



Between the spice of life and the melting pot: Biodiversity conservation and its impact on Indigenous Peoples

by Andrew Gray

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Between The Spice of Life and the Melting pot:

**Biodiversity conservation and its
impact on Indigenous Peoples**

Andrew Gray

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**"Variety's the very spice of life,
That gives it all its flavour"**

William Cowper

**"There she lies, the great Melting Pot - listen!
Can't you hear the roaring and the bubbling?"**

Israel Zangwill

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Preface - a synopsis

When the survival of the rainforest is under discussion, the rights of indigenous peoples are too often ignored, treated as a low priority or relegated to the footnotes of glossy reports. The current initiatives of international organisations such as the World Resources Institute (WRI), the International Union for the Conservation of Nature (IUCN) and the United Nations Environment Programme (UNEP) for conserving biodiversity are no exception.

Biodiversity is the variety of the world's genes, species and ecosystems. There are well over 30 million different species in existence clustered in particular ecological regions such as coral reefs and rainforests. Through environmental destruction such as deforestation the biodiversity of the world is under threat as never before.

Ecological areas inter-connect with each other which means that the destruction of biodiversity in one area has not only local but global consequences. Furthermore biodiversity encourages alternative varieties of agricultural species and enhances the preservation of ecosystems. Estimates of the destruction of biodiversity are as high as 30,000 times what they would be in a state of unperturbed nature.

Environmental organisations and resource management institutions have been working on ways of dealing with the biodiversity crisis for several years. Prominent among these is a Biodiversity Conservation Strategy. Although the WRI, IUCN and UNEP say that the BCS is not yet implemented, several documents outlining such a strategy have been published as well as three major reports on the world's biodiversity which include detailed proposals as to how biodiversity conservation should take place (Reid & Miller, 1989, McNeely, Miller, Reid & Mittermeier, 1990 and WRI, IUCN, UNEP and WCU, 1990).

However the world biodiversity crisis is matched by a "world cultural diversity crisis". Indigenous peoples live predominantly in areas of high biodiversity while at the same time comprise 95 per cent of the cultural diversity in the world. They face threats against their territorial possessions, their cultures and, in some areas, their lives.

Indigenous peoples have demonstrated that they are the best conservers of their environment which they use and manage according

to their own cultural premises. In addition indigenous peoples consider themselves as custodians of their territories which have been passed down by their ancestors and have to be conserved for the generations to come.

On the basis of documentation published hitherto the Biodiversity Strategy as it is currently discussed stands to affect indigenous peoples detrimentally and this report charts these problems. Each chapter of this report raises an issue within the biodiversity discussion - the diversity crises, protected zones, marketing resources and intellectual property rights. By placing in close succession the perspective of indigenous peoples with contrasting views of those advocating resource management strategies, it is possible to see the possible impact of the biodiversity conservation initiatives on indigenous peoples.

The usual way of dealing with protection zones is to demarcate them and then try to deal with the indigenous peoples of the area. However this is the inverse of a sound strategy. Unless indigenous territorial rights are recognised as a condition of and in co-ordination with all other conservation strategies, local people risk being expelled from their lands. By recognising indigenous peoples' territories acknowledging the need for land of other forest peoples, it should be possible to combine the social needs of the local population with plans for biodiversity conservation.

Along with protection zones, resource management organisations are seeking ways of harvesting the rainforest for economic profit. This means evaluating its economic potential and extracting its resources. The objective is to make commercial interests prefer sustainable development projects. However this strategy by-passes the needs of indigenous peoples.

Without complete social control over their production and marketing, indigenous peoples cannot enter the market economy on their own terms. Dependency and eventual poverty then face indigenous peoples whereby consumer demand from the North dictates its own production needs onto the South. In addition, encouraging harvesting puts yet more pressure on the environment.

When those advocating a Biodiversity Conservation Strategy talk of studying the environment, indigenous peoples have good reason to consider their intellectual property rights. Three quarters of the current prescribed medicinal drugs derived from plants have been discovered through indigenous peoples' knowledge. Rainforest medicinal plants have produced profits of \$43 million annually to the pharmaceutical industry. Indigenous peoples have received neither recognition nor respect for their contribution to the health and welfare of the world's population.

The biodiversity strategies currently under discussion seek to advertise the benefits of indigenous peoples' knowledge, yet past experience shows that this knowledge almost invariably disappears into the hands of industrial and agricultural concerns. By using patents and other protections these interests control access to the information and gain any profits which arise from the product, created on the basis of indigenous knowledge.

The strategy proposals give economic profits and the gathering of information higher priorities than the rights of indigenous peoples. Those benefiting the most will be the "investors" for the programme - international bodies such as the World Bank or the Consultative Group on International Agricultural Research (CGIAR), national governments and private enterprise. Once again indigenous peoples are treated as passive victims or recipients of development programmes sent down from on high.

However indigenous peoples are asserting their right to self-determination throughout the world. Over the last 20 years the indigenous movement has blossomed into a powerful lobby which is trying to change the paternalistic attitudes of the past. They have succeeded in several areas. Their rights are recognised by the International Labour Organisation and the United Nations. Indigenous peoples now take their analysis of self-development far beyond the superficial economic level of resource managers, but incorporate cultural and political dimensions to their own plans for the future.

The biodiversity reports and strategy proposals which have been published hitherto preach conservation in the form of setting aside areas where indigenous peoples will not be allowed and removing them to "development" buffer areas where they will become integrated into the national society. The effect of this approach will be the increase of two forms of monoculture. On the one hand there will be an increase in exploitation of rainforest resources in these areas, encouraging only those varieties which make money. On the other hand indigenous peoples forced into buffer areas will become increasingly integrated into the national society melting pot and lose their cultural diversity.

Indigenous and forest peoples the world over are facing a crisis of destruction, not only of their environment but also of their social and cultural ways of life. The current strategies for conserving biodiversity are too economic, top down and give human beings far too low a priority. The challenge for environmentalists is whether they support the "resource management" approach to conservation or one which looks at social ecology as a whole placing human beings within the context of conserving the environment. Until indigenous peoples are at the centre of environmental conservation there will be neither biological nor cultural diversity in the world.

Introduction

"We are concerned...that the Amazonian peoples and in particular the indigenous peoples, have been left out of the environmentalists' vision of the Amazonian Biosphere. The focus of concern of the environmental community has typically been the preservation of the tropical forests and its plant and animal inhabitants. Little concern has been shown for its human inhabitants who are also part of that biosphere.

"We are concerned that the indigenous peoples and their representative organisations have been left out of the political process which is determining the future of our homeland. The environmentalist community has at times lobbied on our behalf; it has spoken out and written in (the) name of the Amazonian Indians. While we appreciate those efforts, it should be made clear that we never delegated this power to the environmentalist community nor to any individual nor organisation within that community."

This quote comes from a document written in 1989 by the Coordinadora de las Organizaciones Indigenas de la Cuenca Amazonica (COICA) entitled "To the Community of Concerned Environmentalists". It summarises clearly the disquiet which indigenous peoples have been feeling about the various initiatives which have emerged over recent years for conserving and protecting the environment. This report analyses the reasons for such conflicting views between indigenous peoples and environmentalists using the current discussion on the conservation of the world's biological diversity as a starting point.

Biological diversity, the totality of genes, species and ecosystems, provides the basis of life on earth. However the over-exploitation of the environment is threatening the capacity of the earth to support life. Biological diversity is most apparent in the rainforests of the world which are being destroyed at a faster rate now than ever before in history. Whereas the consequences of the destruction of biodiversity effect everyone, the indigenous forest peoples are among the first to suffer.

Several international organisations, among them the International Union for Conservation of Nature and Natural Resources (IUCN), the

World Resources Institute (WRI), Conservation International, the World Wide Fund for Nature and the World Bank have all shown themselves concerned at the loss of the world's biological diversity (McNeely et. al, 1990). However in their proposed strategies for action, the perspective of indigenous peoples is hardly ever seen or heard.

Indigenous peoples and environmentalists frequently express markedly different perspectives when analysing the threats facing life on earth and how to cope with them. This report focuses on these discrepancies and juxtaposes two distinct approaches. The first takes as its starting point the experiences and initiatives of the people living in the area who are directly affected by the loss of biological diversity. In contrast, the alternative view analyses the problems from outside and imposes solutions from above. The proposed Biodiversity Conservation Strategy, which forms the backdrop for this report, is an initiative from above and largely by-passes the needs, desires and perspectives of indigenous forest peoples.

A preliminary outline of a "World Strategy for Conserving Biodiversity" was drawn up under the Forests and biodiversity Program of the World Resources Institute in November 1989. It proposes a Biodiversity Conservation Strategy. Since this period several seminal documents and reports have been published by WRI in collaboration with the International Union for Conservation of Nature and natural Resources (IUCN) and other NGOs. Although members of these organisations insist that the Strategy is still under discussion and does not exist, the information produced by these organisations shows that the broad outlines and directions of the Biodiversity Conservation Strategy are well under way. (The most recent version is discussed in the Epilogue.)

Without more dialogue and understanding, the conflicting perspectives between environmentalists and indigenous peoples will become a conflict of interests between people over resources. It would, however, be inaccurate to draw a line of conflict strictly between "environmentalists" and "indigenous peoples". We have to distinguish between establishment-created organisations which seek strategies to manage sustainably the world's resources (such as the WRI and the IUCN) and indigenous peoples who are organised politically in order to defend their rights to land and culture.

Environmentalists are, strictly speaking, spread between both camps. Some, such as the larger international environmental organisations try to combine their conservation work with the resource organisations, using what has become known as "green capitalism" or protectionism as a means of conserving while utilising resources at the same time (Elkington & Burke, 1989:162 and sponsors to McNeely et. al., 1990).

Alternatively there are many non-government organisations both national and international (such as the World Rainforest Movement) which openly ally themselves with the cause of forest and indigenous peoples and support initiatives from the grass roots.

Many environmentalists remain in between these positions, fearing that working with indigenous peoples is unrealistic, while at the same time remaining uncomfortable with initiatives which reduce the environment to a set of resources. This report seeks to demonstrate that solutions to environmental problems can only arise with the local people directly affected. This is the only way to create a genuine social ecology which places human beings at the starting point for environmental conservation initiatives.

The indigenous peoples of the Amazon appear predominantly in the following pages because much of the current discussion on the threat to the rainforest has arisen as a result of fieldwork in that region. However, rainforests are found throughout Southeast Asia and Central Africa where forest peoples are facing similar problems to those of the Amazon. The principles which emerge in the discussion areas of this report should in many cases be applicable in the contexts of other indigenous peoples. Head and Heinzman, 1990, show clearly the importance of looking at rainforest destruction from a global perspective (specifically the chapter by Norman Myers).

Apart from the indigenous peoples of the rainforest, there are many non-indigenous forest peoples, who share similar views on the destruction of their territories. In an Amazonian context, these peoples are known as "rubber tappers", caboclos or ribereños. Non-indigenous forest peoples such as these are found all over the world. Most of them have usually lived with, or in close proximity to, indigenous peoples for hundreds of years. The rights and problems of these forest peoples are ignored even more than those of indigenous peoples.

In the 1990 report "Rainforest Destruction: Causes, Effects and False Solutions" produced by the World Rainforest Movement, there is a grassroots based critique of the current solutions to the biodiversity crisis. Four main criticisms of the current plans by the WRI, IUCN and UNEP, in collaboration with many other smaller organisations, to establish a Biodiversity Conservation Strategy are set out in the report. These four criticisms parallel the four chapters in this book:

1. the failure to tackle those process that are currently destroying genetic diversity;
2. viewing biodiversity conservation too much in terms of establishing "set-asides" and "reserves";
3. assuming that conservation programmes must be shaped to the logic of the market;

4. accelerating the transfer of genetic resources from the Third World to the North, to the economic, social and political detriment of the South.

This report takes each of these issues in turn and looks at the questions primarily from the point of view of indigenous peoples. Each chapter places the perspective of indigenous peoples and environmental resource managers in direct opposition. The first chapter looks at indigenous peoples and contrasts their views on biological diversity with recent writings by environmentalists and the proposed conservation strategy.

This strategy was originally based on the slogan "save it, study it and use it" although a somewhat euphemistic alternative of "defend it, understand it, use it wisely and equitably" appears in the more recent propaganda. The subsequent three chapters continue to present the counterpoint between indigenous peoples and environmentalists taking each of these three areas. "Save it" involves a discussion of land rights versus protected areas; "use it" is a comparison of green capitalism and an uncontrolled market economy with indigenous peoples' own trade strategies; "study it" is a review of the issue of intellectual property rights and how they relate to indigenous peoples.

These issues are of concern to both indigenous peoples and environmentalists. They are inter-related and the findings form a cluster of principles which relate directly to the rights of indigenous and forest peoples. The perspective of indigenous peoples and those of non-governmental organisations taking a social ecological approach to conserving the environment has been given a priority in this report.

Indigenous peoples are too frequently ignored or given a very low priority in environmental discussions. A recent example has been the Tropical Forestry Action Plan, which has been drawn up without consultation with indigenous peoples (see Chapter 1). Indigenous peoples have also been pushed off their lands to make room for protected zones for preserving animal species (Chapter 2). The resources of the forest have been sold off and "developed" without the consent of the indigenous inhabitants (Chapter 3), while their knowledge of the environment has been used by industrial concerns to make profit without acknowledgement or compensation for their contribution (Chapter 4).

By starting from the position of indigenous peoples, this report adheres largely to the views of the "social ecological" perspective on these issues. However, all the differences of opinion expressed in this report should not obscure the fact that everybody acknowledges the seriousness of the devastation of the rainforest and that indigenous peoples' rights should be respected.

There is a great danger now that a flood of money might let loose a tidal wave of "environmentally friendly" projects on the world, which somehow shed their amiability on contact with indigenous peoples. This growing concern has been illustrated by an indigenous leader as a

friendly elephant trying to help a duck out by incubating its egg (IWGIA, 1985:293).

The main preoccupations of indigenous peoples with their rights to self-determination and control over resources are either ignored or not understood by many well-intentioned environmentalists. Unwittingly, they fall into paternalistic and economic methods of resolving indigenous problems, which, to their surprise, are received with resentment and rejection by the very peoples they had hoped to "save".

Whereas the word "survival" is used to refer to the future of indigenous peoples as well as whales, elephants or exotic plants, environmentalists are accused of not appreciating the differences. Indigenous peoples are not passive recipients of conservation and preservation strategies, they are active political agents in their destiny with the right to control their own lives. They want respect for their territories and cultures and recognition of their right to determine their own future development. The right of self-determination for indigenous peoples is intimately bound up with the notion of sustainable resource development.

The meaning of the ambiguous notion "sustainability" for indigenous peoples is "self sufficiency" (IWGIA, 1987:182). Self-sufficiency is a goal which they are striving to keep at the centre of their struggle for survival. Indeed the fact that indigenous peoples still co-exist with the rainforest shows how these systems of environmental control have been successful. This is not to say, however, that indigenous peoples are the perfect guardians of the forest (Redford, 1990). The impact of the international interests, pressures from consumer demand for their products and changes in their production methods have in some cases placed enormous obstacles for the continuation of their traditional conservation methods.

