Tropical Forest Peoples Today

Volume I
Tropical Forests, Human Forests:
An Overview

APFT

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TROPICAL FORESTS, HUMAN FORESTS:
AN OVERVIEW

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ADAPTED FROM THE ORIGINALFRENCH VERSION BYTHEODORE TREFON

Programme
Avenir des Peuples des Forêts Tropicales
Brussels - 2001

This synthesis constitutes Volume I of a multi-volume APFT report: *Les peuples des forêts tropicales aujourd'hui.* It is based on findings contained in:

Volume II: Thematic approach
Volume III: Central Africa
Volume IV: The Guyanas (Caribbean region)
Volume V: Melanesia (Pacific region)

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Introduction

Tropical forests are often perceived as natural spaces void of human presence. This, however, is a false impression. These forests have been inhabited for millennia, and people have significantly contributed to their rich biodiversity. People are thus integral elements of tropical forest ecosystems and as such need to be consulted, informed and involved when elaborating and implementing conservation and development projects.

This summary report analyses the present situation for a large area of tropical forest in ACP (Africa-Caribbean-Pacific) countries, a zone where the European Union is particularly engaged. Although these countries appear to be in a chronic state of underdevelopment, the social, political, ecological and economic reality is more complex. Understanding this requires a comparative, multi-level and multi-disciplinary approach.

Chapter one will outline the APFT regional approach, concentrating on the historical and cultural factors which have created differences which challenge the increasingly accepted idea of the global.

Chapter two will raise, and respond to, 36 important questions pertaining to conservation and development which all sustainable development programmes should ideally take into account. These questions reflect the major intellectual and practical results of APFT. They should serve to help define coherent development policies for the ACP zone.

Research and political issues relating to tropical forests will be presented in chapter three in the form of an overview of forty years of North-South relations. This overview is necessary because outdated perceptions still have currency in some circles. These perceptions continue to hamper the elaboration of viable social and economic policies, the rational conservation of biodiversity, and the cultural and social well-being of both urban and rural populations.

Chapter four addresses the following points:

- practical and ethical concepts influencing development and conservation;
- diverging objectives of development and conservation;
- ways of understanding the relationship between different levels of time and space;
- how to elaborate more successful policies.

We conclude with some thoughts on the future of North-South relations in the area of tropical forest conservation.

PNG (photo F. Brunois)

I

PEOPLE AND TROPICAL FORESTS

Returning from the field - Cameroon (photo S. Carrière)

Tropical forest degradation is a problem that will not go away. Modern technology now facilitates extraction in forest areas which were previously difficult to reach. These complex equatorial ecosystems with their minerals, wood, industrial cash crops and grazing lands are increasingly part of the global economy. All tropical forest populations have economic and political contacts with the outside world. All are affected by change and most accept it.

Poverty is a corollary to forest degradation. Per capita incomes in the majority of ACP equatorial countries have declined over the past decade. Foreign debt repayments are paralysing these states and public infrastructures and services are deteriorating.

The primary goal of APFT was to understand the daily life of people who depend on tropical forests at the end of the 20th Century. Researchers observed the ways of life of numerous forest, rural and urban communities for over three years in order to improve our understanding of this change.

Twenty-three research sites in 9 ACP countries have provided precise, multi-disciplinary and comparative data. Knowledge of the local context was crucial in our comparison of ways of life in parts of Central Africa, the Guyanas and Melanesia.

1. Central Africa

Characteristics

The African forests played an important role for APFT. The majority of our observations come from there. The natural environment of the forests in Central Africa shares many similarities with other tropical forests. Colonies inherited indigenous patterns which have influenced how space is structured today. For example, other than the Congo River, major waterways are rarely used: land transport is more common

Central Africa is sparsely populated. Yet, despite the slave trade, demographic imbalances were less dramatic than they were in Amazonia or insular Melanesia. While some hinterland space is empty, as in Amazonia, humans are omnipresent. This is another argument against the concept of *completely isolated populations*. Cultural diversity is obvious, and comparable to that in the Amazon Basin (but with larger populations per linguistic group) but weaker than in Melanesia. Bantu languages predominate.

As independence was relatively recent in Africa, political management of space is still influenced by the colonial rule-of-law state systems. But traditional structures no longer correspond to their expectations. Given this short timeframe, it is too early to condemn Central Africa’s prospects for the future.

Unlike Amazonia, but similar to Melanesia, Central Africa has at least one major advantage. Everyone there is indigenous. This reality is however poorly understood in the North. Numerous NGOs persist in defining some groups, such as Pygmies, as being emblematic. In the Western mind, they translate into a perfect adaptation to the natural world. But other groups have adapted just as well. These views are dangerous to the

Processed wood - Cameroon (photo S. Bahuchet)

Charcoal production - Cameroon (photo S. Bahuchet)

parties concerned because they can exacerbate prejudices or stereotypes. In theory, these sovereign states provide the basic conditions for national construction and democratisation, but political instability and civil war is widespread. Decision-makers in Central Africa are hardly concerned with the inhabitants of their forests.

The distribution system of Western development aid maintains artificially created entities and identities which sometimes lack historic bases. Poverty, exacerbated by Structural Adjustment Programmes, privileges this form of distribution. This situation is, however, much more pronounced in the Sahara and in savannah areas than in the forest.

Neither local political opposition nor the international community are able to diminish the power of African leaders. The proliferation of different movements leads to a complex situation which renders our understanding of Africa extremely tenuous. Africa can thus be interpreted as the West's most longstanding challenge to the democratic ideal.

This situation is expressed through an exaggerated spirituality. Witchcraft mixes with and challenges monotheistic religions. Neither initially aggressive and then passive Christianity, nor dynamic Islam, have succeeded in playing a major role in the forest. Africa has very effectively transformed Western religious messages. Christianity, Marxist-Leninism, Liberal Democracy and other ideologies have all been re-modelled by old African beliefs.

Social indicators, however, contrast sharply with this ability to maintain cultural independence. Comparatively, infrastructure is poor, education is limited and health services are in a state of decline. Malaria and other longstanding health problems are on the increase and new ones such as alcoholism and AIDS have emerged. These should be priorities for decision-makers.

What's at stake?

The international community appears to be more concerned with tropical forests than with the people who live in them. In response to this situation, APFT has supported other conservation initiatives such as ECOFAC. While we were able to broaden the debates, our impact has been slight.

The size of reserves increases, but for whom? Why? Because conservation projects are unable to understand the dynamics which influence their activities, they replace critical analysis with new conservation space. Trapped in positions of weakness (often created by inappropriate development projects), how can forest communities survive?

Trying to correct its mistakes, the West creates new projects and institutions thinking that quantity can replace quality. The communities most directly concerned thus turn into mere justifications. Conservation policies appear to forest communities as obstacles to their aspirations.

Western companies, facing South-East Asian competition, have accelerated forest exploitation. Local processing of timber increases state revenues, but at the same time increases forest degradation because more species are exploited. Worse, this new type of

Timber for export - CAR (photo S. Bahuchet)

profit generation hardly reaches the community level. Communities play only a small role in forest degradation even though they try to eke out a living by selling game or produce in the logging camps.

Loggers, like safari organisations, have understood the need to have the support of forest peoples. They do so by building roads, schools or football pitches. If states were more efficient, more viable forest extraction could be achieved. This would require elaborating new, and applicable, legislation, and a better distribution of national wealth. It is unrealistic to imagine that green lobbies from the North will ever be able to stop Africa from exploiting its natural resources.

Poverty reduction in Africa is a major social challenge, although local reality is often neglected. For example, forest villagers living in a thatched hut are confused with slum dwellers. *Poverty will never be really reduced until those that create it are forced to stop…* This challenge implies a serious evaluation. A recommendation that could be made here is *controlling those who live off the poverty of others*, particularly some NGOs.

There is no better indicator of our inability to carry out long-term actions than the low success rate of development projects. Projects are poorly thought out, local participation is low, money seems to disappear. While Africa is only part of the problem, it does appear as a model of unsustainable development.

In this context, the success of protected area management is a serious challenge because conserving forest space and wildlife is perceived locally as being less important than the problems of people. Because management plans are more often based on ideology than on common sense, the system continues to confuse core priority conservation areas with secondary peripheral ones. Buffer zones, for example, could play a key role in sustainable development. Populations are excluded from these core zones but they dream about what they perceive as abundance in them. It is time to be more realistic. Forest products are extractable as long as all the parties concerned agree that profits have to be generated over the *long term*. Forest communities deplete their resources today because they are convinced that depletion is inevitable. Once again the West is caught in its own rhetoric by advocating concepts such as *extinction is for ever*. Africans have embraced this pessimism.

