			1.5%	Hawaiians
Pacific					
New Zealand	ratified			14%	Maori
Fiji	ratified	169	High		
Marshall Islands	ratified		High		

² The Soviet Union also endorsed the Convention in 1989 but the Russian Federation has yet to inform the ILO of its adherence to the Convention

Country	Party to CBD	Signatory to ILO 169 or ILO 107	Priority given to implementation of Article 8(j) ¹	Indigenous population	Indigenous Peoples
Micronesia (Fed States)	ratified		High		
Nauru	ratified				
Niue	accession		High		
Palau	accession				
Papua New Guinea	ratified				
Samoa	ratified		High		
Solomon Islands	ratified		High		
Tonga	accession				
Tuvalu	ratified				
Vanuatu	ratified		High		
South America					
Argentina	ratified	107 169 ³		372,996 (1.1%)	mestizo Amerindian
Bolivia	ratified	107 169		4,142,187 (24.85%)	Quechua (30%), Aymara (25%) Ayoreo (Chaco)
Brazil	ratified	107		254,453 (0.6%)	Kraho Tupinamba Guaja Awá
Chile	ratified			989,745 (7.06%)	Amerindian
Colombia	ratified	169		620,052 (1.74%)	Choco (incl. Embera & Waunana), Kuna, Awa, Pererara- Siadipara, Yukuna, Tanimuka
Ecuador	ratified	169		2,634,494 (25%)	Chachi, Awa, Eperarar, Afro-American, Shuar, Quichua, Achuar, Secoya

³ Ratification documents were not deposited with the ILO

Country	Party to CBD	Signatory to ILO 169 or ILO 107	Priority given to implementation of Article 8(j) ¹	Indigenous population	Indigenous Peoples
French Guiana				4,100 (3.64%)	
Guyana	ratified			45,500 (5.64%)	Akawaio, Arawak, Aracuna, Carib, Macushi, Patamona, Wai-Wai, Wpishiana, Warrau
Paraguay	ratified	169		94,456 (1.96%)	Enxet (17,000) mestizo
Peru	ratified	169		8,793,295 (38.45%)	Machiguenga
Suriname	ratified			14,600 (3.34%)	Maroons (10%), Amerindian (2%)
Uruguay	ratified			8%	mestizo
Venezuela	ratified	107 ⁴ 169 ⁵		315,815 (1.48%)	

⁴ Venezuela has incorporated ILO Convention 107 into national law but has not registered its adherence to the Convention with the International Labour Office

⁵ The Venezuelan Congress endorsed the Convention in December 2000 but the full legal procedures have yet to be followed bringing this into law

Appendix 2

INFORMATION ON LEGISLATION FOR EACH PARTY RELEVANT TO INDIGENOUS KNOWLEDGE

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
Africa					
Benin				Benin's second National report refers to legislation, also in the draft stage, on access to genetic resources, benefit sharing and the protection of traditional knowledge. (Benin NR2)	
Botswana		<p>In western Botswana, the Tribal Land Act (1970) ended the tradition of obtaining land and resources through self allocation, and the granting of land to San by headmen and chiefs. The Act required people to apply to the land board, or the sub-land board (for arable or residential land). This has encouraged the mapping of lands, which has often assisted in securing title (Hitchcock 2001:45; see section 2.5)</p> <p>The Tribal Grazing Land Policy (1984) created commercial leasehold ranches which aim to protect pastures from poor management (Botswana 1998:20).</p> <p>The controversial evictions of the San Bushmen from their lands in 2002 have drawn global attention to the condition of indigenous peoples in the region.</p>			
Cameroon		<p>The Land Tenure Act of 1974 abolished the concept of "native" and customary" lands. Following the Act, the government has legal title to indigenous land, and indigenous peoples have user rights, i.e. are free to exercise their customary rights within reserves, farmland, pastures, fishing territories etc (Bokwe et al:1, 13). However, the Land Tenure Act only guarantees indigenous peoples' rights to occupy these lands "until such a time as the state has assigned the land to a specific purpose." Thus in most of Cameroon's protected areas, such as the</p>			Cameroon has signed agreements with member states of the OAPI (African Intellectual Property Organization). However (Cameroon 1997:67), there is no national legislation on Intellectual Property Rights related to biological diversity. Cameroon's first National Report outlines the need for a <i>sui generis</i> system to affirm and protect traditional ecological knowledge, and to prevent biopiracy.