Nevertheless, indigenous peoples have demonstrated that they are the best guardians of the environment. In spite of so many threats to their survival, indigenous peoples have managed to remain on territories which have retained a sustainable production potential for many hundreds, if not thousands of years. This in itself is proof that the real experts at conservation of the rainforest are indigenous peoples themselves. More environmentalists should consider these factors before dismissing indigenous peoples as another "minority interest group" trying to make a living out of the rainforest.

Why do indigenous peoples not receive the respect they deserve as caretakers of the forest? Part of the reason is that many environmentalists do not trust them with "conserving the world's heritage". They point to extinct species, blaming the ancestors of indigenous peoples for over killing them. They assume that with technological means indigenous peoples would be as eager as anyone else to wipe out flora or fauna for

commercial gain. They assume that all human beings operate as over-exuberant entrepreneurs motivated by personal greed.

But this argument is misconstrued. The question is not about indigenous individuals' capacity to conserve their environment given certain circumstances but whether they live in conditions which provide them with the opportunity to protect their self-sufficiency. Vast tracts of rainforest territories belong to indigenous peoples. They have prior rights to those lands which can only be invaded by conquest and colonisation. The threat to the environment thus comes from the conquest and colonisation not from the indigenous people's attempts to live on a sustainable basis.

This report argues the case that, as a major aspect of environmental protection and conservation, indigenous peoples' rights have to be recognised and respected and brought right into the centre of the discussion on biodiversity. The dialogue with indigenous peoples has to be based on trust.

For too long indigenous peoples have been forgotten, placed low on the list of priorities or relegated to appendices and footnotes. Now the time is ripe for people to understand that their interest in conserving resources is every bit as urgent as for environmentalists. Indigenous subsistence can only take place providing they are able to continue respecting the forests and rivers on which they live. If the forest were to disappear indigenous peoples would be the first to go. Indeed they are the front line in the fight to defend the rainforests of the world.

An Amarakaeri Indian from Peru explains this perspective from his community in the Southwest Amazon:

"We Indians were born, work, live and die in the basin of the Madre de Dios River of Peru. It's our land - the only thing we have, with its plants, animals and small farms: an environment we understand and use well. We are not like those from outside who want to clear everything away, destroying the richness and leaving the forest ruined for ever. We respect the forest; we make it produce for us" (Moody, 1988:211).

Chapter 1: Indigenous Peoples and Biodiversity

Cultural Diversity - a global crisis

Indigenous peoples are the descendants of inhabitants of a country prior to its colonisation, whose rights are still not fully recognised. There are two factors involved in identifying indigenous peoples - their relationship to the nation state and their own self-definition. Today indigenous peoples live in a particular territory with their own social and cultural characteristics distinct from the dominant culture of the nation state where they live. They number as many as 200 million people and constitute about 4 per cent of the global population (Burger:1987:11).

"Indigenous" is a term which is used here in recognition of the indigenous movement which, over the last 20 years, has spread all over the world. As with the movement, the word indigenous is increasingly becoming synonymous with concepts such as "tribal peoples", "the Fourth World" and "cultural minorities".

Indigenous peoples are colonised peoples who have organised and fought for their rights for hundreds of years. Indigenous organisations have existed since the 19th century, but it is only in the last 25 years that an indigenous movement has flourished on a global level. The indigenous movement first emerged in North America, Scandinavia and Australia in the 1960s linked with the increased consciousness of social and racial exploitation.

Since then there has been a growing consciousness among the peoples of the world demanding the recognition of their right to self-determination. The rise of a movement for self-determination along with the demand for the recognition of territorial and cultural rights has spread gradually and consistently been raised by increasingly vocal indigenous peoples.

During the 1970s the indigenous movement spread throughout Central and South America. By 1980 indigenous peoples from the Pacific and Asia were showing interest in allying themselves to the indigenous struggle for rights. Indigenous questions had led the international discussions on communal rights and peoples from all over the world began to see the potential for improving recognition of their rights through the indigenous movement.

An Indian indigenous tribal organisation was created in 1986, in 1989 the first African representative participated and spoke at the UN Working Group on Indigenous Populations in Geneva, and in 1990 the first meeting of indigenous peoples of the Soviet Union took place in Moscow. Indigenous is consequently a dynamic concept shifting in meaning and significance with the spread of the movement throughout the world.

The distribution of indigenous peoples covers three main types of colonisation:

1. Indigenous peoples who were colonised by a permanent non-indigenous population. Settler colonies, for example, developed throughout the Americas after the 15th century. The native population was reduced and unable to take power on independence in the 19th century. There are over 30 million indigenous people in North, Central and South Americas. Similar forms of colonisation took place over the Aborigines of Australia and the Maori of Aotearoa. In all of these cases the indigenous peoples were the original inhabitants of the area.
2. Indigenous peoples also live in countries which were colonised by small elites of Europeans who lost power at independence. Examples range from the tribal peoples of Asia who constitute the largest number of indigenous peoples - over 125 million - most of the island peoples of the Pacific, to the several million pastoralists and hunter-gatherers in Africa.
3. Land colonisation also took over indigenous peoples. The most well known examples are the Saami from Norway, Sweden, Finland and the USSR. The peoples of the northern Soviet Union and the Minorities in China would come under this heading.

Indigenous peoples identify themselves by the importance of the bond with their lands and their distinct cultures. Exact figures on the diversity of cultures are hard to come by, but anthropologists at Bergen University Norway estimate that there are as many as 5,000 different indigenous cultures in the world (Georg Henriksen pers. comm.). If we compare the number of national state cultures and national minorities in the world we would find that indigenous peoples constitute 90-95 per cent of the cultural diversity in the world. The indigenous peoples of the world therefore represent the diversity of human existence, even though they constitute a numerical minority.

The threats facing indigenous peoples are enormous. In many parts of the world they are being killed in indiscriminate warfare, such as in Colombia, Peru, Guatemala, East Timor, West Papua and the Chittagong Hill Tracts of Bangladesh. In the Pacific they are suffering from the effects of nuclear testing, a case familiar to the Western Shoshone of the United States.



*Em Marta, a Karen from Burma, at UNWGIPs (United Nations Working Group for Indigenous Populations) yearly meeting in Geneva.
(Photo: Jens Dahl)*

The main conflict for indigenous peoples centres around land and resources. Nation states and multinational corporations, eager to take advantage of the areas where indigenous peoples live, implement colonisation plans and militarisation programmes, establish mines, construct dams, destroy the rainforest for logs and extract natural resources. The IWGIA Yearbook summarises these abuses thematically every year.

Ethnocidal activities, such as proselytisation of religious creeds, inappropriate education methods and policies of assimilation, all play their part in destroying indigenous cultures. Development projects which take no heed of the needs and desires of indigenous peoples have in many cases made them "victims of progress" (Bodley:1982).

However indigenous peoples are not simply victims. They have organisations and have laid their demands clearly before several international bodies such as the International Labour Organisation and the United Nations. The former has recently revised its Convention on Tribal and Indigenous Populations while the latter is working on a Declaration of the Rights of Indigenous Peoples.

Indigenous peoples are working on their own alternative models of development which are based on the fundamental right of self-determination. Self-determination is the basis of the indigenous movement. It refers to the right of indigenous peoples to live their own lives as they wish and to develop along lines which are in harmony with their needs and desires. The right of self-determination does not mean that indigenous peoples want to be apart from the world or withdraw into protected zones. They argue increasingly that they want no more than control over their lives and resources.

However without recognition of this fundamental right, indigenous peoples as culturally distinct societies will disappear or be sucked into the national society. The indigenous struggle aims at recognising and respecting cultural diversity.

Biological diversity - a global crisis

"Biodiversity is the variety of the world's organisms, including their genetic diversity and the assemblages they form." (Reid & Miller, 1989:3). The current interest in biodiversity has demonstrated a shift in environmental thinking from the idea of protecting single threatened species in a vacuum to an understanding that ecological systems as a whole provide the basis for environmental protection.

Preserving the diversity of genes, species and eco-systems is important for several reasons. A recent publication on biological diversity draws attention to the interdependence of ecological systems and that destruction of one, such as the rainforest, could mean eventual devastation in other parts of the world (McNeely et. al. 1990). In addition biological diversity is important for encouraging alternative types of agricultural species as a protection against over-reliance on any particular variety, and it enhances the preservation of ecosystems as a whole to ensure the survival of as many different species as possible. Biological diversity is important to meet "future generation's needs and aspirations" (Reid & Miller, op cit.:4).

The document "Conserving the World's Biological Diversity (McNeely et. al. 1990) was sponsored jointly by the IUCN, WRI, CI, WWF and the World Bank. It emphasises primarily the economic wisdom of preserving biological diversity:

"But in order to compete for the attention of government decision-makers in today's world, policies regarding biological diversity first need to demonstrate in economic terms the value of biological resources to a country's social and economic development" (ibid.:1990:25).

This quote demonstrates an economic approach to the environment as a set of resources for consumption.

The report continues by contrasting "direct values" of local consumption and commercial production with "indirect values" scientific research - maintaining options for the future and the value of species existing in themselves. Even though local consumption patterns are discussed, the whole economic reduction of the environment to a set of consumable resources is completely at variance with indigenous people's holistic view of the environment. For indigenous peoples, the relationship binding people and the environment together consists of social, cultural and religious values which promote communally shared self-sufficiency.

It is estimated that there are between 10 and 30 million species in existence although this is probably a very low figure considering that there are possibly 30 million species of insects alone. Species are not distributed evenly throughout the world. Areas known as "Vavilov centres of genetic diversity" identify a great variety of species in tropical rainforests, coral reefs, and island ecosystems. Diversity reaches its peak in tropical rainforests, particularly in Brazil, Colombia, Peru, Indonesia and Malaysia. Although they cover only seven per cent of the earth's surface, tropical rainforests contain at least half of all known species.

For this reason, much of the environmental discussion on biodiversity destruction relates to deforestation. Owing to the increasing devastation of the rainforest "current rates of extinction among birds and mammals are thus perhaps 100 to 1000 times what they would be in an unperturbed nature." (Reid & Miller: op cit.:31). However this figure could be as high as 30,000 times (Wilson and Peter, 1988).

The latest figures on rainforest destruction show that in 1989, 142,000 km² of tropical forest was lost (Myers,1989). The World Resources Institute explains the relation between deforestation and species destruction as follows: "if a habitat is reduced by 90 per cent in area, roughly one-half of the species will be lost" (Reid & Miller op.cit.:35).

The causes of rainforest destruction have several dimensions. Repetto (1990), looking at rainforest destruction globally, refers to government policies which encourage the exploitation of logging and clearing the forest for ranches and farms.

In the Brazilian Amazon, Jose Lutzenberger (1987:156) points to land speculation, cattle ranching, logging and monocultural plantation crops as the prime factors behind deforestation. Particularly destructive has been the mass invasion by settlers such as the colonisation of Rondonia which took place in the 1970s and 1980s. Susanna Hecht points out that "the majority of deforestation in the Amazon is caused by pasture development, and most cleared land will ultimately end up in pasture" (1989:229). This is because land receives a title only when it is cleared and furthermore, the Brazilian government has, until recently,



How long can blowpipes defend the rain forest against bulldozers? The Penans attempting to block their roads to protect their basis of subsistence.

(Photo: Ole Hein Pedersen)

been subsidising clearance for pasture. This policy promotes deforestation.

In Southeast Asia logging is the main problem. Malaysia is the largest exporter of timber and logging companies, particularly those from Japan are destroying the forests of Sarawak in the face of severe resistance by the native peoples of the area (Colchester:1989). By 1985 over 20,000 hectares were being destroyed annually. Meanwhile Thailand has now become a net importer of timber having destroyed its own forests. Burma is a current target for deforestation by Thai companies.

Deforestation is a major problem in New Guinea. In West Papua the Indonesian government is providing logging concessions to companies in the lands of the Asmat to the south. Scott paper also had a large deforestation plan for the country was temporarily stopped after international opposition but is now starting up again with an Indonesian corporation (Anti-Slavery Society, 1990). In Papua New Guinea, in spite of legal protection for local people, commercial logging interests have bypassed the law and taken advantage of community divisions to extract timber (Renner, 1990).

Environmentalists are gravely concerned at the destruction of the rainforest because of the threat to the richest biodiversity of flora and fauna of the world. During 1989, the World Resource Institute published on the need for establishing an international strategy to conserve

biodiversity (Reid and Miller, 1989). Their approach contrasts two types of conservation:

- 1) In situ conservation which refers to creating natural and semi-natural ecosystems to form primary reservoirs of the world's biodiversity. This includes protected areas which the WRI would like to increase from between 5-10 per cent at present to between 15-20 per cent of the earth's surface in the future.
- 2) Ex situ conservation complements in situ conservation and includes preserving and breeding over 900 species of fauna in zoos and aquaria and 35,000 flora varieties in botanic gardens. Furthermore ex situ conservation includes seed banks and the storage of genetic material.

In a research report parallel to the programme to preserve biodiversity, indigenous "bio-cultural conservation" is presented as a part of conserving biodiversity and "where appropriate" it recommends enhancement of local peoples' systems of resource use (Reid and Miller op.cit.). However, this comes fifth in a list of priorities and subordinate to: enhancing decision-making, boosting conservation in development, encouraging regional planning and organising a global strategy.

Indigenous Peoples and Biodiversity

There are two points where indigenous peoples and bio-diversity inter-connect. First of all, indigenous peoples are fighting for the right to express themselves and their distinct cultures, while asserting their identity vis a vis the state. Cultural diversity for indigenous peoples is every bit as important as biological diversity for environmentalists.

Secondly, the high areas of biodiversity in the world, particularly tropical rainforests, are the homelands of indigenous peoples who are the original or prior inhabitants of the area. Indeed, if it were not for indigenous peoples, the genetic potential of the planet would not necessarily be as diverse as it is. Consequently, indigenous peoples should feature very highly in any world biodiversity plan. Unfortunately this is not the case.

Not only are indigenous peoples peripheral to those organisations forming the biodiversity strategy, but the proposed action emphasises aspects of planning and development which run counter to indigenous interests. In order to understand this further we should now look more closely into the plans for conserving biodiversity, their precursor in the Tropical Forestry Action Plan, and the underlying strategy common to both plans.

The Biodiversity Conservation Strategy - the Killer Cure?

Two parallel initiatives for biodiversity conservation are currently under discussion. The first, known as the Biodiversity Conservation Strategy, is being elaborated by the World Resources Institute, the United Nations Development Programme (UNDP) and the International Union for the Conservation of Nature (IUCN).

The second, the International Biodiversity Convention sponsored by UNEP and IUCN, will work on an inter-governmental level. The IUCN has written a draft and the UNEP has produced an official paper outlining some of the principles.

This report does not look into the Convention and at the moment there is still no coherent draft form. However the versions which I have seen have minimal reference to the rights of indigenous peoples and do not look very hopeful. The issues raised in this report, although looking more at the proposed strategy than the Convention raise questions which are relevant to both processes.