A typical African problem is the commercial bushmeat trade. It is a destructive activity which has little to do with subsistence economy. Its importance to the informal economy has clearly identifiable causes. One is structural adjustment which has encouraged the young urban unemployed to work in this trade. Another is the fluctuation of cash crop prices such as coffee and cacao. Now compromised, these crops were formerly integral elements of sustainable agro-forestry systems. The cultivation of cacao cultivars which are poorly adapted to the region’s climatic situation, marketing techniques and poor transport conditions is an option which villagers have refused. At the other end of the spectrum, the bushmeat trade is thriving because game is cheaper than domesticated livestock or imported meat. The pillage and destruction is a problem that will not go away partly because because the North is unable to integrate economic market

Wild life survival depends on the well-being of local populations (photos C. Aveling)

policies and conservation. *There is no hope for gorillas or elephants if humans in the forest do not enjoy decent living conditions.*

The bushmeat trade is an important element of forest-city relations. All of Africa has urbanised at a dramatic rate over the past 40 years. The phenomenon first developed in the Sahara and then in savannah zones but rapidly reached Equatorial Africa. African villages emptied as the continent's cities expanded. Family links are maintained, constituting essential and sustainable exchanges. Manufactured goods flow from city to village and villages feed the city. Even though globalisation influences forest-city relations, these relations represent an example of Africa's originality. These exchanges provide great potential for development. Western development agencies should think seriously about the nature of goods exchanged in order to reduce unsustainable pressure on forest resources.

Access to forest is another major challenge facing Central Africa. The entire region is undermined by an obsolete transportation (mainly road) system. While this has not stopped anyone from leaving the village, it has never been able to keep modern problems out either. This relative isolation is even conducive to illicit activities. More than ever, contacts with the outside are crucial to forest communities. Groups cannot understand their own worth without being able to compare themselves with others. Contrary to views held by some environmentalists and indigenous groups, road building and maintenance is crucial for forest communities: it is an important means to make village economies viable.

APFT Activities

Political landscapes vary considerably in Central Africa. Cameroon is relatively stable; the economies of Gabon and the Republic of Congo are based on natural resource extraction (mainly oil); Equatorial Guinea has serious development problems; the Democratic Republic of Congo has suffered from dictatorship during the Mobutu years and subsequently war. These different conditions influenced what we were able to do. Although APFT did not set up permanent partnerships, it did contribute to local capacity building.

Particular attention in Africa was given to protected areas because human activities there are widespread. Research sites were established at Dja (Cameroon), Odzala (Republic of Congo), Monte Alen (Equatorial Guinea), Kivu (Democratic Republic of Congo) and in the Lopé Reserve in Gabon. We also studied local-level issues outside of protected areas, e.g. in Cameroon's Ntem and Tikar regions. Another point of emphasis was our study of, what have proven to be rich and varied, agricultural systems perfectly suited to feed both rural and urban populations. Studies pertaining to forest-city relations were carried out in capital cities (Yaoundé, Libreville, Kinshasa) as well as in some intermediary urban areas (Ouesso and Pointe Noire in Republic of Congo and Kikwit in DRC). Research combined with pre-existing activity in protected area management and community forestry which was institutionalised by Cameroon's forestry code.

Comments

• African economies are largely dominated by a very dynamic informal sector. Even though it has emerged on the fringes of development projects, its ostensible independence needs to be considered carefully when it occurs in cash economies. It can be argued, paradoxically, that given the process of monetarisation, the informal economy is an effective response to globalisation. In the framework of our study, the informal sector is a crucial link between forest communities, cities and beyond. Outside intervention cannot be successful without taking this into account.

• *Acephalous* (or non-centralised) traditional social systems predominate in Central Africa. These societies are more susceptible to the destruction of their power networks than stratified systems, and are also more conducive to individual initiative. Nonetheless, even though in some places traditional patterns still function, dynamic associative systems are becoming the rule. Individualism is perhaps just the rural extension of a process that started in cities. It may also be the catalyst of new forces. In any case, community development must by acceptable by all generations. Training professionals who maintain contacts with communities is thus crucial.

• The subsistence economy remains essential to rural and urban populations. In these extremely opportunistic economies, agriculture is increasingly important (especially given forest degradation), but hunting, fishing and gathering still provide the primary sources of protein. Species most emblematic to conservationists rarely provide these dietary needs. Nonetheless, trade in Non-Timber Forest Products (hereafter NTFPs) must be well organised and based on demand flexibility and variety if the mistakes made in the cash crop sector are to be avoided.

• In addition to (but not completely disconnected from) the serious economic situation just described, the ‘Pygmy problem’has become an obsession in Central Africa. In their quest for emblematic ‘indigenous peoples’, the North has found an exportable cause for the protection of the environment, e.g. persecuted Tuaregs, elegant Massai and miserable Bushmen and Pygmies. This neglects other peoples whose territorial legitimacy, history and territorial relations cannot be questioned. Such rhetoric is dangerous: there is not and must not be a ‘Pygmy problem’ in Africa. It is crucial to take into account the interdependent relations between Pygmies and their neighbours if a further interethnic conflict is to be avoided.

• The final challenge to viable and thus sustainable use of forest space is that of training. The absence of qualified, professionally trained field workers is a cause for concern. The European Union should do everything it can to avoid this.

2. The Caribbean

Characteristics

The Guyana massif, a vast formation of ancient rocky mountains, extends over the three Guyanas and parts of Venezuela and Brazil. Europeans penetrated into this region relatively late, so detailed maps are only recent.

APFT worked in Guyana and French Guyana. The first is a country which achieved independence from Britain in 1966 and is a developing nation in the classic sense. The second is an assisted French Department which has the status of a Region.

Plantations developed along the coast during the slaving period. Remaining agricultural space exists today only in Surinam and Guyana. The rest of the economy is extractive (gold, balata gum, wood, palm hearts...) and has undergone major fluctuations over the past century. The economy is generally fragile. The hinterland is still largely isolated and contributes little to the economy of the region.

Colonisers and African slaves were confined to the coast, to the detriment of coastal native Americans. Like all Amazonia, indigenous peoples suffered from imported diseases: they declined demographically from between 60% and 90% of the population. This gave Guyana its present reputation of being a natural environment void of human presence. This void was diminished in the centre of the region through the settlement of Black Maroons who were escaped slaves from Dutch plantations. In less than half a century they were able to accommodate their desire for liberty within a new natural environment.

Neglected, exploited and sometimes fought (this was particularly the case for the Black Maroons), hinterland populations played a very small role in the political construction of the Guyanas. The region’s history was, and still is, made along the coast, and particularly in the three coastal capitals (Georgetown, Paramaribo and Cayenne). A historic cleavage persists between native American Indians and Black Maroons on the one hand, and the descendants of colonial populations (mulattos referred to today as Creoles, Indians from India, Indonesians from Java, Europeans, Lebanese, etc.) on the other. The first group remain largely outside the political decision-making arena. It is thus not surprising that indigenous local demands have only been made since the 1980s. The articulation of these demands is directly related to increased contacts with the outside.

As French Guyana is perceived as being a rich country, immigrants from Brazil and Haiti have flocked there over the past 30 years. Cultural diversity is consequently on the rise. But power is still nor distributed evenly. Political ideologies have shifted in all of the Guyanas and despite the different types of political system, corruption, violence, drugs, social fragmentation have become common denominators. But here, there is neither over population nor under nourishment.

Considerable linguistic diversity is part of this cultural diversity. English is spoken in Guyana, Dutch in Surinam, French in the other Guyana. Portuguese and Spanish are other regional languages. Various forms of Creoles and indigenous Native American

The advantages and disadvantages of 'ethno-tourism' have to be carefully balanced - Guyana (photo P. Grenand)

languages are also used. Even though state authorities are trying to control their borders, they are still like sieves. Population movements are significant and people sometimes travel long distances.

Countries of the North have tried to set up a large network of protected areas in Guyanas' forests. This can be attributed to their isolation, the fact that they are relatively 'intact' compared to other countries in the tropics and their false reputation of never having been modified by human presence. As in Africa, the large international environmental NGOs such as WWF and IUCN (reinforced by small local NGOs) are present. Projects in French Guyana however are under state control. The outcomes of these projects are disappointing, other than a highly publicised feedback effect on local communities. They are consequently seriously criticised by the development community, politicians, indigenist groups, as well as mining and logging lobbies. Beyond the obvious need to maintain biodiversity in the face of gold extraction (French Guyana and Guyana) and logging (Surinam and Guyana), the other major reason why the protection of Guyanas' forest is a priority is eco-tourism. It is important here. Local populations are the attraction. But is this ethically acceptable?