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
		Dja Faunal Reserve – a World Heritage Site and Biosphere Reserve with a scattered Pygmy population – local populations live in fear of imminent expropriation or eviction from the ancestral lands which they no longer legally own.			
Democratic Republic of Congo		In the Democratic Republic of Congo indigenous people's land rights are not properly recognised (Democratic republic of Congo 1997;2002).			
Ethiopia				Ethiopia has drafted legislation based on the African Model Law for the Protection of the Rights of Local Communities, Farmers and Plant Breeders, and for the Regulation of Access to Biological Resources (Ethiopia NR2).	
Lesotho		Under the traditional land tenure system of Lesotho (in which the Basotho are the only 'indigenous' tribe), land was administered and allocated by chiefs and no one held freehold title to land. After independence, this system was maintained; land being regarded as property of the nation. The 1979 Land Act introduced leases, titles and other institutions of land administration to deal with "land use mismanagement", and removed the traditional authority of chiefs over land (Nthunya 2002:137).			
Namibia				In Namibia, numerous items of legislation have been drafted, including the draft Act on Access to Biological Resources and Associated Traditional Knowledge, which provides for the practice of prior informed consent, protection under "Community Intellectual Rights" and "Farmer's Rights".	
Tanzania		Land tenure in Tanzania is essentially defined by the Land Ordinance of 1923. The Arusha declaration of 1967 declared all lands in Tanzania to be "public lands", under the control of the President who must ensure all lands are held and administered for the use and common benefit of native			

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
		<p>Tanzanians, but village authorities have been gradually giving up land to commercial farmers and corporations without Presidential consent. (Ben Lobulu 1999:64). Tanzanian courts recognise the equal status of Deemed Rights of Occupancy (customary title), and Granted Right of Occupancy (legal title). Indigenous communities' ownership of pastures can be verified in the courts on proof of the existence of relevant customary laws. However, the courts do not recognise statutory corporate bodies, such as village councils, as holders of collective customary title. To make a claim either a representative must be filed, listing all potential beneficiaries, or all the beneficiaries must appear in court. Since organising such a potentially large group of people can take time, and claims are invalid three years from the instance of the claim, this can present difficulties for claimants(W Ringo Tenga 1999:60).</p>			
Zimbabwe					<p>Zimbabwe has no policy or legal framework governing intellectual property rights, nor any legal mechanisms that control access to genetic resources, or protect and reward traditional knowledge and innovations related to the conservation and development of genetic resources (Zimbabwe NBSAP:118).</p>
Australia, Asia and Middle East					
Australia	<p>The lack of rights afforded indigenous peoples in the Constitution – and the fact that it makes no mention of the special status of indigenous people – falls short of full protection for indigenous peoples and their knowledge.</p>	<p>The social project thrust upon the Australian legislature by the High Court decision in Mabo No 2 (1992) and Wik (1996) is to accommodate Aboriginal land tenure systems alongside the Australian system and, thus, to accommodate the cultural, social and economic differences which arise from the existence of parallel or plural legal systems. The Native Title Act 1993 represented the legislative response to Mabo No 2 (1992); however the denial of the property</p>			<p>The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system of sui generis protection for plant breeders is designed to ensure that commercial plant innovations [are protected]. China, Australia, Korea and Japan are UPOV members.</p> <p>Australia, Japan and China have also granted patent rights over plant varieties. Lebanon has also</p>

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
		rights of indigenous people which resulted from amendments to the Act in 1998 has raised concerns about its constitutionality and lack of compliance with international conventions on racial discrimination (Langton et al 1998). Although the Native Title Act 1993 provides for sea rights of indigenous Australians, in practice the High Court has declined to grant exclusive sea rights to indigenous sea estates (see Commonwealth v Yarmirr, 2001).			implemented a law regarding plant varieties.
Bangladesh	Bangladesh's draft Biodiversity and Community Knowledge Protection Act 1998 represents a strong commitment to the protection of indigenous and local peoples' rights.				Bangladesh's draft Plant Varieties Act 1998 is to be read in conjunction with the protections for indigenous people in the Biodiversity and Community Knowledge Protection Act and in no way should abrogate rights afforded under that Act. It is limited to the commercial exploitation of plants. It therefore represents a response to international obligations such as TRIPS which aims to balance commercial plant breeders' rights with the protection of traditional knowledge.
Bhutan				Bhutan has also placed restrictions on the export of traditional (and over-exploited) products through the National Plant Quarantine Act 1993.	
Cambodia		Cambodia is reviewing existing legislation concerning biodiversity, including by-laws and regulations under the 1996 Law on Environmental Protection and Natural Resource Management. The guiding principle for these reviews acknowledges the need to strengthen laws relating to land property rights , protected areas and intellectual property, and to facilitate community-based natural resource management in all sectors.			
China	The Constitution of the Peoples' Republic of China vests responsibility with the State to guarantee rights and provide assistance for minority nationalities. Article 4 states: "The state protects the lawful rights and interests of the minority nationalities	The Chinese provincial Peoples' Congresses have also implemented local laws covering specific land and resource management issues in provincial regions (see, for example, the Enforcement Regulations Regarding Management of Forests in			The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system of sui generis protection for plant breeders is designed to ensure that commercial plant innovations [are