The difference between the Strategy and Convention is set out in 'Gift to the Future: A Strategy for Local, National and International Action to Save, Study and Sustainably Use the World's Biological Diversity':

"The Strategy will develop and promote the types of action required to halt the impoverishment of biological resources and foster their contribution to economic development for the short and long term. The Convention will create the permanent international system required to ensure long-term co-ordinated governmental action and investment. Both efforts, taken together, will seek to legitimize biodiversity at the political level and incorporate the management properly into social and economic development".

Over the last three years the Biodiversity Conservation Strategy proposal has undergone several modifications. The "International Biodiversity Programme" discussed in Gilbert & Colchester, 1990 and the World Rainforest Movement report in 1990 and the "Global Biological Diversity Action Plan" mentioned in Shiva, 1990 refer to different stages of the initiative. Indeed the formulation of the strategy is a "rolling" process which is still under way. However there are several constant features summarised in the three key words "save, study and use".

The WRI and UNDP in the 1989 International Conservation Financing Project Working Paper estimated that they would have to raise between \$20 and \$50 billion annually for the projects necessary to put the strategy into action. The targets for this financial campaign are the World Bank, national governments and private business.

The money would go towards protected reserves, financing debt-for-nature swaps, bi-lateral conservation projects with governments and



Heavy logging machines compress the topsoil, so that water cannot trickle down through the surface. Stagnating ponds give basis for malaria, and make the soil unsuitable for agriculture. Picture from Teluk Dalam, Indonesia.

(Photo: IWGIA archive)

expanding the role of the private sector. The plan would involve setting up several possible institutions: a co-ordinating financial body which could receive and distribute the funds, establish an investment programme (Ecovest), five year plans, debt reduction negotiations and a World Environmental Fund raised by levies on greenhouse gases.

Behind all these plans and discussions lies the rationale of the whole approach to biodiversity conservation which we will return to throughout this report. The use of ecosystems in WRI's "Keeping Options Alive" report is to "provide goods and services to humanity". The aim is not just maintenance or preservation but utilisation of these resources for profit:

"Many actions that can be taken to stem the loss of biodiversity do provide short-term economic benefits - say, maintaining natural forests so that wild species can be harvested for food, medicines, and industrial products or establishing protected areas so that tourists will visit." (Reid & Miller, op.cit.:89).

By explaining the economic value of conserving biodiversity, the organisations sponsoring the plan hope to make their strategy attractive to the international funding sources such as the World Bank, national

governments and, in particular, to private business. If the only way to save biodiversity is to convert it into profit are we not heading for a contradiction in terms between conservation which tries to limit demand and commercialisation which increases it? (Hildyard, 1989:62). This could be the killer cure.

The Tropical Forestry Action Plan (TFAP)- a Precursor to the Biodiversity Strategy

The TFAP is an attempt by several international agencies to put a stop to deforestation and to devise some alternative forestry strategy, beneficial to the local people. It has been devised by the WRI, UNDP as well as the Food and Agricultural Organisation (FAO) and the World Bank. The TFAP which is based in the FAO, envisages channelling \$8 billion to the forestry sector over five areas:

1. forestry in land use;
2. forest based industrial development;
3. fuel wood and energy;
4. conservation and tropical forest ecosystems; and
5. institutional support.

Seventy three countries are now involved in the process which will initiate projects and action plans on a national basis.

A recently published report "The Tropical Forestry Action Plan: What Progress?" (Colchester & Lohmann, 1990) looks in detail at nine of the national forestry action plans and evaluates the scheme as a whole. Their findings are very disturbing:

"The Plan has been elaborated with almost no consultation with NGOs nor with community-based organisations, it paid little attention to the needs and rights of forest dwellers and seemed unduly focused on funding commercial forestry and wood-based industries, while failing to identify the real causes of deforestation" (ibid.:2).

The national plans are based almost entirely on commercial forestry and provide no solutions to the causes of deforestation, such as landlessness causing rural poor to move into forests, government incentives to companies and landowners to clear forest land for speculation and commercial profit from logging. The report continues:

"The national plans will promote a massive expansion of logging in primary forests. Despite the fact that rainforest logging is not being carried out sustainably and is itself one of the principal causes of deforestation, under the Tropical Forestry Action Plan logging in primary forests will intensify" (ibid.:2).

The main criticisms of the TFAP are that it will increase commercialisation of the rainforests, that it refuses to address the root



In Peru laws regulating forest extraction, require that the forestry tax be invested in reforestation, but attempts do not go beyond a few experimental plots.

(Photo IWGIA archive)

causes of deforestation, that it is a forestry, rather than a forest plan and that it is a top-down exercise with hardly any local involvement. Threedifferent critiques of TFAP, from the World Rainforest Movement, the WRI and the Food and Agricultural Organisation's review of the process have led to a delay in order to establish a Tropical Forest Convention, setting out the principles by which a reformed TFAP could operate.

The TFAP critique is very relevant to the Biodiversity Conservation Strategy and indigenous peoples. For a start, the same organisations are involved particularly the WRI. However, we should note that the WRI has made a clearly formulated critique of the plan and recognises many of its weaknesses. It is to be hoped that this constructive self-critical approach can be applied to the Biodiversity Conservation Strategy before it is too late.

The TFAP is itself currently destroying biodiversity because it is actually encouraging more deforestation. This runs in complete contradiction to the aims of the Biodiversity Conservation Strategy. However, if the WRI, IUCN and UNEP do not recognise the same tendency in its BCS proposal the effect could be the just as devastating.

The TFAP does not address the root cause of deforestation, neither does the Biodiversity Conservation Strategy. On the contrary, the BCS seeks to solve the problem through ameliorating the worse effects, by

raising vast amounts of money for purposes which include promoting the marketing of forest products to divert business thinking away from logging and ranching. The thinking behind this approach has been summarised neatly by a commentator:

"There is no quick fix for the forest. Market forces have driven tropical forests to the edge of extinction. Only market forces can drive their rehabilitation and conservation. The only way to save the forest is to make the trees we want to save more productive, more attractive commercially and more available" (Macklin:1989:51).

Yet to save the forest by attracting commerce is to try to cure the illness by increasing its intensity.

Indigenous peoples - integration through the Biodiversity Conservation Strategy

However, most important for this report is the approach of the Biodiversity Conservation Strategy to indigenous peoples. We noted earlier that they were relegated to priority five in the strategy, however there are yet more disturbing references to them. The 1990 document "Gift to the Future", concerned at the "decline of traditional cultures and biological reserves management systems", proposes to "protect land and models of development that maximise their (traditional cultures') ability to choose the nature and pace of their integration into dominant culture."

For the last five years the International Labour Organisation has been revising its Convention 107 on Indigenous and Tribal Populations. The reason for this was that international bodies, governments and labour organisations all considered that its original 1957 orientation was paternalistic, out of touch with the needs of indigenous peoples and ineffective. The main feature of discontent with the out-dated 1957 Convention was that it promoted the integration of indigenous peoples into dominant societies.

In human rights discussions nowadays, integration is seen as the very worst approach for dialogue with indigenous peoples. Integration is a slow form of assimilation. The dominant culture sets the criteria for their ultimate development goals and indigenous peoples are expected to get there "at their own pace". This is completely opposed to the right of self-determination which is the cornerstone of indigenous existence.

A people cannot live as a people unless they control their resources, their future and their own development. Integration is not a form of symbiosis between the dominant society and indigenous peoples - the relationship is asymmetrical as one party, the state, is dominant. Symbiosis demands a balanced equal relationship, integration does not. Integration sucks indigenous peoples into the vortex of national state

society with all the problems which that brings to indigenous peoples - poverty, urban migration and the breakdown of sustainable systems of production.

At first sight it is hard to explain the reasoning behind the approach of the WRI, IUCN and their collaborating organisations. However, the recent document on Biological Diversity (McNeely, 1990) throws more light on the overall approach. The organisations seek to use the established powers in the world to turn their efforts towards conserving biological diversity. Governments, banks and business are all wooed by the prospect of gaining profits from conservation measures.

No government is ignored. The document even devotes a section to "enlisting new partners for conservation of biological diversity" - the military:

"In short, the various national military establishments operate for the benefit of their respective nations. Since conservation of biological resources is essential to the well-being of a nation, the military should also support conservation and sustainable development in the name of national security" (ibid.:131).

Indigenous and forest peoples are frequently the victims of brutal military regimes throughout the world. Taking into consideration that the military have been responsible for 300,000 dead indigenous peoples in the forests of West Papua, mass killings in Guatemala and Peru, and genocide against the people of the Chittagong Hill Tracts of Bangladesh, the idea of encouraging the military to take a more active part in conserving national security would appear surprising, if not irresponsible.

If the Biodiversity Conservation Strategy continues the lines of thought contained in these reports published by the sponsoring organisations, the effect will not only be to turn the rainforest into a commercially viable enterprise but also to advocate integrationist policies which are culturally and socially destructive for indigenous peoples. Indeed they could even be physically dangerous.

Local people are not a high priority in these analyses. They are recognised for their knowledge and expertise, but when concrete plans are discussed we find quotes such as the following in McNeely, 1990:73:

"Since local cooperation is essential for the long-term success of conservation efforts, it is usually advisable to undertake a socio-economic survey of the communities affected by projects that involve controlling use of biological resources in order to determine what resources are used, how they are harvested, the degree of awareness about controlling regulations, and possible alternative sources of income."

"Such surveys can also provide the necessary raw material for determining the sorts of incentives required to bring about the desired changes in behavior, as

well as the best means of providing incentives and ensuring that they are perceived as fair, equitable, and fairly earned."

This quote has the unpleasant flavour of social engineering. Local people are studied in order to get them to change their ways of production to bring about the twin aims of conservation and profit for the engineers.

Although this quote does not come from the Biodiversity Conservation Strategy statements, the document is endorsed by the WRI, IUCN and UNEP. The analysis is not simply weak but potentially harmful as it promotes the possibility of ill-informed interference in the lives and cultures of indigenous peoples.

The first basic distinction between indigenous peoples and environmentalists in this report rests on different emphases stemming from separate priorities. Both agree that the destruction of the rainforest is wrong and something should be done about it. The organisations and planners behind the BCS and the TFAP can see no solution outside money, commercial enterprise and making people aware of the profit which can be wrested from the forest.

On the other hand, both the tropical forest and indigenous peoples will suffer from this. In practice the TFAP appears to be increasing the problem of deforestation and the BCS is heading in the same direction. Many environmentalists are not supporting the rights of the local people because they fear that they will be penalised by governments and powerful establishment interests. They tacitly accept the inevitability of the integration of indigenous peoples into national society. This understanding of indigenous perspectives is so out of date that it would be more at home with the discredited indigenist policies of the 1940s than with the international initiatives of the 1980s.

The aim of the Biodiversity Conservation Strategy is in complete opposition to the likely results. Instead of moving towards a world where there is more biological and cultural diversity, we are provided with a mechanism which, will lead to the promotion of biological and social monocultures.

As we move through the different strategies for conserving biodiversity we will see that this is not just the first example of a blatant divergence of interest. However, the irony is that the indigenous peoples themselves have strategies of conserving biodiversity which are cheaper and far more effective than anything thought up in the environmental power houses of Washington or Geneva.

Chapter 2: Indigenous Peoples, Territorial Rights and Protection Zones

Indigenous Peoples - Territory, Production and Reproduction

Indigenous peoples have developed countless methods of organising their subsistence. Anthropologists, ecologists and indigenous peoples have different ways of explaining the common features of indigenous production and reproduction, yet they all share certain features which are crucial for understanding how indigenous peoples relate to the rainforest.

Some anthropologists use the methods of biological ecologists to quantify physical interactions between human populations and their environment. The result is that Amerindian societies are seen as using adaptive strategies to optimise or improve their resource use. A detailed series of studies edited by Hames and Vickers (1984) divides the tropical forest into seven human habitat types and the contributors compare productive strategies for hunting, gathering, slash and burn cultivation and fishing.

Other anthropologists look at indigenous conceptual systems and how cultural models have a built-in "eco-logic". Following the anthropologist Marshall Sahlins they see that cultural premises determine production activities (Sahlins 1976). Examples from the Amazon are Reichel-Dolmatoff's work on "vital energy" and indigenous feedback mechanisms (Reichel-Dolmatoff, 1971).

This distinction of anthropological approaches taken from Colchester (1981:53) is described as follows:

"One might summarise by saying that while the first group of anthropologists attempt to understand Amerindians as natural components of the ecosystem, the latter group portray the Amerindians as ecologists in their own right".

A similar distinction has been noted by Jason Clay among ecologists (Clay:1988). This differentiates between people who use resources and those who manage them. Ecologists on the whole argue that unless peoples articulate consciously their intentions with regard to their production practices, they are "using" rather than "managing" their resources.

Both Colchester and Clay argue that the distinction is too severe and that indigenous peoples both use and manage their resources through a form of culturally specific productivity. Darrell Posey, an ethno-biologist, reaches similar conclusions in his work. His research with the Kayapo in Brazil demonstrates clearly that indigenous peoples utilise the heterogeneity of the Amazon to broaden their resource potential. He also explains that the Kayapo make full use of the lands of old swidden fields which are regenerating (Posey, 1985). Posey more recently demonstrates that the Kayapo actually manage their territories by planting semi-domesticated species using indigenous methods of pest control and even making areas available for providing plants and fruits when trekking far from the community (Posey, 1989).

When looking at indigenous peoples as "resource managers" we have to break down our fixed notions of use or management and of ecosystem or culturally based planning. Indigenous peoples are able to live sustainably because their systems of production and reproduction are flexible and make sense within their cosmological and cultural conceptualisations of the world.

The point at which material production and cultural reproduction meet is with the notion of territory. Indigenous peoples all over the world share a fundamental understanding of the importance of this concept. Territory is the term used more frequently by indigenous peoples because of the notion of continuous area combined with access to resources. Land, however, is the word with which indigenous peoples articulate their relationship with the earth.

There are two aspects to this relationship, as expressed in an indigenous statement to the International Labour Organisation in 1986 (Burgess: 1987:133). On the one hand indigenous peoples' relationship with their territories rests on the importance of resources to the continuing existence of the group. On the other hand, the territory is an area deeply associated with the identity of the people as a whole which each generation keeps in trust for the future.

The first element is an indigenous expression of the use or ecological relationship between indigenous peoples and the environment we noted above, while the second aspect covers the cultural reproduction and management of an ecosystem. Whereas for non-indigenous peoples these factors are separated into "economic" and "cultural" domains, for indigenous peoples they are aspects of the same phenomenon, where time, space, resource use, management and conservation are all part of the same complex, linking identity to production and reproduction.

Indigenous peoples all over the world have similar approaches to their territories. Sovereignty over the earth is shared communally by the whole people. Individuals can use plots of lands for their own subsistence, but the ultimate ownership rests with the community.

Furthermore, the community does not simply own the land as individual property, but its members are custodians of the land passing an inheritance received from the ancestors to the generations yet to be born.