What is at stake?

What are challenges for the ruling classes in the three Guyanas, and in the North which controls the economic situation even more, become problems for Native Americans, Black Maroons or isolated rural Creoles.

The imbalance between the coast and the hinterland in a constant and the creation of local-level political structures in French Guyana are no more than mechanisms to maintain outside control. The hinterland has yet to be tamed. It is politically weak and its borders ineffective. Once a space for liberty, it is becoming a space for exclusion. Altering this imbalance is a challenge because it could enable Guyana and Surinam to become real nation-states and could help French Guyana achieve its ineluctable independence.

Despite strong motives for integration, 30 years of development has brought little. Efforts have been hampered by a difficult natural environment (which we are seeking to protect) and a challenging demographic situation. The populations of Guyana and Surinam have stagnated since independence, as have those of Brazil's and Venezuela's 'Guyanas', although for different reasons. Demographic growth in French Guyana is essentially an urban issue. That of Amapa, Roraima and Venezuelan Guyana concerns both urban and rural areas. Urban populations are, however, growing in Guyana, Surinam and French Guyana despite the general demographic trend. Rural people continue to leave their villages for towns or are leaving them to work in mining and logging camps. One thing is certain: everything that happens in the hinterland is decided in the coastal capitals. People go into the forest but they do not stay there.

Hydroelectric dam construction seriously degrades the environment and results in population displacement (Venezuela and Surinam). Costly efforts aimed at rescuing wildlife threatened by dam construction masks the real problem. Urban populations and

Goldmining - Guyana (photo J.F. Oru)

Guyanese palm hearts sold in France (photo S. Bahuchet)

especially large industrial projects are the primary beneficiaries. Even though these dams and industries may constitute development in the classic sense, it is hardly sustainable.

Environmental protection constitutes another major challenge. In tropical America, the term 'protected area' has a specific meaning. It refers to *indigenous areas*, Amerindian reserves. These exist in Guyana and Brazil, to a lesser extent in Venezuela, but are non-existent in Surinam. They have recently appeared in French Guyana under the name 'zones of right to use' *(zones de droit d'usage)* for constitutional reasons. In addition to these protected areas, Brazil has 'exploitable reserves'which are reserved for the sustainable development of isolated rural populations. Unlike natural reserves and parks, forest populations want these 'exploitable reserves'.

Natural reserves were in theory in Surinam and Amapá (Brazil) in the 1970s, advocated by Northern ecologists. In reality, however, they are little more than pencil lines on maps. There have been no positive and sustainable benefits for the populations of Guyana and French Guyana, but equally there have been no serious negatives effects on forest peoples. While conservation is seriously criticised in Africa, it is a non-issue here. Throughout the Guyanas, river pollution and the destruction of internationally protected species occurs without restraint. One problem here is the fact that animals which are eaten on a daily basis are listed as protected species.

Given increased administrative pressure and especially greater exploitation of extractive wealth, the attitudes of forest peoples have changed considerably over the past 40 years. The impact of these changes has been heightened by the fact that until the 1950s some native American communities were completely isolated and others (such as the Black Maroons) had only sporadic contact with colonial administrations.

Missionary activities in Surinam and Guyana and political-administrative pressure in Guyana and French Guyana have led to an identity crisis amongst Native Americans and the Black Maroons. Such activities even uprooted rural populations. Though these pressures remain omnipresent and are paradoxically uncontrolled by state power, opposition to excessive resource extraction and environmental protection efforts have become new forces accelerating the alienation of local populations. In addition to questioning peoples' identity, these impacts can be very concrete. Political, logging and mining lobbies all ferociously oppose recognition of indigenous areas and refuse to give Native Americans or Black Maroons political representation or the right to bilingual education.

Loss of cultural values is the result. Political and cultural awareness has been appropriated by the economically and politically powerful, who likewise control social knowledge and practices. At the same time, forest societies are subject to a process of 'folklorisation', even by those who are trying to defend them. The same thing happened to Europe's rural communities not very long ago.

The worse part of all this relates to the fact that because change was so abrupt, attitudes dating to pre-colonial times can inhibit access to modern technology. Despite significant inroads, particularly with respect to land rights, the community actions of Native Americans and Black Maroons are still largely dominated by Western models.

Political victories thus remain elusive. It is unlikely that this failure of self-determination can be overcome in the context of globalisation, aggravated by enduring ethnic conflict. Economic and social community activism is the best that can be expected from local NGOs.

APFT Activities

APFT researchers worked primary in the North of the Guyanas. This is clearly the case for French Guyana but somewhat less so in Guyana where real local interest in the forest and its inhabitants exists. This translated concretely into a powerful and generous intellectual engagement. The most explosive political issues were nonetheless not addressed by most APFT researchers. Providing as clear a picture as possible of the forest communities in Guyana was one crucial way of overcoming this handicap, details of which are available in the Regional Caribbean Report. Emphasis was given to the savannahs of Rupununi and the lowland forests of North West Guyana, and to the Maroni highlands and lower Oyapock in French Guyana. Below are summarised the major results with some comments:

- Despite their isolation, all communities in the Guyanese hinterland are affected by state political-administrative systems. They are particularly dependent on them for electoral purposes.

- Nearly all of these communities participate in the global monetary system but this is particularly the case for people under 30. The exceptions are families rather than entire communities. Money can be earned through new economic activities such as gold mining, logging or services as well as through the sale of forest products. Tourism, and increasingly eco-tourism, are widespread but only really important in Belize. In the Guyanas, tourism remains small-scale with few negative side effects but potential donors should be wary of big cat hunting, voyeuristic cultural and sexual tourism.

- Infrastructure in Guyana and Surinam is weak but is developed in French Guyana. All over, infrastructure is poorly managed and is in poor condition due to lack of workers and qualified local professionals. Health, education, public works and communication infrastructures are regionally sub-standard. In terms of real power, local administrations are beyond the control of local communities.

- Pressure on natural resources was formerly sporadic, unbalanced from one region to another and had only a slight to medium impact. The rhythm and scale has changed significantly over the past 30 years. Logging and mineral extraction, even so called small scale operations, are now mechanised. Other less important resources such as palm heart, live birds or bushmeat are now marketed. Given this rate of change, new pressures will emerge.

Comments

Even though the prospects for Guyanas' forest communities appears bleak, there are some positive elements:

• Slash and burn agriculture provides the majority of these communities' calories. Local knowledge is rich, particularly that concerning biodiversity. With respect to manioc alone, native Americans and Black Maroons have mastered its genetic and culinary diversification. The only obstacles to the endurance of this adaptive system comes from government administrations.

• Despite outside constraints, everything that constitutes the spice of life endures, e.g. lineage systems, including marriage rules (but their articulation with official rules are often heterodox), philosophical values, the daily rhythm of social life, etc…

• Technological independence may be weakening but subsistence activities (fishing more than hunting but hunting, more than gathering) not only remain crucial to diets, they also govern the daily activities of the Guyanas' hinterland populations. Their distrust of environmental protection policies is a good indicator of this.

We feel that the well-being of these populations realistically depends on the following four fundamental conditions:

• *The right to collective land ownership:* As long as these populations maintain deep-rooted attachment to their communities, it is crucial to guarantee them collective access to the space they occupy, while protecting them from massive outside invasions. Western democracies alone can provide this guarantee given the current imbalance in power relations.

• *Harmonious settlement:* The major threat to biodiversity is the concentration of large sedentary villages. These provoke land degradation and wildlife depletion. We advise that forest must remain a human habitat, settlement shifts within the forest are crucial to the symbiosis between humans and the natural environment.

• *Freedom of initiative:* Representation of forest communities must no longer be controlled by outsiders. Administrations should respect, even privilege, the emergence of local leaders sharing traditional and modern values. Choice for future evolution must be based on local power structures even though the short-term price may be high.

• *Self awareness*: These communities are under pressure from all directions. The only way to enable them to prevail over their social problems is through gradual development, with emphasis on modest basic infrastructures which are managed locally. Appropriate forms of technical training and use of mother tongues in school is also needed. States should control religious sects which do not respect the free choices of individuals.