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
	and upholds and develops a relationship of equality, unity and mutual assistance among all of China's nationalities..."	Guangdong Province; the Provisional Rules Regarding the Protection of Rare and Endangered Wild Plants in Liaoning Province; Provisional Rules Regarding Management of Wildlife in Jilin Province; Regulations on Nature Reserves in Zhejiang Province).			protected]. China , Australia, Korea and Japan are UPOV members. Australia , Japan and China have also granted patent rights over plant varieties. China's most recent legislation relating to the protection of traditional knowledge is the Regulation on the Protection of New Varieties of Plants (1999) and the associated Rules for its implementation (in forestry and agricultural sectors).
India		In India, the Wildlife Protection Act 1972 confers hunting rights to Scheduled Tribes in India.	The Indian Constitution provides for the Administration of Tribal Areas in the States of India. Certain regions are declared Autonomous States under the Constitution, which enables regional customary laws to be recognized and implemented in these States.	The Indian Protection of Plant Varieties and Farmer's Rights Act 2001 requires breeders to deposit seed of the registered variety in the National Gene Bank (Article 27(1)). Through the establishment of a gene fund (see Article 41), the Act provides for benefit-sharing between plant breeders and village or local communities for their contributions to the evolution of the variety. In response to these issues, India has enacted the Biodiversity Act 2002 which provides for the conservation of biological diversity, the sustainable use of its components, and the equitable sharing of the benefits arising out of the use of biological resources.	The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system of sui generis protection for plant breeders is designed to ensure that commercial plant innovations [are protected]. China, Australia, Korea and Japan are UPOV members (India has initiated for UPOV membership and several countries are in touch with UPOV in the development of their national legislation for the protection of plant varieties: Vietnam, Pakistan, Oman, Malaysia, Sri Lanka, and Saudi Arabia). In India, the protection of bio-resources and associated knowledge has been addressed in the Patents (Second Amendment) Act 2002. It is evident that India is a world leader in the development of specific legislative mechanisms to protect traditional knowledge. As early as 1994, the Indian Karnataka Community Intellectual Rights Bill proposed a sui generis system in respect of plant varieties in the territory of Karnataka, India, which explicitly recognises community rights.
Indonesia	The Indonesian Constitution recognises indigenous institutions, as well as organizations, mechanisms, laws, rights and obligations within the institutional system of the indigenous peoples. Although the Indonesian Constitution recognizes the existence of traditional	In Indonesia, recent reforms to the Forestry Law (1999), the Local Government Law No. 22, 1999 (recognizing the adat structures and territorial rights of indigenous peoples) and the Minister of Agrarian Affairs Decree No. 5, 1999 (providing for indigenous land rights) would seem to			

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
	political entities derived from the cultural systems of the indigenous peoples of Indonesia, Alcorn and Royo (2000) argue that laws implemented by the central Indonesian government under President Suharto undermined the constitutional protections afforded to indigenous people.	afford legislative protection to customary governance and land tenure. However, at least in relation to the Forestry Law, ambiguity surrounds the administrative implementation and enforcement arrangements.			
Japan	In Japan, the Ainu people of Hokkaido are not identified in the Constitution but are recognised as a distinct cultural group under the Promotion of Ainu Culture and Dissemination of Knowledge of Ainu Traditions Act 1997.	The Promotion of Ainu Culture and Dissemination of Knowledge of Ainu Traditions Act 1997 requires government to develop programs for promoting Ainu culture and traditions but falls short of granting Ainu protections for land or recognition of them being holders of traditional knowledge.			The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system of <i>sui generis</i> protection for plant breeders is designed to ensure that commercial plant innovations [are protected]. China, Australia, Korea and Japan are UPOV members. Australia, Japan and China have also granted patent rights over plant varieties. Japan has been a key player in the development of international agreements regulating the use of intellectual property. Consequently Japan has a well developed system of intellectual property rights and seeks to protect indigenous knowledge through these structures. Japan's recently enacted patent laws do not address issues of traditional knowledge protection.
Lao PDR		In Laos PDR, the Order 54/MAF on the Customary Rights and Use of Forest Resources (1996) secures legal rights for local people to use forest resources for subsistence, including the hunting and fishing of non-protected species.			
Lebanon					Lebanon has implemented a law regarding plant varieties.
Malaysia		In the Malaysian state of Sarawak, while customary land rights are recognised by the Sarawak Land Code, they are poorly defined and vague on the ground.	While Malaysia's constitutional system ensures local governance for local communities, the fragmentation of legal control in relation to traditional knowledge has resulted in unequal distribution of rights for indigenous peoples and local communities. State law-making powers in respect of traditional knowledge, local land management and intellectual	No legislation specific to benefit sharing with indigenous people for the use of biological resources or traditional knowledge is currently in place. Some national access controls are in place for foreign researchers but they pre-date the CBD.	The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system of <i>sui generis</i> protection for plant breeders is designed to ensure that commercial plant innovation [are protected]. China, Australia, Korea and Japan are UPOV members (India has initiated for UPOV membership and several countries are in touch with UPOV in the development of their