This responsibility for conserving land for the future is one of the strongest reasons why indigenous peoples take care over the productive and reproductive power of the earth and its resources.

In some parts of the world, land rights or territoriality may not be as pronounced as in others. The determining factor is, usually, the extent to which these lands are under threat from outsiders. In addition, when talking of territories we are not always simply talking of land. For peoples of the north, sea ice is crucial for their existence. As indigenous peoples share the common threat of territorial vulnerability, effecting both their lives and cultures, they increasingly find resource defence a fundamental factor in their common struggle for survival.

The threats facing indigenous peoples' land is part of a historical process which has been taking place throughout the history of colonisation. In 1492 the ancestors of the present indigenous peoples controlled all of the Americas. Since then their history has been a long genocidal process of devastation and land alienation.

For example in the United States between 1887 and 1932 more than 60 per cent of the 56.7 million hectares in indigenous hands were lost, leaving them with only 20 million hectares of marginal land (Bodley, 1982:89). Similar processes took place throughout the world. Population decimation, cultural genocide and assimilation policies have all contributed to making indigenous peoples vulnerable to invasions on their lands, relocation and mass colonisation.

Indigenous peoples have suffered loss of lands in other ways which have been less violent but just as destructive. One way has been to create "reservations" which do not adequately satisfy the subsistence needs of the peoples concerned. If indigenous peoples do not have sufficient land, they are forced to alternative strategies to survive. This frequently means that they become integrated into the labour market or have to move into urban areas. The effect is to create new versions of the South African homelands, where the indigenous Black populations are herded into areas which are too small for their needs and they become a reserve pool of labour for the dominant White society (IWGIA Newsletter, 1984: 62-63).

The other way in which indigenous lands can be destroyed is through breaking up communally owned areas into individual plots. The sharing of resources by indigenous communities is one of the fundamental principles of community life. This "allotment" process destroys community life. It divided the native American reservations in the United States and has been broken up Mapuche communities in Chile as a result of General Pinochet's decree 2568 of 1979.

If we analyse these two main threats to indigenous lands we can see several consequences. Lack of sufficient land affects the potential use of an area, while allotting the community lands into individual plots reduces resources and breaks the link which enables indigenous peoples to be caretakers of their lands from one generation to another.

Indigenous peoples' land rights are recognised in international law. The ILO Convention on Indigenous and Tribal Peoples, the current draft declaration of Indigenous Peoples Rights at the United Nations both recognise communal rights to lands and territories. In addition the national legislation of several national states have indigenous land rights embedded into their constitutions, for example Peru and Brazil.

In many parts of the world, particularly in South America, indigenous peoples have certain areas protected by specific laws. However, in many of these cases, recognition of indigenous land rights has to be legalised by nation states. The process for recognition is frequently complicated and slow. Nevertheless there have been some striking steps forward over the last few years. In Colombia (Bunyard, 1990) 18 million hectares in the Amazon have been returned into indigenous hands, while in Peru, a smaller, but significant process of community land titling is under way in the Ucayali province (Gray & Hvalkof, 1990).

Protected Areas - environmental approaches

Environmentalists have been using protective legislation to set aside areas for conservation for many years. The national park movement started in the United States at Yellowstone in 1872. One hundred years later there were 1200 national parks all over the world (Dasmann, 1988:303).

Over the last decade there has been a considerable discussion among environmentalists as to how indigenous peoples and conservation can be brought into line. According to Clad (1988:322) this convergence has become more apparent since the International Union for Conservation of Nature and Natural Resource (IUCN) established a "Task Force on Traditional Lifestyles".

However, Dasmann, (op.cit.) considers that there is a fundamental contradiction between the approaches of "ecosystem people" (indigenous peoples whose subsistence comes primarily from the ecosystems or systems where they live) and "biosphere people" who have the whole biosphere at their disposal:

"Local catastrophes that would wipe out people dependent on a single ecosystem may create only minor perturbations among the biosphere people, since they can simply draw more heavily on a different ecosystem... The impact of biosphere people upon ecosystem people has usually been destructive... Biosphere people



Maasai woman milking cattle in the kraal. In Tanzania many Maasai have been relocated away from the Ngorongoro National Park. (Photo: Frans Welman/WIP)

create national parks. Ecosystem people have always lived in the equivalent of national parks."

The problems between conservationists and indigenous peoples is a real one. The case of the Ik moved from the Kidepo Valley National Park (Turnbull, 1972) is notorious. Their traditional subsistence practices within the park were declared "unnatural" and they were forcibly relocated, literally overnight. The tragic result was starvation, disease and cultural dissolution.

In Tanzania the Maasai have been subjected to forced settlements as a part of the "villagisation" scheme for rural development coupled with relocation away from the Ngorongoro National Park. In 1988 Maasai from Mkomazi, east of Kilimanjaro, were removed from their villages to create a buffer zone for Ngorongoro (IWGIA, 1989:137).

The Maasai case demonstrates that, in spite of the WRI and other institutions attempts to involve governments in conservation, the state will easily manipulate environmental interests into its own ends. Moving hunters and gatherers or shifting agriculturalists in the name of conservation has the desired effect of integrating indigenous peoples into the national society. Aarhem (1985:63) says:

"Rural development and wild-life conservation are two related forms of state intervention into the rural society. In terms of their impact on pastoralists, current conservation and development policies in Tanzania are similar: they both tend to marginalise the pastoralists and replace indigenous production systems with large scale agro-industries on the one hand and tourist development-estates on the other."

These cases are not isolated. The San of Botswana suffer from the demands made by environmentalists from the North. The government wants to increase cattle production in the country and to appease the a vocal section of the environmentalist lobby takes the San from their lands in the Kalahari Game Reserve (Harden, 1989:18-9). In the name of the "environmental lobby" the Botswana government has "encouraged" the relocation of indigenous peoples. Yet, at the same time, grass roots conservation organisations in Europe were criticising and protesting against the relocations. The government ignored these and only listened to the lobbyists which played the tune they wanted to hear.

Similar examples of conflict between indigenous peoples and game reserves have been reported from Sri Lanka (Stegeborn, 1985) and in the tiger reserves in India (IWGIA:1984). The effects have been similar.

In spite of those environmentalists who genuinely seek a social ecological solution to conservation questions, there is a more vocal and powerful sector of old fashioned nature conservationists. These people seek to move local people out of protected areas and subject them to "rural development" elsewhere. This lobby group couples conservation arguments with appeals to the economic and in some cases militaristic ambitions of governments.

The ways of dealing with indigenous peoples in national parks have been based on the Biosphere Reserve model of central conservation areas with buffer zones around. Too often indigenous peoples have been expelled from their traditional lands which are those very areas still sufficiently intact to be preserved and then encouraged to settle on "buffer zones" around the national park.

One of the more positive elements in the 1990 document on biological diversity is its attempt to broaden the discussion on protected areas. The proposed approach is that:

"through a planned mix of national parks and other categories of reserves, amidst productive forests, agriculture, and grazing, protected areas can serve human communities and safeguard the well-being of future generations of people living in balance with their local ecosystem" (McNeely et.al.: op.cit.:61).

Respecting the rights of people to produce a living is an improvement on previous advocates of relocation. Yet, in spite of this positive shift, the details of the approach do not look at environmental



European Animal Rights Organizations campaigns against fur-products has destroyed the economy among the indigenous hunters in Greenland and Canada.

(Photo: IWGIA archive)

protection through the defense of local peoples' territorial rights.

In the previous chapter we noted that there have been some important attempts to bring indigenous peoples and conservationists together. The Inuit, for example, have been in conflict with conservationists and animal rights organisations over their right to trap animals and hunt seals on which they subsist. Out of the dialogue with conservationists the Inuit have established a nature conservation strategy for the Arctic.

This initiative has been drawn up in line with the World Conservation Strategy, to counteract not only the threat from industrial societies but also:

"another threat against the peoples of the Fourth World...the nature-lovers of the urban populations of industrial societies. A completely misunderstood love, where with tears in their eyes, people seek to protect animal-life, but at the cost of those people who have depended for thousands of years on hunting these animals in order to subsist." (Fægteborg, 1987:5).

In Australia and in Aotearoa, the indigenous Aborigines and Maori have agreed for some of their lands to be turned into national parks. Meanwhile in Panama the Kuna have a park system which regulates

resource management and tourism, although this is not without its problems (Tangherlini & Young, 1987). However in these cases, the indigenous peoples still hold the control over how these parks are run. As Dasmann (op cit:308) says:

"Those who are most affected by the presence of a national park must fully share in its benefits, financial or other. They must become the protectors of the park, whether they are directly employed by the park, receive a share of park receipts, or are in other ways brought to appreciate its value."

However, in addition to this, there is the question of whether the indigenous peoples of the area give their consent to the creation of a park there at all. Questions such as this can bring indigenous peoples and conservationists into conflict.

The Biodiversity Conservation Strategy - Protection Zones and Indigenous Peoples

The conservation strategy contrasts two main elements. "In situ" preservation refers to conservation strategies in the field and "ex situ" preservation which involves removing examples of rare and endangered species for protection in botanical and zoological gardens or else preserving seeds and genetic specimens in storage centres. Chapter 4 will look more closely at "ex situ" conservation in the context of intellectual property rights.

Three aspects to in situ preservation directly affect indigenous peoples: protective zoning, debt for nature swaps and extractive reserves. All of these strategies are aspects of land protection and so relate directly to the issues which have been raised in this chapter.

1. Protected Areas and Land Use Zoning

The WRI report "Keeping Options Alive" distinguishes natural and semi-natural ecosystems (the latter are not completely "natural" because they have had some human disturbance. However it says (Reid & Miller: op cit:67) that "all protected areas require some intervention in the ecosystem - whether boundary patrol or the supervision of recreation, or resource extraction". The impact of humanity, says the report, should not be greater than any other factor.

The plans for these ecosystems do not address the long history of conflict between indigenous peoples and national parks. They are ideas which too frequently are imposed on the local inhabitants, who, if they are lucky, are allowed to live in a manner which the environmentalists consider to be "traditional" and who can take from the environment enough products to make the forest sustainable. The question of whether there is any sustainable subsistence for the indigenous peoples of these



For thousands of years the symbiosis between man and nature in Northern Australia has created a unique landscape and wildlife. The destruction of the aboriginal culture has resulted in tremendous "wild" bush-fires, destroying trees and animals. In the Kakadu national park the yearly burning of the grass is now managed by park rangers. (Photo: Jørgen Abelsen)

areas is of secondary importance. Yet this is the factor which determines whether the strategy will work or not.

The only way to deal with this problem is to encourage models such as those which have taken place in the Kakadu Park in Australia or among the Kuna in Panama. In both cases the indigenous peoples were involved in establishing the park from the beginning. Their priorities and those of conservationists were considered together and a common policy negotiated. However even these cases were not free from problems. Kakadu was only created as a trade off for the establishment of a uranium mine on indigenous territory.

2. Debt-for-Nature Swaps

The idea behind debt-for-nature swaps has been to reduce the burden of national debts which are putting enormous pressure on many countries and rearranging them in return for conservationist measures. Debt-for-nature swaps have taken place in several countries including Costa Rica, Ecuador and Bolivia. For example, Bolivia agreed to spend \$250,000 to protect the Chimanes forest by setting up a protected forest in return for environmental organisations paying off a part of its national debt at a lower rate (usually one tenth of the amount).

The Chimanes forest example of debt swapping has not been very successful as yet (Hecht:1989:199). The Chimanes Indians were not consulted and were "encouraged" to move to a buffer zone where the forest is being exploited by logging and cattle ranchers more intensively than ever.

However this need not be the case. There are currently attempts to improve the situation in the Bolivian Chimanes national park (Kent Redford pers. comm.). Furthermore, the COICA as a result of the Chimenes case is looking into the possibility of establishing indigenous peoples' concerns at the heart of future debt-for-nature swaps.

3. Extractive Reserves

Organisations working on biodiversity are particularly interested in the utilisation of forest resources and how forest peoples can carry out forms of sustainable extraction. The idea of "extractive reserves" first appeared from the National Council of Rubber Tappers in Brazil. At a meeting in 1985, rubber tappers organised a discussion in Brasilia where 130 leaders met from all over the Amazon (Schwartzman, 1989:13). This group introduced the concept of extractive reserves:

"An extractive reserve is an area of public domain, occupied by social groups whose means of livelihood is the sustainable extraction of native forest products in accord with a pre-established management plan." (Schwartz:1989:246).

In addition, modest investments in the community-run schools, health posts, and marketing co-operatives would improve the income and living conditions of the forest peoples. Extractive reserves could be more productive and ecologically sound than short-term cattle ranching and unsustainable agriculture.

The movement had grown by 1988 and demanded through "empates" (non-violent resistance) that rubber tappers' land which was under threat by cattle ranchers be recognised as extractive reserves (Schwartz:op. cit.). Just before leaving office in 1989 President Sarney of Brazil agreed to recognise the first extractive reserve. Unlike indigenous reserves, extractive reserves were leased from the state for a period of only 30 years. However in 1990 a change in the law led to the establishment of 16 new extractive reserves with stronger tenure conditions than the original lease-hold property basis.

The proposed Biodiversity Conservation Strategy has much discussion of taking advantage of the value of the forests for sustained economic development. This is fine in principle, but has several problems. Biologists are sceptical (Anthony Anderson and John Browder are two examples who made their doubts clear at the recent Rainforest harvest Conference in London) as to the long-term sustainability which can emerge from extractive reserves, while the forest peoples themselves

say that struggle for the reserves is primarily a social rather than an economic movement. They argue that too much has been put into the economic sustainability of extractive reserves and not enough into how forest peoples can control their lives (Pearce, 1990:48). Without rubber tappers controlling their lands and production methods, they will become debt-peons on their own lands (Hecht:op cit: 202).

The strategies mentioned here, which are being promoted by environmentalists interested in biodiversity conservation will not work unless the indigenous and forest peoples have control over what is happening to them. They also need to receive some support from outside in the form of small-scale development projects to enable them to continue to satisfy their subsistence needs.

A few of the hoped-for co-ordinated programmes (Clad, op.cit.) have materialised. Indigenous management of national parks and the Arctic Environmental Strategy show that collaboration between environmentalists and indigenous peoples is taking place. It is all the more disappointing to see that the organisations involved in proposing biodiversity conservation are unaware of these developments and planning their strategy from above.

There is a great need for more dialogue with indigenous peoples to understand more fully their social as well as their purely economic needs. The current proposals for a Biodiversity Conservation Strategy are strong on models but weak on social and political awareness. They provide no common ground for discussion between environmentalists and indigenous peoples. As Hecht says (op.cit.:209):

"Without social content the reserves become mere lines on a map, and not necessarily more secure than any other parcel in Amazonia. Without thorough organizing at local levels (which for many reasons is politically unpalatable to the local, if not national elites), the reserves on their own cannot survive. They will only have a cartographic reality."