Preparing sago - PNG (photo C. Kocher Schmid)

3. Melanesia

Characteristics

Papua New Guinea, the Solomon Islands and Vanuatu are geographically part of Melanesia. Melanesia can be considered as a clearly-defined cultural region. This is not the case for Central Africa which is composed of many geographic and cultural sub-units or the Guyanas which cannot be separated from wider Amazonia. Melanesia's elites are increasingly aware of their cultural and geographic specificity.

The Pacific in general and Melanesia in particular were the regions where Western control reached later than elsewhere, beginning in the 18th Century. Nonetheless, global capitalism, here as elsewhere, has led to tragic consequences for the region's population, including servitude, disease and the destruction of traditional values.

Despite this, the geographic isolation of the Pacific proved to be advantageous for its peoples. For example, New Guinea (some 884,000 km2 of land area) is one of the most ethnically and linguistically diverse parts of the world, probably the most diverse; and this matches its biodiversity significance. There are 806 different ethnic groups in New Guinea and approximately 100 in Vanuatu. In contrast to Equatorial Africa and the Guyanas, rural populations predominate (82% in Vanuatu and 87% in Papua New Guinea). Like Africa, however, most people are of local origin. Only in Irian Jaya (West Papua) has there been extensive (Indonesian) immigration. On the other hand, in the three countries where APFT worked, basically the same neo-Melanesian vehicular language is used. It is referred to as Tok Pisin in PNG, Pijin in the Solomon Islands and Bislama in Vanuatu.

Clan and other forms of kinship organisation pre-dominate at a local level, with ascribed traditional leadership in the lowlands and islands, and achieved 'big' man systems in the highlands. Male/female segregation is significant. Pig husbandry is widespread, and where it is found directly related to political control. The majority of Melanesians are subsistence farmers, *amongst the most sophisticated subsistence farmers in the world.*

What's at stake?

Melanesia is a region where population pressure is much greater than in Central Africa or Amazonia. Forests cover less area, although the percentage is high in PNG: 78.5% of the total land surface. It would however be misleading to describe these forests as 'natural'.

Biodiversity, be it created by humans or not, is seriously threatened by South East Asian logging interests, particularly in PNG where endemism is high. There are 200,000 known species. As in other parts of the world, people have significantly contributed to the creation of biodiversity directly through the domestication and management of numerous plants, as well as inadvertently. In this respect it is impossible to separate agro-ecosystems from the wider, so-called 'natural'systems of which they are an integral part.

Preparing sago - PNG (photo C. Kocher Schmid)

Kasua festive dress - PNG (photo C. Kocher Schmid)

This forest environment which has been preserved partly through its isolation, is still a factor on islands such as Santo and Vanuatu, though on really small islands environmental degradation is a huge problem. Despite a history of relative isolation, however, logging has now become a major threat. Since 1991, 17% of PNG's forest has come under concession. Mining has also become a major issue in PNG and contributes towards 45% of the country's exports.

For populations still considered to be 'traditional' by Westerners, and increasingly also by the Japanese, cultural tourism is a tempting strategy for the region's new states – as well as for tour operators.

More so than in Central Africa, and as much as in Amazonia, many Melanesian communities have remained relatively isolated until recently. Road and air links are increasingly making prolonged contacts possible, but instead of encouraging development ('sustainable' or otherwise), it has led to hinterland populations migrating towards the coast, as we have observed in the intermediary cities of PNG and Vanuatu.

In these traditional societies, men, and particularly the elders, still play major roles. Women do not participate much in politics even though they are key economic actors, and cultural responses to rapid social change, such as we find in Kastom movements and other cargo cults, are particularly visible.

APFT Activities

Just as many senior and junior APFT researchers worked in Melanesia as elsewhere, and the participation rate of local PNG researchers was particularly high. Some regions were studied in great detail, illustrating the APFT approach. These include: Pawaia/Pio-Tura; Vanimo-Kilimeri region; Santo/Vanuatu. Other areas were selected because of pre-existing term-long research experience of EU researchers, e.g. Ikundi/Ankave; Musula/Kasua; Nokopo/Yopno and Trangap/Oksapmin.

Work here focused on subsistence systems, food and diet and cultural change. Disturbances caused by missionaries, loggers and mining companies were carefully examined. In Vanimo-Kilimeri, negotiations with loggers is central to the lives of communities while in Trangap/Oksapmin, gold and missionaries have disarticulated traditional communities.

Logging is an excellent example of how global capitalism can destroy local societies. It started late in Melanesia, effectively 20 years ago, and there are similarities with the Guyana and Cameroon situations. In PNG, local communities have a constitutionally enshrined voice in the decision-making process as 'land-owners', though their decisions are rarely based on access to all the necessary information regarding consequences. Conflict now arises over control of perceived gains, particularly between urban elites and their rural base.

Distribution of cooked pork during a feast - PNG (photo C. Kocher Schmid)

Comments

Contemporary Melanesia is a group of relatively new independent states. Traditional values remain strong throughout most of the region though elites are increasingly alienated from these values. It is the subsistence knowledge associated with these values which deserve our attention. Fruitful lessons can be learned, for example, from the management and role of wild and domesticated pigs, and from arboriculture throughout Melanesia.

Population is growing rapidly almost everywhere in Melanesia, although this is not always evident from official census reports. This growth can have negative consequences for some agricultural communities with limited access to land, and for EU decision-makers, in that demographic growth is out-competing structural development.

With respect to political power, many of these countries have tried to accommodate traditional elements in modern democracy with varying degrees of success. Vanuatu has had more success than PNG, mainly because the traditional social hierarchy of these islands has proved easier to accommodate within a modern state than (paradoxically) the more egalitarian traditional systems of the New Guinea highlands.

In some areas, fundamentalist sects and other Christian missions have undermined traditional taboos and restrictions which served to protect sacred zones and other areas of forest. Here more than anywhere else, sustainable development policy makers must be very cautious of the deleterious effect which these sects may have. The loss of social regulators caused by these sects and by ‘easy’ (but always short-lived) money paid by logging and mining companies is dramatic. It results in the corruption of the better off and criminalisation amongst the socially uprooted. The progression of these negative indicators is rapid in PNG, recent in the Solomon Islands and still slow in Vanuatu. Once these fault lines open, there is a systematic loss of self respect with the ensuing resort to simplistic solutions.

In order to understand long-term change in Melanesia, what must be remembered is the rapidity and recency of Western intrusion epitomised by the American and Japanese activities in World War II. Today, this has encouraged nativistic movements, such as Kastom in Vanuatu, as well as movements expecting millenary change in PNG.

The interconnections between culture and wildlife are intricate and extensive in Melanesia, which makes the task of implementing conservation policies particularly difficult. The general weakness of environmental policies in Melanesia has paradoxical consequences. It seems that the limits of self-managing community systems are reached when they are deprived of their traditional logic. By allowing these communities to dispose of their territories as they see fit, these young nations are putting them at the mercy of speculative capitalist enterprises because no stabilising mechanisms exist. If Melanesia is to avoid finding itself in the unenviable situation of Central Africa, it will have to rapidly find a stable compromise between traditional values which are officially tolerated and the values of the nation-state which are shared by all.

Fishing - Guyana (photo P. Grenand)

II

PEOPLE AND TROPICAL FORESTS:

36 QUESTIONS

The remarks and recommendations which follow apply to all tropical forest communities at the present time. The aim of this chapter is to outline the observations and knowledge which should serve as the foundation for development and conservation work. *Knowledge of what exists, before changing it, is of the utmost importance in our opinion.* It is equally important to identify falsehoods and clichés which misrepresent reality and undermine projects. The success of environmental and development projects relating to forest peoples is contingent upon refocusing strategies which give decision-makers a clearer picture of place, people and challenges.

Anthropologists can do this in four ways. These are:

- provide the technical data necessary to carry out a project;

- identify the fundamental knowledge and objectives of the populations concerned;

- interpret the preoccupations of the community;

- inform the community of the impacts of changes brought about through contact with the outside world.

1. Do prejudices and fashions influence development policy?

a) Importance of the question

Ignorance of the structures, procedures and ways in which forest populations are integrated within their environments is striking. Falsehoods, simplistic ideas and clichés tend to govern, sometimes wittingly, our views and attitudes towards tropical forest peoples. These falsehoods are often assumed to be scientific givens and thus serve as the foundations for initiatives which inevitably fail. This, no doubt, is due less to ill-will than to intellectual laziness because they do not correspond to reality.