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
			property are scattered between the various (national, state and municipal) competencies.		national legislation for the protection of plant varieties: Vietnam, Pakistan, Oman, Malaysia , Sri Lanka, and Saudi Arabia). In Malaysia, the draft Protection of Plant Varieties Act (1999) protects plant breeders' rights.
Mongolia	In the autonomous region of Mongolia, the Constitution (of China?) protects the rights of ethnic groups to practice their native tongues and cultural activities, within a constitutional framework of dominant State ownership.	The Mongolian Government under Resolution No. 125 of 1998 has implemented a licence system for the management of forests and use of forest resources (see, for example, the Law on Fees for the Harvest of Forest Timber and Fuelwood, Law on Natural Plant Use Fees, and Law on Hunting Reserve Use Payments). Since 1998 the Government had issued contracts of 20-40 years duration to 6 communities (FAO 2000).			
Nepal		A strong emphasis on the participation of local communities is evident in Nepal's Local Self Governance Act (1999) and the Forest Act (1993, and see also the Regulations, 1995). The forest legislation, which concerns the conservation, management and sustainable use of forests and forest resources, empowers communities to manage and police their own resources. In Nepal, the National Parks and Wildlife Conservation Act 1973, and particularly the 1993 amendments to that Act, provide for the establishment of parks and their 'buffer zones'. The Act ensures that local people are involved in planning and management decisions.			
Oman					The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system of sui generis protection for plant breeders is designed to ensure that commercial plant innovations [are protected]. China, Australia, Korea and Japan are UPOV members (India has initiated for UPOV membership and several countries are in touch with

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
					UPOV in the development of their national legislation for the protection of plant varieties: Vietnam, Pakistan, Oman , Malaysia, Sri Lanka, and Saudi Arabia).
Pakistan				Pakistan has drafted legislation on Access to Biological Resources and Community Rights which aims to protect and support the rights of local (and traditional) communities over biological resources and their related knowledges, innovations and practices (WIPO, 2002).	The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system of sui generis protection for plant breeders is designed to ensure that commercial plant innovations [are protected]. China, Australia, Korea and Japan are UPOV members (India has initiated for UPOV membership and several countries are in touch with UPOV in the development of their national legislation for the protection of plant varieties: Vietnam, Pakistan , Oman, Malaysia, Sri Lanka, and Saudi Arabia).
Philippines	In the Philippines, the adoption of the 1987 Constitution provided recognition and protection of rights for indigenous cultural communities (see Article XIV section 17). From this constitutional base, some innovative and progressive legislation to protect traditional knowledge have emerged.			Article XIV section 17 of the 1987 Constitution [of the Philippines], which enshrines the rights of indigenous cultural communities, has given rise to three notable instruments, namely: · Executive Order No 247 ‘Prescribing a Regulatory Framework for the Prospecting of Biological and Genetic Resources, their By-products and Derivatives, for Scientific and Commercial Purposes, and for Other Purposes’ (1995);	
Qatar					In relation to intellectual property, Article 39 of the Qatar Copyright Law No. 25 of 1995 provides for the protection of folklore matters whereby the State ‘shall endeavour to protect the national folklore by all legal means and methods and shall exercise the authors’ rights in works of folklore...’ Qatar is party to the Gulf Cooperation Patent Law but does not have its own statute regarding patents.
Republic of Korea	The Republic of Korea, similar to other nations in the region, does not recognize any groups classified as indigenous people which are				The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
	considered, in a legal sense, differentially to the interests of the nation state.				of sui generis protection for plant breeders is designed to ensure that commercial plant innovations [are protected]. China, Australia, Korea and Japan are UPOV members
Singapore	Singapore (as a relatively small land mass and a high density population) does not conceptualise indigenous peoples' or local communities' interests as distinct from those of the nation.				
Saudi Arabia					The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system of sui generis protection for plant breeders is designed to ensure that commercial plant innovations [are protected]. China, Australia, Korea and Japan are UPOV members (India has initiated for UPOV membership and several countries are in touch with UPOV in the development of their national legislation for the protection of plant varieties: Vietnam, Pakistan, Oman, Malaysia, Sri Lanka, and Saudi Arabia).
Sri Lanka					The Sri Lankan Ministry of Health and indigenous Medicine is currently reviewing the existing legislation with a view to strengthening the protection of traditional knowledge relating to the use of medicinal plants. The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system of sui generis protection for plant breeders is designed to ensure that commercial plant innovations [are protected]. China, Australia, Korea and Japan are UPOV members (India has initiated for UPOV membership and several countries are in touch with UPOV in the development of their national legislation for the protection of plant varieties: Vietnam, Pakistan, Oman, Malaysia, Sri Lanka , and Saudi Arabia).