In the last chapter we noted that the integrationist model of indigenous development was completely opposed to indigenous demands and forest peoples needs. None of the initiatives about biodiversity have even remotely considered the implications of integration measures for indigenous peoples. In this chapter we have also seen a broad differentiation between indigenous peoples and those institutions working with biological diversity with regard to land. Indigenous peoples are interested in their rights to land and their use/management or eco-cultural relationship to their territories. On the other hand in the analyses and plans for preserving biological diversity there is no consideration for the territorial rights of indigenous peoples. The discussion on papers, furthermore distinguish between "natural" lands which have no human beings "disturbing them" and "semi-natural"

where indigenous peoples and other forest peoples are allowed to enter and sustainably extract resources.

Whereas the improvement in the environmental model which includes indigenous sustainable resource extraction within its framework is significant, nevertheless drawing forest peoples ever further into the market economy will bring other problems which risk promoting the very same integrationist tendencies. Creating more needs, changing production practices and making forest peoples pay for essential services may oblige them to exploit even more intensely the rainforest resources that they depend on for their survival. Indigenous peoples will not be too impressed with this solution.

Outsiders, namely conservationists and indigenous advocates, will eventually take control over the production models in the extractive reserves and indigenous territories, leaving the forest peoples no longer in control over the access to their resources.

Indigenous peoples are therefore still forced to respond to the development planning of others, while their identity, so bound up with their territory, becomes fragmented. Each indigenous culture has its own patterns and processes for inter-relating with the environment. The variety of cultural alternatives are part of the diversity of the human species. As long as environmentalists and advocates try to seek monolithic and monocultural solutions to problems of conservation and paternalistically project their own ideas about protection on to forest peoples without trying to understand their perspectives, the world will end up with neither conserved areas nor forest peoples.

The most important factor for indigenous peoples in terms of land conservation is to obtain recognition of their lands and legal title to their territories. With this fundamental goal at the forefront of conservation strategies, indigenous peoples and environmentalists will begin to find a common ground on which they can fight together for the future.

Chapter 3: Indigenous Peoples and the Marketing of the Rainforest

The enthusiasm for marketing rainforest products is understandable. As we crunch our way through nutty Bio-Bars, take the hairs off our chests with ayahuasca jelly or dab our armpits with tincture of opossum, we can rest assured that we are preserving the biodiversity of the commodity market. The question is whether this has any effect on the threat to rainforest biodiversity in general or to indigenous peoples' cultural diversity in particular.

Marketing products gathered by forest peoples of the world, initially appears an ingenious blending of conservation and development goals. On the one hand the forest is protected by extractive or indigenous reserves while on the other forest peoples can produce a sustainable income to ensure their subsistence needs and long-term survival. Furthermore national governments can take heart that their gross national products will be on the increase and green capitalism now has a new and acceptable face.

Indeed, as has been so often said, indigenous peoples are in great difficulties now. They need cash resources to defend their lives and futures. This money can come from marketing their forest products extracted sustainably from their lands.

These arguments present the urgency of the case. People who disagree are usually termed romantics who want to keep indigenous peoples in some time-warped protected reserve under the supervision of paternalistic do-gooders. The trouble with both these arguments is that they are so caught up by their own preconceptions, or rather hype, that they simplify the issues and ignore years of experience, discussions on development questions and, above all, the voice of indigenous peoples themselves.

Trade and Indigenous Peoples

Indigenous peoples in many cases want to exchange their goods and actively seek market opportunities. They have been trading and bartering for centuries. The exchange of extracted resources exchange over long distances is nothing new. The history of the Amazon has shown that

chains of exchange are the most usual routes for the introduction of exotic goods. Inca style axes in the Peruvian Madre de Dios region demonstrate the likelihood of such trading taking place in Inca times when metal axes were exchanged for forest products (Aikman:1984). Furthermore, finds in the Bolivian Andes show that highlanders received medicines from rainforest shamans hundreds of years before the arrival of the Spanish.

Evidence from different parts of the Amazon shows indigenous peoples still actively seeking out goods for different reasons. In the Northwest Amazon, indigenous peoples have received trade goods through barter which are exchanged within and between communities (Hugh-Jones,1987). A detailed study of the spread of colonialism among indigenous peoples by Eric Wolf demonstrates clearly the inter-relation between internal and external trading practices and how these were bound up with the spread of the colonising frontier throughout the world (Wolf, 1982).

One of the standard ways of "attracting" indigenous peoples has been by leaving machetes or axes as offerings in the hope of luring them into seeking more. When considering the amount of work time saved when clearing a field through using a steel axe instead of a stone one (several hours), it is not surprising that indigenous peoples want trade goods and some cash (Colchester, 1981:56).

There are hardly any indigenous peoples in the Amazon who are completely isolated from the market economy and who would not like to take advantage of their resources. But the argument is not as simple as that. Marketing is a two-edged sword. Industrial society and markets have contributed generously to the devastation and destruction of indigenous peoples throughout the world.

However, for many indigenous peoples, such as the Co-ordinadora de la Cuenca Amazonica (COICA), the indigenous international organisation for the South American rainforest, this emphasis on finding markets as a priority would appear something of a luxury. In their recent statement to "The Community of Concerned Environmentalists" their first priority for action was as follows:

"The best defense of the Amazonian Biosphere is the defense of the territories recognized as homeland by Indigenous peoples, and the promotion of our models for living within that biosphere and for managing its resources" (COICA, 1989:4).

This quote crystalises the point that the priority for indigenous peoples is a secure land and resource base and that all marketing should be firmly under their control and in accordance with their ways of life.

Indigenous peoples primary problem is securing and defending their land base. Without it they cannot carry out their mixed economy of

hunting, gathering, fishing, horticulture and other activities and furthermore they are unable to live according to the traditions of their society and culture. The effect of invasions on their lands is that these means of subsistence are depleted through deforestation and disturbance of the flora and fauna of the region.

Until indigenous peoples have obtained recognised control over their resources and inalienable rights to these territories, any form of survival will remain precarious, and the production of surplus commodities will be unstable because of the threat of invasion, deforestation and resource depletion. Thus, to discuss marketing apart from the control of the resources which will provide that market with goods is an inversion of sound economics.

Markets and Indigenous Peoples

A common assumption of the ideal model of saving indigenous peoples and the rainforest through the market economy is to presume that the market is a changeless phenomenon. Indigenous peoples are presented as unified standard community-based entities which, when plugged together with outside markets are switched on by a cash flow something like switching on a light. However this is to simplify marketing excessively.

Marketing as a part of exchange activities between and within communities consists of several features based on the extent to which the community is independent of or integrated into the broadly industrial market economy (Belshaw, 1965, Hodges, 1988:4-6). A simplified scheme of these attributes of a market are:

- 1) Exchange between communities of goods, such as resources found in specific areas, trade goods obtained from outside the area or other commodities.
- 2) Local markets existing in the form of trading posts, or nearby towns, where indigenous and other forest peoples can bring their produce to a central place and sell or exchange it for other goods.
- 3) Chains of exchange which link the indigenous community to the national, regional and international economy. Here goods which are found naturally in the forest such as rubber, gold, wood or other products are sold or exchanged to middlemen or merchants who sell them to outsiders, usually at considerable profit.

When we discuss the marketing of rainforest products, we are talking specifically of this third aspect of the market economy. Indigenous peoples provide markets with three potential products: the surplus of their subsistence economy; products which they discover are valuable (such as gold or rubber) or else their labour (see Colchester, 1989). In the models of marketing extractive resources (Baker, 1989:64-5) indigenous

peoples provide a mixture of their labour time, subsistence goods and new products for the market.

Effects of Marketing on Indigenous Peoples

The following examples show the range of effects the market economy can have on indigenous peoples in the Amazon from the genocidal and ethnocidal to the less disruptive and potentially beneficial.

1. Genocidal

The most bitter example of market impact on the Amazonian peoples came during the rubber boom of 1894 to 1914, particularly in the Upper Amazon. In order to meet the increasing demand for rubber to provide tyres for bicycles and motor vehicles, indigenous peoples were indebted by force into slavery to produce great quantities for the market. The most notorious and well documented example was on the Putumayo river, now in Colombia where the Casa Arana (a Peruvian concern which later became established as the British based "Peruvian Amazon Company") was condemned internationally for its maltreatment of the Indians (Gray, 1990).

Considering the scale of the work, the environmental destruction wrought by the rubber boom was not as severe as the appalling effect on the indigenous peoples of the area, many of whom lost up to 90% of their population through displacement, disease and murder.

2. Ethnocidal

Less intense but by no means less destructive has been the impact of the market economy on Indians faced by on-coming development projects. The effects of highways in Brazil has brought many indigenous communities into contact with the market economy. One telling example from the visit of the Aboriginal Protection Society's team to Brazil was the image of the Parakanan village of Espiritu Santu with the Indians, sick and barren of native artifacts. The APS team reported:

"Since their pacification and resettlement, these Indians had sold their cultural possessions to outsiders in exchange for guns and ammunition and were living off the dole of highway workers along the Trans-Amazon Highway" (Davis:1977:68).

This episode was typical of many cases in Brazil and elsewhere in the Amazon.

3. Market Control where there is some form of balance

There are examples of Amazonian peoples who have managed to deal with the market economy on their own terms. According to Paul Henley,

the Panare who have refused to participate in replacing their subsistence economy with cash-cropping, who exchange handicrafts with the local Criollos and are still able to continue with their subsistence economy (Henley, 1984:224).

In Peru, the Amarakaeri have developed their gold economy on a sustainable basis. By controlling their territories with recognised land titles and emphasising their subsistence economy, they have largely escaped the devastating impact of the market economy (Gray, 1986). However there have been some difficulties: the effect of buying commodities, particularly alcohol has affected the traditional activities and prestige of the women. Even where marketing appears to be not so destructive, the introduction of a cash economy can severely disrupt a community.

4. Indigenous Control

Examples of indigenous peoples controlling their own marketing are hard to find. In the Pichis region of Peru and the Rio Negro of Brazil, indigenous peoples are looking at marketing as a whole process rather than as merely the selling of produce. They are trying to gain control of transportation thereby preventing travelling merchants and middlemen from gaining much of the profits from production. Nevertheless, this indigenous controlled model of marketing is as much an ideal to which they aim as an existing system.

We can see that markets need not necessarily destroy indigenous cultures, but they can and do. When indigenous peoples do not control the market process they become dependent on outside bodies whether they are unscrupulous middlemen or well-meaning NGOs (Pearce, 1990).

This dependency is what lies at the root of the destruction of indigenous cultures and society. Dependency is the means of shattering the right of self-determination of indigenous peoples to control their own lives and futures. Indeed, as one commentator has recently said: "the solution must surely lie not in surrendering further to the lure of the market, but in systematically disentangling ourselves from its clutches" (Hildyard, 1989:62). This need not mean indigenous peoples avoiding the market for ever, but controlling and determining their relationship with it.

Whereas dependency is the external way of integrating and assimilating indigenous peoples into an economy over which they have no control, the internal effects are no less problematic. Indigenous economies are renowned because they are based on the principle of reciprocity and redistribution (Dalton, 1965:14). These aspects of circulation of people, products and ideas are firmly embedded in the social and cultural relations of the people concerned (Sahlins 1974:76).

The significance of this is that indigenous society controls economic exchange and therefore production and consumption.

When indigenous peoples enter the market economy and find that they are supplying outside needs apart from their own, their subsistence orientation encounters other needs - the demands of outside interests. This takes the economy out of the social control of the indigenous peoples and transforms their society greatly (Polyani, 1944). This is precisely what happened in the cases of genocide and ethnocide, mentioned above.

In contrast, the gold economy among the Amarakaeri of Peru has blended more easily into their subsistence economy because they receive money for themselves according to how much they produce. The National Mining Bank sets the price of gold and, even though exploitative (Gray, 1986), it enables the Amarakaeri to mine at their own pace. Thus the outside economy is still predominantly under Amarakaeri social control. The economy is not yet an independent institution out of the control of the people concerned.

Sustainability controlled by consumer demands leads to a fundamental contradiction between limiting and increasing demand. Who will have the upper hand in this conflict of interests - the consumers or the producers? Anthropological work in Africa has demonstrated that domestic production can supply social and economic subsistence needs but, as demands for profit increase, consumer needs force more control over indigenous labour which threatens the very domestic production unit which supports it (Meillassoux, 1981:conclusion).

These examples demonstrate clearly that marketing among indigenous peoples is not an easy matter. The control of their market process covers several areas as has been outlined in a recent series of documents by the Union of Indigenous Nations in Brazil (Hosken and Steranka, 1990:30-31 & 65):

1. Indigenous peoples have to control the processing of products before they go to the market.
2. Indigenous peoples have to control the transportation of commodities to market
3. Indigenous peoples themselves have to use their own contacts through their national and international organisations to contact marketing outlets.

If indigenous peoples do not have control over these aspects of the marketing process, they will speedily find themselves in dependency relations with the outside whims of the international market. Merchants and middlemen will syphon off the profits. Middlemen do not have to be local traders, multinational middlemen touting for trade have been a feature of oil, rubber and coca booms.

The relationships of dependency described here are directly analogous to those between the countries of the North and their unequal relations with those of the South. Indigenous peoples present a microcosm of the inequalities and exploitation which takes place at the level of nation states. Thus indigenous peoples stand to lose not only as members of nation states of the South, but also as exploited within those states.

Current initiatives to market the rainforest

The discussion papers and proposals for the Biodiversity Conservation Strategy include utilisation of the resources as one of its main attributes.

On page 89 of "Keeping Options Alive", the authors say:

"Many actions that can be taken to stem the loss of biodiversity do provide short-term economic benefits - say, maintaining natural forests so that wild species can be harvested for food, medicines, and industrial products or establishing protected areas so that tourists will visit."

The report advocates expanding the short-term utility of biodiversity to increase the potential for new products. This involves fixing "true" economic values to biodiversity. The document on conserving biological diversity (McNeely et.al., 1990) considers valuation one of the fundamental bases of conservation.

The promotion of valuating the environment is particularly problematic. Not only is it extremely difficult to do, but it actively encourages new speculation in products which can be extracted from the rainforest. In the same way as the Tropical Forestry Action Plan is seen as an advertisement for increasing deforestation, so the biodiversity conservation strategy will attract outside interests into further rainforest exploitation.

These plans present the peoples of the rainforest as passive recipients of the benefits of green capitalism. However, there are no guidelines to provide locally controlled production methods and marketing. On the contrary the approach is based on the needs of the northern consumer, who once again will dictate their demands and desires onto the local producers. After initially taking advantage of a few limited benefits these people will, as in the past, find themselves dependent on the development models of outsiders.

Development is the concept which the WRI, IUCN and UNEP hope to wed to biological diversity conservation. Economic utilisation of biological diversity will be able to contribute to national development goals. However this says nothing about the effect of "development" on indigenous peoples.

In addition to the dangers and complexities of market economies on indigenous peoples, there is continual problem of imposed development.

Current initiatives to market the rainforest and provide the indigenous and forest peoples of the area with a sustainable means of development counteracts the direction in which development has been going in the last few years. The approach used takes a very economicist vantage point whereby development is seen as a question of cash flows which automatically solve the problems facing indigenous peoples.