False assumptions at the outset necessarily lead to poor policies.

b) Some answers

• Attitudes are widely based on misunderstandings, even ill-will. The values and techniques of forest communities are unfavourably compared to those of the dominant society:

- slash and burn agriculture compared to permanent agriculture;

- seasonal mobility is compared to fixed habitat;

- small dispersed communities are compared to large resettled villages;

- hunting and fishing is compared to animal breeding;

- pagan rites are compared to dominant religions (Christian or Islam);

-ostensibly divisive linguistic diversity is compared to a supposedly unifying national language.

All efforts based on this type of dualistic thinking have resulted in failure.

• The subsistence economy is also negatively judged. Forest peoples are considered poor because they have neither savings nor surpluses. These societies occupy what is seen as wilderness which is poorly managed and under-exploited because they often possess unimagined wealth.

• The failure of projects which are ill-adapted to the needs of local populations reinforce negative prejudices. This is tantamount to blaming the victim.

• Prejudices held by project managers hamper contacts with target populations. Inversely, these population place development agents in their own sphere of experience, often unknown to these agents. The West is thus perceived as representing a collective outside force, not as individual persons. It is important to emphasis that the attitudes which populations have concerning outside intervention is formed by both recent and colonial history.

c) Guidelines for action

• **Show self-awareness:** people working in the development field need to understand their position in power networks; they have to respect their counterparts; they have to be coherent and rigorous.

• **Be informed** about local populations, their history (particularly recent history) as well as their colonial past.

• **Know** the political and historical context of the project.

• **Share information,** because developers have to provide step-by-step information to populations, depending on their personal experiences.

• **Update** old knowledge which is no longer useful for new projects.

• **Be sensitive to local realites:** do not use general models. Elaborate projects by using pertinent local knowledge.

2. Who are tropical forest peoples?

a) Importance of the question

Focusing on a few emblematic groups such as Pygmies or the Yanomami risks:

- provoking jealousy and resentment,

- neglecting other groups who are more numerous. In Central Africa, for example, half of the population lives in towns or cities.

Not all forest peoples are the same. Denying their extreme cultural, economic and social diversity may lead to ill-adapted local development projects.

b) Some answers

• Most dense humid forests have been inhabited for many thousands of years (this is supported by archaeology). *There is no such thing as a virgin forest.*

Sao Tomé (photo S.Carrière)

French Guyana (photo P.Grenand)

PNG (photo P. Lemonnier)

Cameroon (photo E.Dounias)

• Since then, there have been many waves of human settlement. The penultimate one is associated with colonial history (European presence, population displacements caused by the slave trade…). The last wave is that of modern development (settlements of landless workers and peasants). The result is complex and mixed settlement patterns with forest-dependent economies.

• Hunter-gatherers such as Pygmies now constitute very small minorities. There are less than 300,000 in the entire Congo Basin. The vast majority of dense humid forest inhabitants are slash and burn farmers who have also been dependent on forest products for centuries, perhaps millennia. Given this dependence, their livelihood and identity is seriously threatened by the eventual loss of their forest environments.

• The main ACP forest areas are home to approximately 4 million people. There are nearly 3 million rural forest people in Central Africa, nearly 140,000 in the Guyanas (Caribbean region) and more than one million in Melanesia (265,000 in PNG, 150,000 in the Solomon Islands and 100,000 in Vanuatu). These people represent a wide *cultural diversity*, a mosaic of *nearly 1,000 ethnic groups* (there could well be many more than estimated here). They are the only inhabitants of these regions. Different populations have different languages, histories and inter-community relations.

• These figures represent only a small percentage of national populations in ACP countries with tropical forests. For example, approximately 70 million people live Central Africa, 6.2 million in Melanesia and 1.4 million in the three Guyanas. It is important to emphasise that forest degradation has serious social, ecological and economic implications for all of these people, hunter-gatherers, villagers and city dwellers alike.

c) Guidelines for action

• **Identify** all the communities involved in a project along with their languages and history.

• **Do not put all groups into the same artificial mould for the sake of political expediency.**

• **Adapt** projects to local cultural diversity in order to be realistic.

• **Explain** projects in local languages or in vehicular languages using interpreters.

• **Take into account** the attitudes of neighbouring groups and anticipate attitudes of distrust, jealousy, rejection or hostility.

• **Do not concentrate** development efforts on just a handful of forest communities. This can create a sentiment of exclusion by other groups and can provoke negative attitudes towards the perceived privileged group targeted for development.

3. Is traditional social structure compatible with modernisation?

a) Importance of the question

To succeed, conservation and development projects must work through local social structures and must therefore be *participatory*. It is crucial not to impose modern Western systems upon forest populations, despite pre-existing patterns of influence and the use of common official languages (French and English).

b) Some answers

• Kinship relations may appear unimportant to economists and environmentalists. Yet, they can have crucial implications for development and change. Radical social changes such as displacement, dispersion or resettlement of populations with different cultures and rupture family networks. This undermines social solidarity, while in times of hardship may lead to delinquency or dependency on outside aid.

• Conversely, social organisation and family demands may constrain individuals in developing independent opportunities. What may appear as 'laziness'or lack of initiative may reflect the difficulties which people have in weighing the relative advantages of change against traditional social responsibilities.

• *Kinship constitutes the foundation of most communities*, characterised by a specific relationship to space, low population densities and young populations. Kinship relations define at birth the *social universe of individuals as well as their roles within this universe.*

• Kinship relations link members of a society with a network of *social security* through which, conditions permitting, their basic material and psychological needs will be met.

• Societies based on kinship have characteristics which are often seem inconsistent with the aims of development projects. For example, in cases where land belongs to particular lineage groups, access may also be extended to non-lineage members. Yet it is uncommon for a project manager to take into account all of these concerned parties. The same can hold for material goods. Kinship involves numerous responsibilities, including financial ones. When money is earned, it is redistributed widely. This makes saving difficult.

• Polygamy is still widespread. For a long time, in Central Africa at least, it was a chief's recompense for his services to the community. The community in turn thus 'exchanged' some of its women for the chief's well-being. But, patrilinearity and an increasing preference for the nuclear family one now reinforce parent-child links, reflecting Western values which are becoming more common given pressure from all major religions.

• The value of traditional social organisation is widely questioned by the young. New spokespersons emerge from the younger generation as well, and their attitude may conflict with those of elders.

c) Guidelines for action

• **Do not underestimate** the importance of social organisation based on kinship.

• **Do not disrupt** social security systems based on kinship. These systems are very costly to replace and are emotionally vital.

• **Be aware** of the positive demands of the younger generation, but do check their capacity to authentically represent all of their co-citizens.

• **Preserve** some degree of self-sufficiency. This is the only way to maintain stability within communities.

4. Who holds power in tropical forest communities?

a) Importance of the question

Dialogue with the outside has been difficult because traditional power systems tend to be diffuse and discrete. The characterisation of these people as 'leaderless, faithless and lawless' has justified trespassing on their territories without permission and exploiting it without compensation. In such a system, who do you participate with? In a development project it is crucial to establish who is affected and with whom the elaboration of the project should proceed. Without clearly identifying who is affected and what the decision-making process entails, development projects are bound to fail. *People working in development need to know who legitimately represents a community.*

b) Some answers

• Forest societies are often *acephalous* (non-centralised). Kinship governs who has a voice and the political choices an individual has.

• Leadership is based on an individual's capacity and experience. This means that a group may have many leaders, in different spheres of life.

• The 'chief' is often the person who distributes the most because he is responsible for the well-being of his community. Positions of influence are thus maintained through the subtle maintenance of consensus within the group. With as many responsibilities as rights, a leader's power is circumscribed by his capacity to federate his people.

• In many societies equality is maintained primarily through a *levelling process*. People who try to upgrade their status and respect into positions of dominance are rapidly brought to order by the group through criticism, ostracism or even witchcraft.

• Such strictly defined leadership does not provide the means to address development issues. The reality of the situation is that communities are reluctant to entrust their future to a single spokesperson.

• Community members are generally relatively independent and their decisions engage only specific elements of a group.

• Disagreements and other forms of conflict are settled through conciliation rituals which often coincide with large-scale feasts and reunions. This serves to replace government agency or autonomous legal institutions.

House of village chief - Ashoka (photo S. Bahuchet)

Traditional healing - Cameroon (photo E. Dounias)

• Traditional authority structures are in crisis. They are contested by the young and educated. The young generation provides new ‘mediators’whose origins and quality vary considerably..

c) Guidelines for action

• **Determine** who the development agent has as an intermediary. Take into account the relevant local structures of decision-making and representation.