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
Syrian Arab Republic					The Biodiversity Strategy and Action Plan for the Syrian Arab Republic (included as part of the First National Report, 1997: 32) identifies the development of legislation to safeguard intellectual property rights and genetic resources of local plants and animals as one of its strategic objectives.
Thailand		The Thai Constitution was amended in 1997 to provide local communities with a more substantive role in managing their own resources (Vivajsirin et al 2002:266-7). The Community Forest Act 1996, which has not yet been enacted, would further strengthen the traditional management structures of indigenous peoples in forest areas. Although it is not an Act intended to affect land rights, it provides a legislative protection of indigenous people's rights to manage and (within limits) use the resources of forests.		The Thai Plant Varieties Protection Act (1999) contains protection for community varieties conserved and developed in a particular locality (ss43-51) and benefit-sharing provisions (s 52).	
Viet Nam					The Union International pour la Protection des Obtentions Vegetales (The Convention for the Protection of New Varieties of Plants-UPOV) system of sui generis protection for plant breeders is designed to ensure that commercial plant innovations [are protected]. China, Australia, Korea and Japan are UPOV members (India has initiated for UPOV membership and several countries are in touch with UPOV in the development of their national legislation for the protection of plant varieties: Vietnam , Pakistan, Oman, Malaysia, Sri Lanka, and Saudi Arabia).
Caribbean					
Central America					
Panama					Panama attaches great importance to the understanding that traditional knowledge in the public domain should be protected and that it rather should have the effect of positive protection, as it was the rationale behind the development of Panamanian Law (Law No. 20) for the protection for

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
					indigenous cultural knowledge. Panama has also noted that since existing systems of intellectual property protection could not provide comprehensive protection for traditional knowledge, further consideration should be given to the development of appropriate sui generis systems of protection.
Europe					
Denmark (Greenland)			The Faroe Islands (since 1948) and Greenland (since 1979) are self-governing overseas administrative divisions of the Kingdom of Denmark (since 1948). Each has its own parliament - the Landstinget in Greenland and the Faroese Logting.		
European Union		The Sami are granted exclusive rights to reindeer husbandry under the terms of the Treaty of Accession of Austria, Finland and Sweden to the European Union, 1994, Protocol No.3 on the Sami People, grants Saami exclusive rights to reindeer husbandry(European Union 1997:10, 2002; Sweden 1997:18).			
Finland	The Sami in Sweden and Finland are covered by the European Framework Convention for the Protection of National Minorities.	The Sami are granted exclusive rights to reindeer husbandry under the terms of the Treaty of Accession of Austria, Finland and Sweden to the European Union, 1994, Protocol No.3 on the Sami People (European Union 1997:10, 2002; Sweden 1997:18).	The Sami Parliament is a democratically elected body which provides political representation for Sami populations vis-à-vis the state. It cooperates with the Finnish Ministries of Agriculture and Forestry, Environment, Justice, Trade and Industry, and Labour, as well as the Finnish Forest and Park Service, to co-ordinate the management, use and protection of natural resources in regions inhabited by Sami (Finland 1997).		
Netherlands	The Netherlands ratified ILO 169 in 1998.				
Norway	Norway ratified ILO 169 in 1990. The Sami in Norway are not covered by the European Framework Convention for the Protection of National Minorities: "Saami Parliament		The Sameting, or Sami Parliament, established in 1987, is a democratically elected body which provides political representation for Sami		