However, the development debate in recent years has emphasised that two factors, culture and politics, which have to play a role as important if not more important than economic questions (Henriksen, 1989). The first is known as the "cultural dimension of development". This means that sustainable development in itself is not necessarily appropriate culturally. Prohibitions, social production patterns and cosmological questions could all affect a community being persuaded to sell rainforest produce. The new production process could well enter into conflict with their existing world view causing splits within the communities.

An example of this took place in the rainforest of Peru in an Ashaninka community. They were rice growers and part of the community had decided to increase production and develop sales nationally and internationally. The result was that the community turned themselves over to rice growing exclusively, gained the money they had originally sought, but at the expense of community harmony and respect for traditions. After several major conflicts, the community threw the rice mill into the river, curtailed their profits and returned to making subsistence agriculture their priority (pers. comm. Segundo Macuyama).

The second element is the "political dimension of development" and this takes several forms. The first is the idea that indigenous peoples organised in communities, naturally tend to form co-operatives. This uniform view of indigenous society is quite mistaken. Over the past 10 years of working gold, the Amarakaeri of southeastern Peru have worked as communities, as clans, as extended families and even individually. They choose whatever strategy suits them in the current conditions. The imposition of co-operatives from outside could be disastrous to the unity of the community which is frequently kept together by respecting internal divisions.

The other aspect of the "political dimension" is the top down approach to development, where the sustainability is but a cloak for encouraging integration of indigenous peoples into the market economy, aided and abetted by the general public and unwitting companies.

This chapter raises several points at variance with the idea of encouraging indigenous peoples to enter markets before they have worked out their own strategies:

1. Its economicist basis threatens to swamp cultures and societies.

2. Markets are a two-edged sword. They can destroy more easily than they can help, particularly when consumer demands over-ride indigenous control.
3. The emphasis on extractive reserves and marketing at this stage is important for those forest peoples wanting immediate cash. However this in itself may not provide sufficient sustainable returns without further support from agencies for small-scale local projects.

In terms of priorities, land rights, control over resources and the self-determination of their lives and development are the basis for indigenous production without which all their marketing hopes will be very risky. Furthermore profits for investors from abroad will also be very uncertain. The dilemma facing commercial environmentalists and indigenous marketers is that without indigenous rights and control over production, processing and marketing, there will be no consistency in productivity as outside interests scramble for whatever profits they can grab from the area.

Where companies do make profits, they will be subject to scrutiny that they are not responsible for exploiting indigenous communities or encouraging their integration into the international economy. On the other hand when indigenous peoples control the market the companies will find themselves in competition with indigenous peoples themselves and this will subsequently reduce their share of profits.

Produce gathered, grown or extracted as well as marketed and controlled by forest peoples could be of positive benefit. Anything else will just increase the present pressures for them to change in line with the economic priorities of others. Forest peoples who wish to go ahead certainly should be free to determine their future and take the risk, but we should all think of the destruction which those non-indigenous peoples have wrought who have gone out to the Amazon bearing gifts and promising the indigenous peoples an answer to all their problems in return for commodities.

We have to link markets to the overall demands of indigenous peoples, we have to perceive their needs from their point of view, we have to respect their ways of approaching these problems and respond accordingly. We have to be reactive to their strategies for marketing not proactive, seeking our solutions to their problems. As an indigenous leader once said to me: "we prefer to make our own mistakes rather than having the mistakes of others thrust down our throats".

The days when indigenous peoples' problems are solved paternalistically should be over. They are capable of facing these difficulties themselves and we should be listening to their voices. If we do not we will turn the marketing of rainforest products into a commercial side show as we witness the destruction of the rainforest and the extinction and assimilation of the indigenous and forest peoples who

have been custodians of the diversity of species there for thousands of years.



22.000 year old rockpaintings from Zimbabwe, Africa, show what has been important for mankind since the beginning of time: Hunting.

(Photo: Frans Welman/WIP)

Chapter 4: Indigenous Peoples and Intellectual Property Rights

Indigenous Knowledge

Indigenous peoples have accumulated a vast wealth of knowledge of their environment and production techniques over the thousands of years they have been living in the rainforests. When an indigenous shaman dies, Mark Plotkin (1986), following Perrin, likens the event to the loss of a unique library. Throughout the indigenous world, knowledge of the environment depends on contacts with the invisible spirit world which plays its own crucial part in ensuring the reproduction of resources.

The Amarakaeri people of southeastern Peru know where to hunt because the spirits inform hunters in dreams where to seek their prey. Hunters are also told by the spirits how much they can kill without suffering the consequences of illness. The Amarakaeri organise their hunting, gathering and fishing through spirit contacts and from the shamans who advise and recommend against over-use of any one area.

The Mapuche of Chile and Argentina depend largely on the experience of their Machi female shamans to ensure the health of the community and individuals. These women through their contact with the spirit world are able to cure and advise. Mapuche spirits thrive in certain copses where there are particular plants known to the Machi. These spirits are so real that I have been informed of some who requested a Chilean Mapuche Machi to draw up a small self-development project for rehabilitating an old copse where the plants were not working efficiently enough.

When environmentalists work with indigenous peoples they have to grasp not only biological but spiritual aspects of knowledge. This is not simply dealing with a relationship between human beings and an external "nature", but with a relationship between the visible and the invisible spirit world.

For this reason when we talk of "intellectual property rights" or "indigenous knowledge" we are often entering into uncharted territory. Most non-indigenous people neither believe nor understand the complex inter-relationships in indigenous cosmologies and take a somewhat prosaic view of knowledge. This also makes legal protection of what in



Curare, the poison used on the spears and arrows of native hunters in the Amazonian region for centuries, now used as anaesthesia, is vital in hospitals throughout the world.
(Photo WHO)

indigenous terms are the spirits of the rainforest, a particularly difficult matter to conceptualise.

In many South American societies, certain specialists build up technical prowess in production activities and in curing from their special relationships with the spirit world. These shamans will often exchange their knowledge of these techniques for goods or services within the community. This form of exchange is similar to what we noted in the last chapter when referring to reciprocity and redistribution in indigenous societies. The knowledge circulates within the community along socially established relationship lines which control how the information is to be used and who is to benefit from it.

When this knowledge leaves the community, control from the indigenous community weakens to almost nothing. Those who take the information can benefit themselves and make a profit which will not be redistributed within the community. As we noted with the market economy, instead of redistribution within the society, profits are earned on the resources outside and the demand for more goods or information increases.

Shamanic knowledge is recognised as a major repository for information on plants in the rainforest (Rural Advancement Fund International, 1989). Plants have been used for some 7,000 medical components in the industrial pharmacopoeia (about a quarter of all prescription drugs). Three quarters of these have been gathered from information provided by indigenous peoples (RAFI, 1989:5). The efficacy of quinine was taught by the Shuar as a remedy for malaria. The National Cancer Institute of the USA is currently working on a five year programme costing \$2.8 million to screen plants from all over the world for chemotherapy (Gilbert and Colchester, 1990)

The rosy periwinkle from Madagascar contains at least 67 named alkaloids which can operate as anti-tumour agents. The plant was identified and gathered from the peoples of Madagascar and is now the basis of a multi-million dollar industry. It sells for \$100,000 a lb and raises \$160 million annually. The rural people of Madagascar have received no benefit from this.

Apart from plants, indigenous peoples have drawn attention to new varieties of crops, organic pesticides, sweeteners, new fruits and perfumes. They are, however, the last people to be acknowledged for their contribution.

The Gene Robbers

With the growing expertise of bio-technology it is becoming possible to make ever more use of these valuable rainforest products. Multinational companies are being informed that by ignoring the destruction of the

rainforest they are losing profits of up to \$77 billion for industrial use alone (Reid & Miller:28).

Varieties of plants and genetic material are both increasingly in demand from areas of the world where there is great biodiversity. However, whereas varieties of plants can be used for breeding one at a time, genetic material when held in storage can be used as the basis of reconstructing whole plants, or even transforming the material into new varieties. The controls over newly bred or genetically produced varieties can present great problems for the local agriculturalist.

Currently there are several programmes sending researchers and also professional gene hunters sub-contracted by companies out to indigenous areas to seek out new plants. Although biologists are indeed discussing the ethical questions of compensation to indigenous peoples (Brian Broom pers. comm.), the majority of specimen researchers working with big industry avoid the question completely. It is interesting that intellectual property rights did not arise in the London "Rainforest Harvest Conference", even though businesses interested in exploiting the rainforest were present, including gene prospectors.

The resources of the rainforest, and the South in general, are usually considered as a "world heritage" which people from the North can come and investigate freely. They visit, talk to the indigenous peoples living in the area and take away their samples. When the samples are processed and a product is made, the "discovery" is patented and rights are under the control of the company backing the project, even though the knowledge leading to that product as likely as not came from indigenous peoples. A recent example has been the exploitation by the drug company Monsanto of an anti-coagulant taken from the "tiki uba" plant used and identified by the Uru-eu-wau-wau people in Brazil. Their attempt to patent part of the genetic make-up of the plant is likely to be the subject of a court case, currently under investigation by Cultural Survival (Jason Clay, pers comm.).

A recent publication on the subject of exploiting indigenous knowledge says:

"In all of this there is a sense of something wrong. Japanese companies are collecting herbs in Asia. American companies are after plants in Latin America. European companies are opening up research centres in Brazil and India. There is money to be made. But none of it will be made by the people who first discovered the value of these traditional medicines." (Fowler, et.al., 1988:166).

The problem lies in a conflict of interests between the genetically rich resources of the South and the industrial and financially rich countries of the North. The resources of the South, and in particular those of indigenous peoples who live in some of the more genetically

diverse regions of the world, see their resources taken for profit, yet are told that it is for the good of humanity.

Making Money out of Biotechnology - Precedents and Current Practice

The historical precedents of the biotechnological revolution provide considerable cause for concern. The Green Revolution was a form of genetic manipulation of plants in order to increase yields. Working on specific varieties of corn, rice and potatoes in particular, scientists in the 1960s and 1970s replaced a number of crops in the Third World with supposedly more efficient varieties.

The result was that instead of taking advantage of the existing and very diverse varieties of crop, the new "improved" models were sold back to the Third World. These species became the only species available and previously genetically diverse areas relying on a multitude of potential crops became based on monocultural crops vulnerable to diseases (Shiva, 1990).

The social effects of the Green Revolution were not as anticipated. Whereas yields increased and provided short-term benefits for certain parts of the world and initially demanded extra labour, the main beneficiaries were the larger farmers who were able to invest in the new technology. The smaller farmers were not able to persevere in the face of the inevitable drop in food prices that the Green Revolution brought (Ahmed, 1988).

Small farmers and marginal tribal peoples of India suffered the most from the impact of the Green Revolution. The high overheads forced many local producers into debt. To pay of their dues they had to sell their lands while the rich prospered. The poor were dispossessed. The Green Revolution provided a breeding ground for insurgency and social unrest (Duyler, 1987, Shiva, 1989).

The Green Revolution was spearheaded by a network of International Agricultural Research Centres (IARC) which were co-ordinated by the Consultative Group on International Agricultural Research (CGIAR), established in 1970 with its offices in the World Bank. CGIAR organises the collection and conservation of genetic resources. The effect of this research structure has been the centralisation and the break down of the diversification of genetic potential in the Third World. The seed industry now monopolises the market, selling special varieties resistant to herbicides (Gilbert and Colchester, op.cit.).

In 1961 the Union for the Protection of New Varieties of Plants (UPOV) set up a Convention enabling "protection for plant varieties that are...clearly distinguishable, sufficiently homogeneous and stable in essential characteristics" (Posey, 1990:12).

UPOV compensates breeders and protects rights to varieties. These rights need not be of any use to small farmers. More wealthy farmers who can perhaps afford to buy the varieties could, if they so wish, use them to develop other varieties. However, even this is not possible under the Biorevolution's patent system which provides companies with the right to control all the varieties where a particular cluster of genes appears.

How the Biotechnological Revolution (Biorevolution) compares with the Green Revolution

The Biorevolution differs from the Green Revolution in several respects. According to Ahmed (op. cit.: 53):

"Biotechnology refers to commercial techniques which use living organisms to make or modify a product, including techniques for improving the characteristics of economically important plants and animals and for developing micro-organisms which act on the environment".

Biotechnology covers several techniques. It is now possible to regenerate a whole plant from one cell and to fuse two plant cells from the tissues of intact plants, forming a new entity with different characteristics. Genetic engineering involves isolating genetic traits in an organisms' deoxyribonucleic acid (DNA) which is a chemical constant in all living things, and splicing it artificially from one organism to another. So whereas the Green Revolution dealt with genetic manipulation at the level of the whole plant, the Biorevolution can cross the species barrier, re-creating anything.

Biotechnology has been presented as the answer to all the world's food problems, although little has appeared in the last ten years to justify the initial enthusiasm (Young, 1990:14). Nevertheless, multinational corporations are interested in the potential of biotechnology. The result has been that whereas in the Green Revolution, public funding and interests were involved, the Biorevolution is increasingly in the hands of corporate interests who are setting the research agenda and providing funding for the universities (Kloppenburger, 1989).

CGIAR and the FAO have established a research institution to conserve and carry out research into genetic resources. The International Bureau for Plant Genetic Resources (IBPGR) contains 127 base collections of genetic material. Eighty-one of these are deposited in the north and a further 29 are controlled by companies from the North. In all only 17 of these base collections are in the hands of the Third World, even though most of the material comes from there. Research for Biotechnology reflects the CGIAR system of storing genetic resources in the north,

centralising the research, and planning to produce species which will encourage more monocultures and less genetic diversity.

A further feature of the Biorevolution's contact with the private sector has been the increase in legal actions and registration of patent protection for modified life forms. A patent holder has the right to prevent others from commercially exploiting the subject matter. The patent enables the owner to gain a lead in the commercial market. The discovery or invention has to be novel, inventive and practical in its use in order to receive a patent (ICDA Seeds Campaign, 1989).

Patenting life forms is ethically problematic, and logically difficult to sustain, given that nothing is strictly "invented", but rather existing life forms are transformed. Patenting also provides difficulties for farmers who wish to use a seed or plant developed from biotechnology because there may be company control over several varieties using the cluster of genes which have been patented. In addition, a farmer will not be able to reuse a species for which some of its genetic material has been patented, as can be done under UPOV. In spite of this, patenting of life forms is now firmly on the legal agenda in most countries. It has now been accepted in the United States and the European Community is currently discussing a directive to legalise patents for life forms.

The debate concerning the patenting of life forms has focused on the FAO in recent years, where the Third World countries have been trying, with some success, to wrest bio-technological control out of the hands of the industrialised countries, particularly the United States (Mooney, 1983). However the discussion is moving increasingly to the General Agreement on Tariffs and Trade which is being discussed in Uruguay.

The current GATT negotiations are not simply about liberalising international trade through tariff cuts as the previous talks have been. The framework has now been extended to include "trade related issues", services and investments rights and intellectual property rights, (Raghavan, 1990:44). The aim is to broaden the freedom of operation of multinational corporations. Largely influenced by the US, the European Community and Japan, Third World countries participating in the talks feel at a disadvantage.