• **Weigh** the effects of change induced by a project on relations of power and if they have been disturbed, think about their replacement cost.

• **Engage** individuals, not only groups. Encourage viable individual projects even if the initiative does not emanate from a collectivity (as long as the initiative, of course, does not destabilise the group).

• **Help** provide civic training to young and other new mediators.

5. Are tropical forest peoples becoming extinct?

a) Importance of the question

Given the history of their contact with the Western world, it is understandable that there is concern about the extinction of forest peoples. Believing this extinction to be is inevitable may make development projects involving them self-fulfilling prophesies. Alternatively, the disappearance of forest peoples might actually be seen as a good way of preserving nature.

b) Some answers

• The virgin forest myth is directly linked to human population decline following contact with the West. Disease, slavery and forced work during the colonial period has decimated populations.

• *Forest populations are no longer shrinking.* Over the past 40 years, demographic growth has been considerable. Nearly half of the population is now under 15 years old. Only 5% of the population is older than 65. Nonetheless mortality rates for children below 5 is still high.

• Girls continue to marry young and the age of marriage is even becoming lower. A woman can be a grandmother at 30, still with young children of her own. Grandparents are therefore less available to carry out their traditional support roles as grandparents. One result of this is a decline in the effectiveness of knowledge transmission between old and young.

• In Africa in particular, migration to urban areas stabilises growth rates in rural areas (though modest). These shifts modify population composition because the individuals who migrate tend to be young adults of marriageable and childbearing age.

c) Guidelines for action

• **Do not rely** on official census data because field work reveals them to be unreliable.

• **Improve** the quality of local level demographic data through, for example, the setting up of population observatories or by monitoring migration movements

• **Improve** medical care, especially by developing maternal and paediatric services.

• **Encourage** state authorities to recognise that birth control improves age distribution and is thus important for sustainable development.

• **Make sure** that there are sufficient working people in villages where projects are active to ensure their viability.

6. Does demographic growth negatively impact on resource availability?

a) Importance of the question

Global demographic growth in developing countries creates fears about over exploitation of natural resources and the destruction of the environment. In the long term, the worst case scenario forecasts dramatic population rise leading to complete exhaustion of resources, and leaving people with no means of subsistence. Is it in fact possible to estimate land carrying capacities in relation to this growth?

b) Some answers

• In many tropical regions, population density was considerably higher prior to indirect and then direct contact with Europeans. Contact introduced many fatal diseases and displaced large groups of people with equally fatal consequences. *Contemporary under-population is a result of this historic trauma.* It can thus be argued that the equatorial forest is capable of supporting a greater population density than it does at present, as was the case in the past.

• Forest groups vary considerably in size, but the majority rarely surpass 5,000 individuals. Most groups are small, sometimes dispersed in small hamlets over vast territories. Current population densities are low. Impact on biodiversity is consequently slight.

• Threats to resource availability emerge when there is competition over land and when agricultural rotation or territorial expansion is blocked. Observation of decreased crop rotation, shortened fallow periods and an over-extraction of the forest through hunting or gathering systematically follows the implementation of poor land management plans, the creation of poorly located protected areas or the parcelling out of land for agro-industrial activities such as plantations or logging concessions.

• Population growth accompanies rural migration flow into urban areas. Pressure

on forest resources caused by urban expansion is far greater today than pressures caused by rural population growth. The increasing presence of outside populations in forest areas, urban expansion, as well as the creation of mining and logging 'boomtowns' provokes such an intense demand for bushmeat and fish that some species may become threatened with extinction.

• Regrouping dispersed villages, forced displacements and the stabilising of historically dynamic habitats have the same result if carried out too quickly, i.e., increased pressure on natural resources.

c) Guidelines for action

• **Take** into account the predictable growth of populations in land management plans and the creation of protected areas.

• **Calculate** land surface areas required in management plans with greater accuracy, allowing for long fallow periods and population growth, to avoid future pressures.

• **Do not arbitrarily regroup** small dispersed communities into large sedentary villages. Address realistically the problems of insufficient schools, clinics or water pumps/wells

• **Control** the settlement of forest lands by peasants coming from other areas.

• **Anticipate** the attraction which the setting up of a project will have on populations of regions other than that where is it located (e.g. company villages or headquarters of a protected area). Set up the necessary infrastructure and equipment and make sure supplies are available

• **Develop** urban distribution and supply systems and improve ad hoc peri-urban expansion with land use plans.

7. With what environmental disturbances are tropical forest peoples confronted?

a) Importance of the question

Forests are threatened, but so are the peoples who live in them. A development project can also be perceived by forest dwellers as a disturbance of their environment.

b) Some answers

Governments which seek *export revenues* from wood, minerals, cash crops, energy, etc. run the risk of degrading their environments, as well as undermining local populations

• *Logging* disturbs ecological balances over vast territories and modifies the resources available to local people. Local populations are negatively impacted by the

Logging - Central Africa (photo S.Bahuchet)

Goldmining - Guyana. (photo J.F.Oru)

decline of vital resources (game, fish, building materials…) and by the arrival of outsiders. Logging companies bring in workers who temporarily settle in work camps. These hybrid entities which are neither completely urban nor completely rural have significant food needs. They consequently disturb the fragile networks of exchange by increasing needs for game. Alcoholism and prostitution are also rife in these camps. Moreover, logging opens up previously remote tracts of land with roads. This facilitates the arrival of outsiders who either hunt commercially or settle as agricultural colonists.

• *Mining* seriously disturbs the environment (destruction of vegetal cover, water pollution…). It also brings in outside populations who provoke the same kinds of problems as loggers, although over smaller areas. A related problem is insecurity caused by clandestine mining activities.

• *Hydroelectric installations:* Dam building floods valleys and consequently the lands of neighbouring inhabitants. Settlement of fishing communities along the banks of dam lakes exacerbates competition for land.

• *Industrial agriculture:* the development of cash crops (coffee, cacao, palm oil, coconut, rubber, sugar cane…) results in the loss of agricultural and gathering space for local populations who participate in the sector as farm workers. Industrial agriculture also brings in outside workers.

• *Extensive breeding:* Deforestation to create pasture for cattle ranching has similar consequences on development as industrial agriculture.

• *Peasant colonisation:* Organised or spontaneous settlements on new lands by peasants from outside regions provokes intensive deforestation, destruction of habitat and permanent land clearing. This combines with over-hunting and over-fishing and leads to unequal competition over resources between populations of varying demographic densities.

• *Creation of protected areas:* This leads to the eviction of local inhabitants or at least limits their subsistence activities. In some cases it leads to entire population displacement.

c) Guidelines for action

• **Conceive** management plans on a regional level, taking into account all populations present along with the networks that unite them.

• **Limit** and **regulate** migratory flows into forest areas

• **Be vigilant** concerning the respect of local inhabitants' rights vis-à-vis migrant populations.

• **Do not subsidise** projects which involve displacing forest populations.

• **Ensure the strict respect** of mining and logging regulations and work towards improving their environmental protection clauses.

• **Reinforce** state surveillance capacity by creating a cadre of properly paid, trained civil servants who are familiar with regional realities and who have the means to carry out their jobs.

8. How do populations react to change?

a) Importance of the question

Notwithstanding the presence of a development project, forest populations generate their own dynamic in response to sociological, economic or ecological disturbances. What strategies should be implemented in such circumstances? Local attitudes concerning change influence acceptance or refusal of a development project. What conditions are necessary before change will be accepted? To what extent can local people appropriate a project? Do the changes proposed (often imposed) from the outside, really correspond to the needs and aspirations of these populations?

b) Some answers

• Forest peoples are not isolated and the history of their contact with the outside world is long. Long distance trade networks, bringing new products, techniques, foods, populations too, started well before globalisation.

• The majority of forest communities aspire for the comfort and well-being associated with the West. Modern tools and equipment are appreciated because they make work easier. Their use is not necessarily synonymous with over-extraction of the environment, as long as used in a context separated from outside commercial interference.

• In all regions, major trends in the exploitation of tropical forests provoke similar transformations of indigenous peoples' life-styles. These result mainly from administrative actions but can also come about spontaneously

• Disturbances which accompany change *multiply costs:*

- loss of ancestral lands, modification of traditional land tenure systems: f*eeling of being uprooted ;*

- economic and social marginalisation: *poverty* or worse, *sentiment* of poverty;

- increase in inter-generational conflicts, loss of prestige and authority amongst elders who represent what is considered to be an old fashioned and inefficient life style: *social disorders*;

- *nutritional problems* due either to loss of wild sources of protein or due to rejection of traditional hunting activities; *alcoholism* creates the illusion that exchange and conviviality can no longer be assured by traditional food and drink.