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
	in fact recommended that the Saami were not listed as a minority but instead retained their legal status as an indigenous people” (Føllesdal 2001:105).		populations. Since 1997 a Deputy Minister in the Ministry of Local Government and Regional Affairs has dealt specifically with Sami issues.		
Russian Federation	The USSR signed ILO Convention 169 in 1989, and since then has taken steps such as convening a Congress of Northern Indigenous Peoples (in March 1990), and drafting several federal laws on the rights of Indigenous people (Murashko 1999). However, we have not found that the Russian Federation ever ratified Convention 169, and many draft laws have been rejected by the parliament (Duma).	A law enabling the establishment of “Territories of traditional natural resource use” (ZTPs/TTPs) was passed in 1999, and entered into force in 2001. Up to 2001, however, most applications for TTP status were rejected, and two that had been accepted were later annulled (the Noglikskii district and the “ethno-ecological refuge” Tkhsanom in the Koriak autonomous region).			
Sweden	The Sami in Sweden and Finland are covered by the European Framework Convention for the Protection of National Minorities.	The Sami are granted exclusive rights to reindeer husbandry under the terms of the Treaty of Accession of Austria, Finland and Sweden to the European Union, 1994, Protocol No.3 on the Sami People (European Union 1997:10, 2002; Sweden 1997:18). In 1994 the government rescinded Sami authority over hunting and fishing activities on Sami lands. Hunting and fishing is now unlimited on all government property (USDS 2001).	In Sweden, the Sami Parliament is called the Sametinget and is democratically elected to provide political representation for Sami populations. The Sametinget has functioned since 1993 as an advisory board to the government (USDS 2001) although there have been clear tensions with the state government (Baer 1996:19).		
North America					
Canada	In Canada, the 1982 amendments to the British North America Act included recognition and reaffirmation of existing aboriginal and treaty rights (section 35).	The Nisga’a Final Agreement provides that Nisga’a citizens have the right to harvest wildlife throughout the Nass Wildlife Area “in a manner that is consistent with the communal nature of the Nisga’a harvest for domestic purposes, and the traditional seasons of the Nisga’a harvest” .	In 1995 the Canadian Federal Government adopted a policy for the negotiation of self-government agreements. As a result, a number of self-government agreements have been concluded and approximately another 80 agreements are under negotiation. Concluded agreements include the Inuvialuit Final Agreement of 1984, the Umbrella Final Agreement with the Council for Yukon Indians of 1993, the 1992 Gwich’in and the 1993 Sahtu Dene and Métis Comprehensive Land Claim Agreements, and the Nisga’a Final Agreement of 1999. These agreements provide at least some opportunities for the indigenous peoples involved to		

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
			use and protect their traditional knowledge. Not all indigenous peoples in North America have been recognized as holding an inherent right to self-government, however. First Nations Bands operating under the Indian Act, most Métis communities and Tribes in the US not recognized by the federal government have significantly less autonomy to manage their own affairs.		
USA	Although there have been ups and downs in the relationships between the indigenous peoples in the United States and the American Government, today many indigenous peoples (Tribes) are officially recognized by the federal government.		As a result of their official recognition by the federal government many indigenous peoples (Tribes) have a degree of autonomy akin to that of self-governing indigenous communities in Canada. Not all indigenous peoples in North America have been recognized as holding an inherent right to self-government, however. First Nations Bands operating under the Indian Act, most Métis communities and Tribes in the US not recognized by the federal government have significantly less autonomy to manage their own affairs.		
Pacific					
South America					
Bolivia	Bolivia ratified ILO 169 in 1991	Most of the countries of the Amazon region, except for Suriname, undertook processes of demarcation, reparation and entitlement of lands. In some countries like Bolivia , Colombia, Brazil and Ecuador, vast extents of lands have been recognized, mainly in their respective Amazon areas In spite of the fact that there has been an advance in the entitlement of Amazon indigenous lands, there are still problems that jeopardize the socio cultural integrity of these people.			The Andean Community of Nations or Comunidad Andina(CAN) is a sub regional organization formed by Bolivia, Colombia, Ecuador, Peru and Venezuela. In the CAN environment two important decisions have been adopted regarding the intellectual and industrial property that involves topics relevant to the biological diversity and traditional knowledge: Decision 391: Common regime on access to the subscribed Genetic Resources. July 2, 1996; Decision 486: Common regime about Industrial Property. September 14,