Through Trade-Related Intellectual Property (TRIP) rights the:

"Industrialised countries are seeking to establish new international rules to protect the monopoly rentier incomes of their TNCs (transnational companies), deny the Third World countries access to knowledge, block their capacity for innovation and technical change and prevent any rise of competitive capacity in the Third World" (op. cit.:114).

The industrialised countries are seeking to achieve this by ensuring worldwide rights for processes and products for drugs. Furthermore the

USA through GATT is trying to ensure that manipulated genes and altered species become patentable internationally, (op. cit.:124).

The Biodiversity Conservation and the Biorevolution

The discussion papers on biodiversity linked to the proposed strategy see the role of the IBPGR and CGIAR as an important part of their in situ and ex situ conservation proposals. The International Board for Plant Genetic Resources' task will be to identify numerous species for in situ conservation such as groundnut, oil palm, banana, rubber, coffee, cocoa, onion and citrus fruits.

In addition to in situ preservation, seeds will be stored in dry low-temperature vacuum containers (cryogenic storage) and preserved in some of the 227 natural seed banks which are deposited in 99 countries. The WRI report "Keeping Options Alive" says that the use of wild germ plasm is expected to increase as advances are made in biotechnology" (Reid and Miller op.cit.:65).

The Biodiversity Conservation Strategy intends to make use of the same institutions as did the Green Revolution. The idea of storing varieties or plant and even genetic material is particularly controversial when we look at the proposal in the light of the rest of the Strategy.

The WRI's financial strategy is to seek funds from business, national governments and international institutions to implement the BCS. However, warnings are coming from concerned scholars and activists (Mooney, 1983 and Kloppenburg, 1988 for example) to note with concern the interest of private enterprise in controlling rights over information concerning protected plant and genetic material. Furthermore, with this money WRI, IUCN and those involved in the BCS intend to promote the establishment of a new Institute for Research on Tropical Ecology, linked to CGIAR (Gilbert and Colchester, op.cit).

Intellectual property rights and Indigenous Peoples

Discussions on intellectual property rights are usually centred around the rights of farmers in the third world and at first sight do not appear to concern indigenous peoples. However with the increasing focus on the plants and their produce available in the tropical rainforests and elsewhere, it is a major problem for indigenous peoples. We have seen the Brazilian case of genetic material taken from plants found by the Uru-eu-wau-wau, and it is not too difficult to see this type of case increase considerably in the future. Researchers are taking different species from indigenous peoples' territories, isolating the genetic material which gives the plant its particular healing characteristic and selling it once patented on the open market.

Darrell Posey has drawn this and other related problems to the attention of the international community. He points out (Posey, 1990:4) that industry and big business are aware that there is money in indigenous knowledge. He says: "the annual world market value for medicines derived from medicinal plants discovered from indigenous peoples is \$43 billion". This is to say nothing of insecticides and other products.

Posey argues convincingly that there must be protection for the intellectual property rights of indigenous peoples. They should receive compensation for the important contribution which they make to furthering knowledge. This contribution is not usually recognised to indigenous peoples directly, but for advertising purposes the intellectual debt to indigenous purposes has been acknowledged. For example, in a recent advert the British Pharmaceutical Company acknowledges the contribution of the Shuar in Ecuador for the realisation that curare is an important component in making anaesthetics.

Intellectual property rights is a potentially important issue for indigenous peoples with the rise of the bio-technology revolution. Indigenous peoples stand to lose in the same way as the Third World countries have done from both the Green and Bio revolutions. Whereas we now are discussing the patenting of medical crops, the time could well be when essential staples of indigenous peoples such as manioc or maize become patented in the North.

Ways of Dealing with the Question of Intellectual Property Rights

The difficulty of intellectual property rights for indigenous peoples is that it makes these peoples doubly vulnerable. If they stand firm and demand the right to patent their knowledge they will be accused of trying to limit a world heritage and acting like private enterprise. In addition they could also be accused of succumbing to the current trend to patent life forms which would be particularly difficult ethically for many indigenous peoples. On the other hand if they do nothing their knowledge will become prey for multinational companies.

Several solutions other than patenting are possible. Darrell Posey points to the advantages of indigenous peoples demanding the same sorts of rights for their crops as plant breeders. This would need much co-ordinated action to register the varieties before genetic aspects of their construction are patented.

Other solutions include using copyright law, which is difficult because this relates to works of art and written material. A "know-how licensing model" would be another possibility which would enable indigenous peoples to license their knowledge, yet the practical difficulties of this could be problematic. In addition, copyright and know-

how licensing is usually a question of individual rights rather than communal rights such as would accrue to a community or people as a whole.

The approaches of plant breeders' rights, patenting, copyright and know-how licensing all provide possibilities for protecting the intellectual property rights of indigenous peoples within the nation and international legal system as it stands. The existing law would perhaps be used more to protect indigenous peoples from existing exploitation (as in the Monsanto case) rather than providing them with a solution adequate to their own needs and conceptions.

Darrell Posey has investigated the possibility of using the World Intellectual Property Organisation which is based in Geneva to provide a new way of looking at the problem. This institution is probably the most relevant international organisation to deal with indigenous intellectual property rights issues. In 1984 WIPO developed "Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Prejudicial Actions". Posey explains (1990:11) that the provisions sought to maintain:

"a proper balance between protection against abuses of expressions of folklore on the one hand and the freedom and encouragement of their further development, dissemination and also adaptation for creating original authors' works inspired by folklore, on the other."

Using these expressions of folklore would necessitate the authorisation of the "competent authority" or "community" concerned.

WIPO's initiative stagnated because it was not thought through sufficiently which generated a lack of interest. Since then, there has been no attempt to extend this into the field of indigenous scientific knowledge. Posey is in favour of a move through the United Nations, authorising the FAO and WIPO to take the question further. One proposal is the establishment of a Convention to ensure protection of the intellectual property of indigenous peoples and ensuring their just compensation. This could be an important approach for the long term benefit of indigenous peoples. In addition the discussion could broaden national legal systems' view of these questions as they relate to indigenous peoples.

Whether the existing legal structures are used or a new strategy, indigenous peoples have to be aware of this new threat to the integrity of their knowledge. A possible initiative would be for them to establish indigenous institutions which would retain their knowledge under their control and which could be used to help researchers with royalty agreements. The information would be controlled by indigenous organisations and be used only with the authorisation of the people concerned and after negotiating just compensation. In this way the

information would not be patented but would be open. However it could not be used without the consent of the indigenous peoples themselves and their agreement as to the form of compensation.

Indigenous peoples in control of their knowledge

The question of cash compensation is less of a problem than indigenous peoples controlling access to their knowledge as much as they can. As we noted with markets, providing that indigenous peoples are in control of the process which releases their products and knowledge onto the international market, they are not so likely to be dragged into dependency or exploited to such an extent by the industrial world.

The principle we noted earlier was to start locally and work through national and then international organisations. The issue of intellectual property rights is something which has to be discussed primarily with indigenous peoples. The alternative strategies have to be set out and explained to them so that they can then decide which is the best form of protecting their cultural heritage.

Indigenous peoples, with an organisational basis would be able to establish their own institutions to seek out market channels and organise trademarks and authenticity labels for their products. These institutions could also establish ways of registering information which indigenous peoples are prepared to offer the world, but for which they would like to receive recognition, respect and a just reward.

However a considerable amount of research needs to be done. In Papua New Guinea there is some acknowledgement and compensation for the intellectual property rights of the local rural peoples who control much of the territory of the country (Espen Waehle, pers. comm.). The advantages and disadvantages of a government-controlled system should be analysed and discussed further as a possible future strategy for indigenous peoples in other parts of the world.

Indigenous peoples are not opposed to their knowledge being used for the benefit of humanity as a whole. Indeed many of their practices and knowledge, learned from thousands of years of experimentation and thought, have already provided our lives with basic resources ranging from potatoes and tobacco to quinine and curare.

The recognition of the knowledge of indigenous peoples is a major component in the conservation strategy we are using here. As the Biodiversity Conservation Strategy seeks the means to "discover" new species and make money out of them, its proponents should be firmly aware that without the support of indigenous peoples they will find it impossible to utilise these resources. In addition this recognition will contribute to a respect and tolerance towards indigenous religions which are at the root of so much wisdom and knowledge of the rainforest.

There are currently initiatives for different parties to discuss the question of intellectual property rights. At the 1990 Madras session of the Keystone International Dialogue series on plant genetic resources, NGOs, governments and corporations met to find common ground. The meeting agreed to look more closely to farmer's rights and said that:

"if some of the changes now proposed by some industrial nations to GATT and WIPO are successful, the only forms of human innovation that will not be patentable will be those of informal innovations in developing countries. The twin dangers of expansion of the scope of formal patent rights on the one hand, and non-recognition of informal innovation systems on the other, will lead to a widening of the economic gap between industrialised and poor nations." (KIDSPGR report, 1990:6)

In spite of this example of dialogue, the future looks bleak. Commercial environmentalists ignore the needs and potential of indigenous peoples at their peril. If in the name of conserving the biodiversity of the world, environmentalists support the trends of patenting they will increase the gap between the North and South and the exploitation of indigenous peoples. Furthermore, by encouraging companies to develop new "super" species and varieties will contribute to monocultural activities which they allege that they are trying to discourage.

As the recent RAFI communique (p.7) sets the argument clearly:

"Much more is needed than search and rescue missions from the North motivated by economic interests. Third World countries and indigenous people must also benefit from their knowledge and biological treasures. Long-term conservation measures must be put in place. In the process, indigenous people must be treated with respect and given the recognition they deserve."

Conclusion

This report has presented an argument about conserving biodiversity and has juxtaposed it with an indigenous perspective which combines biological and cultural diversity. The two arguments go as follows:

1. Biodiversity and Indigenous Peoples

The world's genetic diversity is under threat and the only way to protect it is through in situ and ex situ conservation strategies. In order to finance this, it is necessary to attract the interests of business and explain the financial advantages of saving the rainforests' resources. Indigenous peoples live in the forest and will eventually integrate into the broader society. They should be allowed to carry out these activities and, through attaching them to industrial capital, enable them to earn enough money to survive. They should also gain compensation for the help they give to companies establishing new products through biotechnology which utilises the resources of the rainforest.

2. Indigenous Peoples and Biodiversity

The alternative view starts from the position that indigenous peoples are colonised by outside interests. Indigenous peoples want to exercise their right of self-determination. As the rainforest and other areas are decimated and biodiversity is eroded, indigenous peoples' resource base comes under threat. The way for indigenous peoples to protect biodiversity is through the recognition of their rights to their territories. Furthermore, indigenous peoples should be able to control the marketing of their commodities and receive respect and recognition for the benefits which come from their knowledge. They want to control these processes themselves and determine their own development.

The diverse viewpoints which have been presented in this report may make many environmentalists appear to have completely opposing interests to indigenous peoples. This is not necessarily the case. The difference comes in the starting point of the discussion and the extent to which the opposing parties are prepared to discuss these issues with each other.

Indeed, the problem presented in this report cannot be simplified as one between "environmentalists" versus "indigenous peoples". The political make-up of these groups is complex and leads to several cross-cutting alliances. At the risk of over-generalisation, environmental groups can be divided into "green capitalists", "classical nature conservationists" and "social ecologists". Whereas all these groups share the same sense of urgency over the destruction of the environment they emphasise different sets of priorities:

1. The "green capitalists" are commercial environmentalists who consider that the forest can best be saved by creating profitable markets for forest products to detract companies and colonists from destroying its valuable resources. They work closely with, and in many cases are working for institutions aimed at sustainably managing resources.
2. The classic nature conservationists feel that the best solution to the destruction of the rainforest is to ensure that there are protected areas where no one can enter where endangered species can be guarded from destruction. Some of these people will work with the "green capitalists" if they feel they can gain protected areas as a trade off. However, others consider that "green capitalism" is the greatest threat to environmental protection.
3. The social ecologists see the best stewardship of the rainforests to lie with the forest peoples themselves and have allied themselves in organisations such as the World Rainforest Movement.

On the indigenous side, there are three parallel positions which seek solutions to the problems facing indigenous peoples.

1. "Pro-Indigenous capitalism" is the approach which argues that indigenous people need money to survive and struggle for their lives and lands. The only way to obtain this money is to draw them closer into international markets and attract new rainforest products attractive to consumers in the north.
2. Isolationists argue that indigenous peoples need a large land base on which they can be protected from the outside world.
3. Proponents of self-determination, who say that indigenous peoples' voices are paramount and that it is through their political empowerment combined with land rights and their control of the markets which will ensure their future.

In the last two years an interesting shift has taken place in the political alignments of these three position in both environmental and indigenous affairs. The "green/indigenous capitalism" approach has taken off. International environmental organisations such as the World Resources Institute, World Wide Fund for Nature US and the IUCN have promoted these ideas. In addition, indigenous advocacy organisations

such as Cultural Survival have been working closely with small "environmentally friendly" companies and large concerns such as the Body Shop to market rainforest products.

The joining of the Green Capitalists and Indigenous Capitalist approaches to marketing took place at a conference held in London, on May 17-18, 1990 called "The Rainforest Harvest Conference" which was designed to promote a discussion on the advantages of marketing the rainforest sustainably.

Attended by persons versed in indigenous questions and environmentalists, a series of parallel points of view emerged during the conference. On the one hand the "Green" and "Pro-Indigenous" capitalists argued strongly for seeking financial incentives to solve the problems of the rainforest. however, a substantial number of speakers who were biologists, zoologists and anthropologists and indigenous representatives opposed using the market as the answer to rainforest problems (Pearce, 1990). They ranged from classic nature conservationists to those supporting self-determination for indigenous peoples.

The feeling which arose from the conference was that many environmentalists are caught between the lure of simple "green capitalist" solutions to the problems of biological diversity and the more difficult task of placing the self-determination of the local peoples within such a conservation framework.

For indigenous peoples and social ecologists, the environment and human beings are part of the same world. Indigenous peoples have lived in a dynamic harmony as a part of the ecosystem for centuries, and indeed the destruction of the rainforest really only began with the encroachment of industrial society onto their lands.

Environmentalists, who are more protectionist and commercially oriented on the other hand, clearly distinguish between human beings and nature. For them, Nature is something which contains the means for producing a living, while at the same time it is the environment untouched by human disturbance. Human beings operate on nature. If nature is in trouble then the instinctive approach of environmentalists is to keep human beings at bay.

The strategies we have looked at here are interesting in this context because they bring together the two aspects of "nature" from an industrialised society's point of view. On the one hand nature is a valuable resource while on the other hand it should be left alone and protected from human activity. Asserting any rights for the people living in the rainforest challenges the views of an environment as something without human beings (Hvalkof, 1989).

While this report has painted a rather frank view of some environmentalists and also some approaches to indigenous affairs, I should emphasise that there are many environmentalists who have been

working with indigenous peoples and who do share the view that environmental protection is impossible without respecting indigenous rights. They also accept that indigenous peoples want to protect their environment and that it is in their interests to do so. However they have to do it in their own way, according to their own customs and at their own pace. To impose conservation strategies on them is no better than producing a new form of ethnocidal proselytisation.