• *Traditional communities control their own production and do not cost outsiders anything.* Economic exploitation of their milieu leads to its destruction and provides profits in the short term only to a minority and nothing for the nation (nor for the indigenous populations). On the contrary, once these societies are destabilised, they are costly to the state on which they depend. Not only is the state unable to take care of them, it contributes to their impoverishment.

c) Guidelines for action

• **Evaluate** a community's capacity to innovate and integrate this capacity into the conception of the development project.

• **Anticipate** the impacts of a development project.

• **Limit** the losses of knowledge and techniques crucial to life in the forest and its social balance, notably by refusing ill-conceived school programmes or those which separate adults and children from elders.

• **Respect** traditional knowledge and techniques by integrating them into school curricula.

9. How do cities impact upon forest ecosystems?

a) Importance of the question

City dwellers have vital uses for forest resources. Yet, they use them daily in ways which tend to be incompatible with sustainability. Wood (for fuel and building), game, Non Timber Forest Products, as well as urban and peri-urban space for agriculture, are crucial to urban populations. Pressure on forest resources and space are the result of demographic growth, poverty, weak state systems and cultural attachments to the forest and its wealth

b) Some answers

• The rapid growth of large and middle-sized cities located in forest areas results in serious supply problems for food, fuel wood and agricultural space. In turn, this leads to a seemingly unending expansion of peri-urban zones which represent an *uncontrollable consumption* of space.

• Rural-urban migration, which counterbalances population growth (particularly in Central Africa), contributes significantly to the growth of urban areas.

• These dynamics of urban growth have many implications for rural development and conservation, particularly in Central Africa, where forests and cities are close.

• The classic rural-urban cleavage is disappearing rapidly. Modernity has reached the most remote villages and conversely, village-like attitudes and behaviours are omnipresent in towns. Many high-ranking civil servants, politicians or business leaders are from forest areas and maintain relations with their villages (except in the Guyanas). Not surprisingly, villagers expect a lot from their elites who have found wealth or power in towns.

• City dwellers' perceptions of the forest, its resources and conservation play an important role, because the future of the forest is largely decided in state capitals. Even though cities tend to have a negative impact on forest ecosystems, they are also potentially positive for conservation because urban populations tend to be more aware of conservation issues, more educated and politically engaged than their rural counterparts.

Land clearing - Central Africa (photo S.Bahuchet)

Field - French Guyana (photo M.Fleury)

c) Guidelines for action

• **Prioritise** and manage urban supply and distribution systems. City dwellers' dependence on forest products and space results from inadequate policies at the state level.

• **Take** into account the needs and aspirations of city dwellers. The effort needed here is just as crucial as that devoted to conservation.

• **Study** consumption patterns of forest products in towns, emphasising economic, cultural and social factors.

• **Analyse** exchange networks and social links between rural and urban communities and new associative dynamics.

• **Provide** the financial, technical and institutional means needed to help urban-based decision-makers think about taking conservation seriously.

• **Study** city dwellers' perceptions of the forest (notably those of school children) before conceptualising educational schemes for environmental awareness.

10. Is slash and burn agriculture the principal cause of deforestation?

a) Importance of the question

Slash and burn agriculture is widely seen as the primary cause of degradation in dense humid forests. In the minds of Westerners, forest space should remain free of human presence to ensure its preservation. But forest peoples have been living in these ecosystems for thousands of years and continue to do so. Blaming the small-scale agricultural practices of populations is an easy excuse which avoids confronting big logging interests or commercial agricultural expansion policies associated with new farm colonisation.

b) Some answers

• *Do not confuse slash and burn agriculture with land clearing by fire.* Traditional slash and burn is *itinerant* and thus *temporary*. Land clearing by fire, as carried out by agricultural settlers or cattle ranchers seeking new lands, is characterised by *permanence*. Land surface subject to clearing by fire is 20 to 50 times greater (depending on the region) than that attributable to itinerant slash and burn agriculture.

• Drastic shortening of fallow periods is detrimental to the environment. The primary factor of change is the *increase in population densities* which results either naturally or through displacements where space is limited. This increase augments pressure on land. At the same time, economic development encourages farmers to increase their production of export cash crops. This in turn diminishes their production of staple crops.

• In cases where land is scarce, the primary risk lies in the shortening of fallow periods. This accelerates rotation and leads to increased use of secondary forests which no longer have time to mature. Repeated clearing of these secondary forests is very dangerous because it leads to the nutrient and soil depletion and plant growth unsuitable for pasture or agriculture. It ultimately leads to the disappearance of contiguous tree cover. Interrupted fallow periods is an aberration of traditional slash and burn agriculture caused by political pressure and inappropriate economic policy. *It is thus absolutely necessary to enrich fallow land.*

• Land shortage implies that production per land unit must be augmented. But this gain is counterbalanced by the need to adopt increasingly complex and arduous agricultural practices. Moreover, when it becomes impossible to restore soil fertility by natural vegetation, *it becomes necessary to use expensive fertilisers* to make up for the loss.

• Many traditional techniques, which vary from one continent to another, are used to help forest regeneration. They all involve the use of trees: for example by uprooting selected trees during clearing, maintenance of some useful trees during clearing, or enriching fallow land by planting useful species.

c) Guidelines for action

• **Determine** minimum area necessary for agriculture in land management plans and *take into account the need to have long fallow periods.*

• **Prioritise** research at the regional level on how to enrich fallow lands by the choice and distribution of useful species.

• **Promote** agro-forestry based on traditional fallow techniques and agricultural practices.

• **Integrate** the agricultural clearing/fallow mosaic into strategies to conserve mature forests. This contributes to the creation and maintenance of biodiversity.

11. Is slash and burn agriculture profitable?

a) Importance of the question

Many countries have recycled European colonial policies *opposed* to itinerant slash and burn agriculture, basing decisions on fallacious arguments. Deforestation, for example, is attributed to land clearing or this clearing is alleged to destroy valuable trees which could be sold. Logging, which is a cash earner for some, is preferred over this form of subsistence agriculture. But one crucial factor is neglected here: the primary aim of agriculture is *to feed people.*

Are tropical forest peoples unproductive? Their agriculture is presumed to be archaic. It does not generate any surplus and can barely feed their own villages on the brink of famine. Transforming these so-called reprehensible practices by introducing new crops and techniques is thus seen as a priority in order to ‘help these populations contribute to the nation building process’.

b) Some answers

• Slash and burn agriculture is part of a system. In the seasonal and daily activities of farmers it is associated with other forest activities such as hunting, fishing, gathering and in some regions with tree cropping for export.

• Given the necessity to deal with complex situations, farmers are constantly seeking *compromise solutions.* Their objective is to optimise their systems of production, it is not to augment productivity.

• Traditional farmers try to *minimise risks* more than minimise work in their agricultural practices. Collective work is thus preferred to individual work and cooperative systems are more important than individual solutions.

• Slash and burn agriculture is capable of producing *surpluses proportional to the needs of the community* and its network of social help. These surpluses serve as safety nets in the event of epidemics, village resettlement or temporary social crisis. Traditional agricultural cycles are not only efficient but they can optimise poor soil conditions as well. Thus, when the social fabric is coherent, productivity on even poor land can be equal to that on rich land (observations from Brazil and Guyana). Conversely, low productivity obviously occurs on poor soils but it occurs more notably when social systems are disturbed or where market economic activities monopolise villagers' efforts.

• Traditional agriculture can be described as ‘simultaneous polyculture’, because *planted plots have a mix of different plants* (many dozens of plant types and species are found in a single plot). This diversity which results from local agricultural expertise constitutes an *irreplaceable genetic heritage.*

• Fallow lands are never really ‘abandoned’. The secondary forest which grows there attracts different animal species which makes them good hunting grounds. Other activities include the gathering of NTFPs for food or traditional medicines, raw materials and fuelwood.

• Forest agriculture is a *low input-low risk system.* For the years to come it will remain the best choice available for forest populations.

c) Guidelines for action

• **Reconsider** agriculture as just one component of a much broader system of production.

• **Train** agricultural technicians to understand the logic of itinerant slash and burn agriculture. Forest farmers are frequently confronted by agricultural technicians who are governed solely by the priorities of short-term economic profit.

• **Think** about improving distribution networks rather than being preoccupied by improving agricultural techniques.