Country	Recognition	Land	Self-governance	Access and benefit-sharing	Ownership
					<p>2000.</p> <p>From 1996 the Bolivian indigenous organisations have demanded participation in the decisions of the state related to these topics. In 1998, an inter institutional Agreement of Cooperation among the government's participants, indigenous organizations, peasants and the civil society was subscribed execute the Transitory Disposition of the Decision 391 of the CAN that establishes the elaboration of national studies in each one of the Member Countries. As a result of this agreement 16 workshops took place, which led to the production of a document which contains a national proposal for the protection of traditional knowledge.</p>
Brazil	<p>Brazil ratified ILO 169 in 2002. The Constitution of Brazil, adopted in 1988, assures territorial and cultural rights to the indigenous and black communities.</p>	<p>Most of the countries of the Amazon region, except for Suriname, undertook processes of demarcation, reparation and entitlement of lands. In some countries like Bolivia, Colombia, Brazil and Ecuador, vast extents of lands have been recognized, mainly in their respective Amazon areas In spite of the fact that there has been an advance in the entitlement of Amazon indigenous lands, there are problems that jeopardize the socio cultural integrity of these people.</p>			
Colombia	<p>Colombia ratified ILO 169 in 1991. The rights of indigenous people are enshrined in the country's constitution, and the rights of these people are consecrated in their constitutions. Legislation has been developed guaranteeing special rights for the Afro-American population.</p>	<p>Law 70 of Colombia develops the article 55, which is Transitory of the Constitution that recognizes the right to the collective entitlement of the territories, the participation of the black communities in the policies and the economic life of the country and the recognition and protection of the identity of the black people in Colombia (García n.d.). Most of the countries of the Amazon region, except for Suriname, undertook processes of demarcation, reparation and entitlement of lands. In some countries like Bolivia, Colombia, Brazil and Ecuador, vast extents of lands have been recognized, mainly in their respective Amazon</p>			<p>The Andean Community of Nations or Comunidad Andina(CAN) is a sub regional organization formed by Bolivia, Colombia, Ecuador, Peru and Venezuela. In the CAN environment two important decisions have been adopted regarding the intellectual and industrial property that involves topics relevant to the biological diversity and traditional knowledge: Decision 391: Common regime on access to the subscribed Genetic Resources. July 2, 1996; Decision 486: Common regime about Industrial Property. September 14, 2000. These Decisions have since been updated to consider issues specifically related to the protection of</p>

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		<p>areas. In spite of the fact that there has been an advance in the entitlement of Amazon indigenous lands, there are problems that jeopardize the socio cultural integrity of these people.</p>			<p>indigenous knowledge and access to it. However whilst advances have been made in the legislation for the rights of indigenous and rural peoples, there is still a long way to go. Colombia has been particularly active regarding the traditional knowledge and the important part it played in the development of the CAN's Decisions 345, 391 and 486. In spite of the fact that an internal regulation protects the traditional knowledge efficiently, policies and specific actions have not been established in this matter. This had led to a national process of investigation and discussion conducive to the Eighth Transitory Disposition of Decision 391.</p>
Costa Rica	Costa Rica ratified ILO 169 in 1993.			<p>: Costa Rica's Biodiversity Act punishes with severe fines the non-authorized access to biodiversity and traditional knowledge (section 112), and any agreement on these has to be performed through the Comisión Nacional de Gestión de la Biodiversidad (CONAGEBIO).</p>	
Ecuador	<p>Ecuador ratified ILO 169 in 1998. The rights of indigenous people are enshrined in the country's constitution, and special rights are guaranteed to the Afro-American population.</p>	<p>Most of the countries of the Amazon region, except for Suriname, undertook processes of demarcation, reparation and entitlement of lands. In some countries like Bolivia, Colombia, Brazil and Ecuador, vast extents of lands have been recognized, mainly in their respective Amazon areas. In spite of the fact that there has been an advance in the entitlement of Amazon indigenous lands, there are problems that jeopardize the socio cultural integrity of these people. Part of the Policies and National Strategy of Biodiversity of Ecuador guarantees: · The rights of community such as land and territories of indigenous people, Afro-Ecuadorians, local communities, and exercise the rights and responsibilities as individuals and as a collective group;</p>	<p>In Ecuador indigenous organizations presented to the Congress a Law proposal on Collective Rights. This project contained provisions "to rule the development, coordination and harmonization of the institutions of indigenous peoples that self define themselves like nationalities of ancestral roots, and at the same time regulates the interrelation with the State institutions, and it guarantees the enjoyment and the exercise of their constitutional rights." It is a Law concerning the different collective rights such as territorial and self-government (Chávez 2003), and incorporates the transfer of cultural and historical patrimony to the indigenous people.</p>	<p>Part of the Policies and National Strategy of Biodiversity of Ecuador guarantees: · The fair and equitable distribution of the derived benefits from the conservation and sustainable use of biodiversity. The necessity of urgently developing norms to operationalize the constitutional command that guarantees the right starting from the peoples to the collective intellectual property of their ancestral knowledge (Ministry of the Atmosphere 2001: 60) is emphasised.</p>	<p>The Andean Community of Nations (abbreviated CAN for Comunidad Andina) is a sub regional organization formed by Bolivia, Colombia, Ecuador, Peru and Venezuela. In the CAN environment two important decisions have been adopted as regards to the intellectual and industrial property that involves topics relevant to the biological diversity and traditional knowledge: * Decision 391: Common regime on access to the subscribed Genetic Resources. July 2, 1996; * Decision 486: Common regime about Industrial Property. September 14, 2000. The Law of Intellectual Property, harmonized with the Common Regime of Industrial Property, established by means of the Decision 486 of the CAN, indicates in Article 377, under the Title of the Collective Rights, establishment of a sui generis system of collective intellectual rights of the ethnic and local communities. Their protection,</p>