Differences within the indigenous lobby

There are several approaches to looking at the relationship between indigenous peoples and the rainforest.

One position argues that the problems facing both the rainforest and indigenous peoples can be solved by changing the organisational framework of the world system. This means that particular countries, misinformed persons and general lack of understanding leads to these problems. By utilising the motive of self-interest among those in industrial societies it should be possible to re-arrange the system to favour indigenous peoples, primarily by providing them with money.

The second position sees the destruction of indigenous peoples and the rainforest as a structural problem. Nothing short of a major rethinking of the way in which we understand the world can change it. Indigenous peoples have different ideas of how to relate to the nation state, which challenge our preconceptions. Selling off the forest and basing profit and commercialisation at the heart of the world system works in an opposite direction to the needs of conservation.

The structural position would accept that organisational changes are possible and necessary in the short-term, but these will not solve the long-term threats to either indigenous peoples or the rainforest. If there is tinkering which can be done to the system to remedy the problems facing bio-and cultural diversity, we have to be extremely careful that the so-called solutions do not intensify the same forces that caused the problems in the first place - attracting industrial society to take advantage of the rainforest.

The way of reconciling these positions is to bring indigenous peoples directly into the decision-making process of environmental considerations which affect their lives. Examples of such a shift in thinking are taking place. There are initiatives such as the 1990 Iquitos meeting between indigenous peoples of the Amazon and US environmental organisations and the work of the World Rainforest Movement. The Colombian and Peruvian governments' land titling programmes are also positive initiatives.

Projects from indigenous organisations and small non-governmental organisations working with forest peoples are other welcome

developments in the field. In Peru, for example two initiatives give rise to hope. On it the indigenous communal family garden project (HIFCO) which, based in the Ucayali region, is investigating ways of regenerating the forest using indigenous knowledge and experience. By sharing the ideas of the different Amazonian peoples in Peru, HIFCO is developing local, multi-faceted strategies for conservation benefitting the rainforest and its inhabitants.

Further south in the Madre de Dios region, the recent extension of the Tambopata Reserve has led to an initiative by a local non-governmental organisation, the Centro Eori, to place the social needs of the area right at the heart of a conservation strategy. By weighing together the needs to the people of the area with several conservation strategies, the project intends to seek local solutions from below, rather than impose objectives from above.

Examples of projects such as these will have to spread to the large multi-national environmental organisations if we are to see more than piece-meal results. Smaller projects may not provide as much prestige or money for large organisations, and may also involve more administration. Nevertheless, the results are more effective and constitute the only viable way of combatting the global threats to the world's biodiversity.

Too many large organisations think, in contrast to these projects, that big prestige programmes will solve everything. But money alone will not solve indigenous peoples' problems. Economic independence is extremely important, but without the strengthening of indigenous organisation, a new form of environmental dependency is could develop.

Indigenous self-organisation is the starting point for any exercise of self-determination. It is through their own efforts and institutions that indigenous peoples will gain effective control over their resources. Shovelling money into communities was an error of development support which was carried out 20 years ago. Simply to seek financial gain will do no more than take away indigenous peoples' control of their lives as the need for more money becomes paramount and a destructive individualism coupled with increasing social inequality spreads throughout their communities.

Indigenous peoples certainly need money and financial backing, but their projects emphasise the creation of institutions in order to control their own destinies. These could range from export agencies, means of transport and cultural centres depositing knowledge about their history and resources.

Each of the four chapters in this book has shown a progression whereby indigenous peoples' and environmentalists' arguments are moving more into line. The biodiversity/integration model versus self-

determination are extremely distant. The move between national parks and the recognition of indigenous territory has been achieved with varying success from Australia and Aotearoa to the Kuna's Pemasky project in Panama. The need for indigenous peoples to market their produce is something which environmentalists and indigenous peoples share. However the enthusiasm with which some products are being brought out on the market through non-indigenous means is less preferable than indigenous peoples taking over the marketing process. With regard to intellectual property rights there is little disagreement on this issue as indigenous peoples are not yet articulating their opinions. When the arguments have been more widely disseminated they will undoubtedly express a preference based on the fundamental principles of indigenous rights.

For environmental organisations to improve their relationship with indigenous peoples, they have to understand the principles on which the indigenous political struggle operates: self-determination, self-development, rights to land, freedom of cultural expression and control over the use and management of their resources. This means recognition and respect for the peoples who have lived in areas of biodiversity for thousands of years and whose survival has depended on the survival of the environment. The fact that 200 million indigenous peoples are alive today demonstrates that they cannot and should not be ignored.

Recommendations

1. Resource and environmental organisations should put an immediate priority on what indigenous and other local peoples have to say about biodiversity and encourage the establishment of a "Peoples Biodiversity Manifesto" which enables them to articulate their desires and opinions. This initiative is something currently under discussion between the World Rainforest Movement and COICA who are spearheading the indigenous peoples/environmentalist discussion.
2. Indigenous peoples land rights and protected zones need to be approached in a complementary fashion without indigenous peoples relegated to unsustainable "buffer zones". Instead of protected areas formed without discussing the question with indigenous peoples, another solution should be formulated. The local people of an area, particularly but not exclusively indigenous peoples, should be guaranteed rights to their lands and an integrated relationship established between their needs and desires and protection areas, without a local population.
3. Development support which environmental organisations can provide should go towards self-development small scale projects which indigenous peoples are with difficulty trying to get funded all over the



Education is one of the strategies indigenous people use to protect themselves against injustice. Ashaninka, Peru.
(Photo: IWGIA archive)

world. These projects should facilitate indigenous peoples to formulate production, processing and marketing strategies in line with their socio-cultural demands. Exploitation of the rainforest or its peoples should be avoided at all cost. Profitability should never take precedence over the lives of local peoples and their fundamental rights. -

4. Scholars and academics interested in these issues should join together in meetings with indigenous peoples for an exchange of opinions to enhance better understanding and work out strategies for the clarification and furtherance of the goals set out in this report. There should be more studies carried out on these questions by indigenous peoples in collaboration with researchers from relevant disciplines. All research with indigenous peoples has to recognise intellectual property rights which remains a major challenge for the immediate future.

The issues raised in this report need to be debated not only with resource managers and environmentalists but primarily with indigenous peoples themselves. The aim has not been to provide any answers or solutions. These can only emerge from dialogue and discussion. However, until those establishing initiatives on the conservation of biological diversity treat indigenous peoples with the respect due to the guardians of the environment there will be little hope either for the conservation of biodiversity or the protection of the fundamental rights and freedoms of indigenous peoples throughout the world.

Epilogue

The research for this report was predominantly carried out in 1990 on the basis of background studies and pamphlets building up to the presentation of a Biodiversity Strategy. However, shortly before going to press I was fortunate enough to obtain a copy of a draft document entitled "Biodiversity Strategy and Action Plan: A Call for Urgent National, Local and International Action to Save, Study and Use Sustainably and Equitably the World's Biotic Wealth" which was dated May, 1991.

I have complied with its exhortation not to be quoted and noted that it does not necessarily reflect the opinions of WRI, IUCN, UNEP or other collaborating organisations. However the document is the nearest statement we have to the direction in which the Biodiversity Conservation Strategy is moving. The proposal document will be extensively revised and reviewed by an advisory committee in September 1991. Nevertheless the paper is a clear example of how the biodiversity strategy is a rolling process (or as some would put it, a moving target).

At the outset, the document provides several important shifts from the sources which have been presented in this work. Indeed, at first sight there appears to have been a *volte face* among those initiating the Biodiversity Conservation Strategy. The proposal suggests ten principles for guiding the Biodiversity Strategy Programme into a ten year action plan. The principles include several positive features, largely lacking in earlier publications.

The principles recognise the importance of life for its own sake and emphasise the inseparability of cultural and biological diversity. They propose equal sharing of the benefits of biodiversity, respect for human rights, institutional accountability and public participation. Local and global priorities are considered as important as those made on a national level.

Aspects of the draft proposal cover several of the areas mentioned in this report:

1. The proposal recognises the importance of cultural diversity and the role it plays in preserving biodiversity.

2. The proposal acknowledges that valuation of the world's biodiversity should not be only based on economic criteria but also on religious and cultural factors.
3. Local communities are given a much higher priority than in previous documents. People should be encouraged and facilitated in natural resource management with incentives, including increased community control over development.
4. The proposal positively advocates the legalisation of indigenous peoples' rights to their ancestral domains and protection from land invasions.
5. Indigenous peoples should be seen as partners when establishing protected areas for biodiversity. All people affected should be incorporated into the planning and implementation of these areas.
6. The collection of and research into local genetic resources should respect indigenous knowledge and collaborate closely with the holders of traditional knowledge. Intellectual property rights of local peoples should be recognised and contracts or agreements should be made before any materials are removed.

It is important to recognise the use of a new form of language which acknowledges the presence of indigenous peoples and the fact that they have rights. Whether or not the organisations involved in the discussion of the proposal take any notice of these aspects remains to be seen.

In spite of these moves, there are several elements in the proposal which point to the possibility that these changes are superficial forms of rhetorical window-dressing to a scheme which has consistently and irrevocably ignored the presence and rights of indigenous peoples hitherto. Indeed on a closer reading there appears to be less of a shift than one would at first think.

Apart from the WRI, IUCN and UNEP, 43 partner organisations are involved in the Biodiversity Strategy and Action Plan which is co-ordinated by 12 institutions. Not one of the near 50 organisations concerned in the initiative is accountable to local people. They are predominantly environmental or resource institutions, but also include the Asian Development Bank, the World Bank, the International Board for Plant Genetic Resources, which are not renowned for their support for local initiatives.

The proposal, while changing its rhetoric, demonstrates that it continues to be a "top down" strategy. Contact with local people, such as it exists, must apparently come from brief consultations on whistle stop world tours because evidence of genuine dialogue is still lacking. The proposal at one point advocates "bottom up" initiatives, but the basis for these are local governments, natural and social scientists and non-governmental organizations. These bodies can hardly be seen as constituting peoples-based organisations, indicating a massive gap

between the proponents of the strategy and the those who will be affected.

If we compare the current draft proposal with the documents which have been published hitherto, it is apparent that the conversion to local and indigenous concerns has been the most recent and least thought through element. The discussion on the problems and causes of biodiversity destruction, the measures of in situ and ex situ preservation of material and the importance of wooing governments and international agencies were all there in the previous drafts. The recognition of indigenous rights, however, is the greatest change and also the element with the least substance.

In the draft proposal, financial support for conservation NGOs, scientists and botanical gardens receive a far greater and detailed discussion than the needs of indigenous peoples. The laudable plea for recognition of land rights, collaboration over the management of protection areas, and for contracts over intellectual property consist of statements which are both vague and inconsistent with the rest of the proposal.

1. Indigenous Land Rights

Although indigenous land rights are given full support, there are several points where the argument appears insubstantial. The proposal insists that states hold full sovereignty over indigenous peoples' lands. This shows a remarkable lack of understanding concerning the flexible and delicate notion of sovereignty which is what indigenous land rights are about.

The proposal, after defending land rights, argues that where lands are acquired for public purposes local people should be compensated whether they have legal title or not. Examples are the construction of dams and forest plantations.

If the proposal genuinely supports indigenous lands rights, it is somewhat surprising to see that these unaccountable organisations are already questioning indigenous peoples' internal sovereign rights to their territories and discussing compensation for when those rights are broken.

2. Protected Areas

The proposal wants indigenous peoples to be involved in the planning and implementation of protected areas. It even advocates that local communities be involved in management programmes. However at the same time it begs the question by advocating traditional patterns of agriculture in buffer zones to protected areas. It is precisely this approach which has been criticised earlier. The proposal argues for involvement while deciding in principle what is best for indigenous peoples. Buffer

zone over-exploitation can lead to enormous socio-economic and ecological problems.

Furthermore, in order to establish Biodiversity Conservation Regions which include people, it will be necessary to establish "task forces" which will look at the local areas and identify the problems. The recommendations from these task-forces (which will not be accountable to anyone living in the area) may be presented as "non-partisan", but they can hardly be seen as an initiative "from below".

3. Conservation of Biodiversity in Off-Site Facilities

The proposal argues that indigenous peoples and the South in general have to have more control over their intellectual property. It talks of contracts with indigenous peoples, or the removal of resources from the North to South, and mentions the importance of national control.

Once again, however, the inconsistencies arise when we look in more detail. The main institutions with which the proposal will work (one is actually on the International Co-ordinating Group) are IBPGR and CGIAR which have been discussed earlier in the report as being questionable with regard to their concern for local peoples' control over their intellectual property and the interests which they represent. The expansion of IARCs which the proposal also advocates means nothing unless the transfer of resources from North to South includes control of the use of these resources.

There is no concrete discussion in the proposal of protection of biodiversity information from irresponsible use, patenting of life forms (which is already in existence) and the questions of free trade, particularly GATT. By skirting over these issues the proposal tries to appease different interests. This is not the way to resolve fundamental social injustices.

4. Cultural and Biological Diversity

At several times in the proposal cultural diversity is placed together with biological diversity. This is extremely important, but when we actually look at what the proposal means by culture, we have to look again. Culture is described as the raw material used for adapting to the environment.

This notion of culture's main purpose as being adapting to the environment sees it not as an element in its own right, but as an appendage or reflection of environmental factors. Culture is not simply a tool of adaptation. It is about human beings creating and reproducing meaning in order to make sense of and to act within the world.

By a remarkable sleight of hand, the proposal recognises the importance of cultural diversity, makes it epiphenomenal to biodiversity

and then ensures that it has to conform to the overall master plan of biodiversity conservation. Seeking the participation and consultation of indigenous peoples regarding biodiversity strategy proposals which concern them are not sufficient. The initiative still comes from outside and they end up having to react to it.

Although we should grant the Biodiversity Strategy proposal the fact that indigenous peoples are a clear part of its subject matter, their position is very ambiguous. My initial feeling that the proposal was genuinely taking on board the issues and threats facing indigenous peoples has been seriously undermined after closer reading.

In spite of certain cosmetic changes from previous publications, the "Biodiversity Strategy and Action Plan" does not yet come to terms with the structural problems which threaten both indigenous peoples and the world's biodiversity. It is not sufficient to initiate a grand strategy from above and then try to draw indigenous peoples into the plan. They have to be there from the beginning.

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When the survival of the rainforest is under discussion, the rights of indigenous peoples are too often ignored, treated as a low priority or relegated to the footnotes of glossy reports.

Indigenous peoples have demonstrated that they are the best conservers of their environment which they use and manage according to their own cultural premises. In addition indigenous peoples consider themselves as custodians of their territories which have been passed down by their ancestors and have to be conserved for the generations to come.

The biodiversity strategies currently under discussion seek to advertise the benefits of indigenous peoples' knowledge, yet past experience shows that this knowledge almost invariably disappears into the hands of industrial and agricultural concerns.

Until indigenous peoples are at the centre of environmental conservation there will be neither biological nor cultural diversity in the world.



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