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					mechanisms of valuation and application will be held to a special Law that will be dictated to that effect. The Constitution of Ecuador establishes the rights: "9. To the collective intellectual property of their ancestral knowledge, their valuation, use and development according to the law"
Guyana		Most of the countries of the Amazon region, except for Suriname, undertook processes of demarcation, reparation and entitlement of lands. In Venezuela and Guyana , the natives are the ones who are carrying out the demarcation of their territories. In spite of the fact that there has been an advance in the entitlement of Amazon indigenous lands, there are problems that jeopardize the socio cultural integrity of these people.		Guyana does not have any specific regulations concerning the access to genetic resources and on rights of the indigenous peoples related with the traditional knowledge of biodiversity. However, there are official documents, positions and policy lines that suggest the necessity to establish norms in this respect.	
Paraguay	Paraguay ratified ILO 169 in 1993.				
Peru	Peru ratified ILO 169 in 1994, and the rights of indigenous people are set out in its constitution. Panama has promulgated the Collective Rights of the Indigenous People Act in 2000 (Act N° 20) but it does not include traditional biodiversity-related knowledge. Its legal scope is restricted to cultural textiles and drawings goods.		In Peru, during the reformation of the Political Constitution in 1993, the representatives of different indigenous organizations of the country, jointly with representatives of the Afro Peruvians people, presented a concerted proposal with positions regarding principles and fundamental rights of these people and communities. Among others, such topics are approached such as: autonomy, self-government and administration of justice, prior consultation and informed consent.		The Andean Community of Nations or Comunidad Andina(CAN) is a sub regional organization formed by Bolivia, Colombia, Ecuador, Peru and Venezuela. In the CAN environment two important decisions have been adopted regarding the intellectual and industrial property that involves topics relevant to the biological diversity and traditional knowledge: Decision 391: Common regime on access to the subscribed Genetic Resources. July 2, 1996; Decision 486: Common regime about Industrial Property. September 14, 2000. Act N° 27811 (August 2002) aims to protect collective knowledge on biological resources for the benefit of its holders. It defines traditional biodiversity-related knowledge as the accumulated and intergenerational knowledge developed by indigenous communities and people on: properties, uses and characteristics of the biological diversity (section 2, c). The Law establishes a Regime of Protection of the Collective Knowledge of the Indigenous peoples linked to the.

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					Biological Resources. Peru is thus the first country to establish a wide legal norm to protect traditional knowledge
Suriname				Although there are no regulations or specific policies on the traditional knowledge, a trial experiment has been underway since 1992, conducted by the International Corporative Biodiversity Group. Formal agreements with communities, resulting from a medicinal plant collection project, recognise that indigenous people possess valuable commercial secrets, know-how and intellectual property rights over the use of certain samples. All botanical information will be gathered with full consent of the communities and with an appropriate compensation.	
Venezuela	Venezuela ratified ILO 169 in 2002. The Constitution of Venezuela recognises the rights of indigenous peoples.	Venezuela has undertaken processes of demarcation, reparation and entitlement of lands, with indigenous peoples demarcating their own territories.	The Organic Bill of People and Indigenous Communities, forwarded by indigenous peoples in Venezuela, has been approved by the National Assembly. The new version of the project of the National Assembly is being studied by various organizations. The proposal picks up the rights established in the Constitution and grants a wide margin of autonomy to the indigenous peoples for handling their matters.		Article 124 of the Constitution of Venezuela, states: "It is guaranteed and it protects the collective intellectual property of the traditional knowledge and innovations of the indigenous people. All activity related with the genetic resources and the knowledge associated to it pursue collective benefits. The registration of patents is prohibited on these resources and ancestral knowledge". Although the Constitution prohibits the patenting of the traditional knowledge, this does not keep them from being protected by other existent forms of property or by sui generis systems adapted to the needs of indigenous communities.