• **Preserve** the biological diversity of cultivars, particularly through *in situ* conservation.

• **Analyse** those tree cropping techniques which have proved successful. Do not be satisfied with replacing them with Western techniques of cash cropping.

12. Should shifting agriculture be made sedentary?

a) Importance of the question

Shifting slash and burn agriculture is often accused of devouring the forest and of being unproductive. All programmes thus give priority to transforming these 'primitive and archaic' techniques into stable agriculture. What is the reality? Are there solutions?

b) Some answers

• Shifting slash and burn agriculture is an agrarian system in which fields are generally cleared by fire and are cultivated in a *discontinuous fashion.* This implies *fallow* periods which last longer than the period when they are farmed.

• Fallow is an absolute necessity in this type of agrarian system. *Reconstitution of forest cover is a fundamental element* in it. In tropical forests, nutrients are stored mainly in the vegetation supported and not in the soil itself. Forest vegetation creates its own nutrient cycles which function independently of soil substrates. The aim of clearing and burning is to temporarily transfer these nutrients into the soil, just for the time when the land is being cultivated. The temporary character of this transfer is important. If the soil is exposed to the atmosphere for too long after being cultivated, it loses its capacity to progressively regenerate forest cover. Environmental degradation then becomes irreversable.

• *Speaking of 'soil' fertility is meaningless here.* The entire agricultural system determines fertility. Soil is only one element along with vegetation, small and large animals which disseminate seeds, mycorrhizes, etc. Local people judiciously use the *fertility of the entire milieu* – not soil fertility exclusively. The role of fallow is not simply to 'reconstitute soil qualities'. It is to respect a nutrient cycle which local people and their descendants can use again when they choose to cultivate that same land in the future.

• *The itinerant character ensures fertility and the productivity of farm plots. Stabilising forest agriculture can take place only when other means of reconstituting soils has been found.*

• Slash and burn agriculture is part of the forest ecosystem. The process of 'capturing' the nutrient cycle helps constitute a *self-generating agricultural system.* This process differentiates slash and burn from Western agricultural systems that depend on fertilisers. In developing countries, in addition to being ecologically beneficial for the forest eco-system itself, slash and burn is, on the economic level, perfectly adapted to peasant communities who live in sparsely populated remote areas and whose reliance on the cash economy is low.

c) Guidelines for action

• **Take into account** the necessity of long fallow periods (15-30 years). This is crucial for forest regeneration after cultivation.

• **Make sure** agricultural areas are sufficiently large. Restricting the size of areas available for cultivation impoverishes land.

• **Support** agricultural systems which incorporate multi-cropping (including tree cropping) which maintains a level of diversity necessary for a balanced diet and which help counter-balance the effects of an economy based solely on a single export crop

• **Encourage** agronomic studies of subsistence systems based on balanced crop rotation and improved fallow.

• **Take into account** potential population growth in order to balance it with needs for new agricultural land.

13. How important is seasonality in subsistence activities?

a) Importance of the question

Organisation of time is crucial for planning subsistence activities. How do new activities created by development projects fit in with pre-existing calendars? How do children accommodate their school activities with the activities of their parents?

b) Some answers

• Organisation of time and space is not random in tropical forest communities. It corresponds to a very strict and precise calendar aimed at optimising productive activities. A major preoccupation of local people consists in the harmonisation of agricultural activities with gathering forest products or fishing. While they can plan their farming according to rainfall or the maturation phases of cultivated plants, their other activities depend on biological rhythms that vary from one year to another. Traditionally, minute seasonal changes are indicated by micro-indicators such as the croaking of a particular type of frog or the migration of certain birds.

• Different time scales (short, mid and long) influence economic activities, but social and symbolic ones do so also.

• The planning of activities is based on a particular conception of time which is slow and cyclical. It is also based on the respect of natural cycles. This conception of time inevitably clashes with the Western one which is legal, arbitrary and subject to global economic influences.

c) Consequences fore development

• **Measure carefully** the availability of people. This varies according to sex and season because of traditional calendars. In cases of conflict between a development project's agenda and the traditional calendar, villagers tend to opt for the latter.

Weaving - Vanuatu
(photo F. Tzérikianz)

Hunting - Guyana
(photo P. Grenand)

• **Harmonise** school calendars with the major cycles of the traditional calendar. This can reduce school absenteeism and does not deprive children of a technical apprenticeship, important in adulthood, that they can acquire by participating in their parents' activities

14. Forest products: luxuries or necessities?

a) Importance of the question

Limiting peoples' access to forest products by creating protected areas is a solution envisaged to preserve the environment. But how dependent on these resources are local people for food and other materials? How is even minimal use of them integrated into peoples' specific cultures and identities?

b) Some answers

• *Hunting, fishing and gathering:* all forest communities balance their diets with forest products obtained through such activities. *Agriculture provides the bulk of forest peoples' diets, the forest supplies the quality.*

• In other words, agriculture provides carbohydrates (calories) while the forest provides proteins, lipids and some vitamins. Although gathering has different degrees of importance from community to community, it is practised all over. This is the case for animal products (amphibians, reptiles, molluscs, insects…) and vegetal products (tubers, plant sprouts, fruit, seeds, nuts, mushrooms…). Traditional hunting and fishing are practised over very large areas. The numerous species of prey, which vary from season to season, are hunted in specific areas, permitting a kind of ‘hunting fallow’. As with traditional agriculture, large areas are needed.

• *Raw materials:* Forest peoples rely on their environment for the supply of a great variety of products necessary for daily life. These include building materials, tools, weaving fibres, musical instruments, medicinal plants, etc. Each element is carefully selected for a specific use. Many of these materials are indispensable. They have no equal and do not cost any more than the time needed to go fetch them. Many of these materials grow in secondary forests or recently re-grown agricultural land. These spaces are thus not without value. Moreover, the vegetation which grows in these spaces attracts many animal species which are hunted there.

c) Guidelines for action

• **Evaluate** the food, technical and economic importance of forest products for local people before restricting access to them. Such an evaluation requires precise quantification and monitoring of full seasonal cycles. This means more than rapid estimates.

• **Monitor** the dynamics of plant and animal populations used by people and use these data in setting any extraction quotas.

• **Circumscribe carefully** the *totality of land* used for extractive activities.

• **Estimate** whether or not substitute products exist and their costs.

• **Encourage** whenever possible, local initiatives aimed at managing threatened animal and plant species.

15. Why do forest populations need so much space?

a) Importance of the question

Demographic pressure, cash cropping and impoverished urban populations all converge to put pressure on forest. If the economy of forest inhabitants is limited to cultivated plots, we need to ask why they should require so much space These people move through the forest for many reasons and their activities are not sedentary.

b) Some answers

• In Amazonia, the expression ‘few Indians but lots of land’ is frequently heard. Ideal economic conditions for forest peoples involves a large territory associated with the dispersion and resource diversity. Aside from the historic fact of depopulation in tropical forest zones, peoples' control over their territory remains moderate. But this is not linked to failure on their part. In these rare parts of the tropics favourable to intensive agriculture, high human population densities are (or were) found. Examples include the Amazon Valley or the New Guinea Highlands. Nowhere along the equator has the West been able to either impose its land use systems, or establish long term European settlements

• Slash and burn agriculture, when it is practised without constraints, never takes the form of continued clearing and does not involve the greater part of a community's territory.

• Hunting, fishing or gathering activities (for food or materials) takes place over territories which are much larger than land devoted to agriculture. In Amazonia, 250 km2 of contiguous dense humid forest is needed to sustain a population of 150. Distances covered are considerable. This requires significant mobility and often temporary habitatation far from the village. An ecological constraint is the heterogeneity of the forest and the dispersion of its resources. Seedling derived from a single tree species, for example, may be separated by kilometres. There might be only one example of a particular species in the entire territory of a community.

• Nomadism and semi-nomadism are often perceived as primitive. They are traditionally associated with a very loose notion of territory, one that is not clearly defined by borders. Yet, the locations of old villages, cemeteries, sacred sites, sometimes indicated by a single tree or a discrete line of stones, constitute good territorial markers. The limits and genealogical, strategic and diplomatic importance of these markers are very real in the eyes of local populations and in the eyes of their neighbours.

• Because of the diversity of modes of extraction, territorial overlap is common.

Groups of hunter-gatherers, farmers or fishing communities can live together in a same area. The diversity of extraction modes leads to cultural specialisation linked to group exchange. Such specialisation, the corollary of which is the voluntary under-extraction of biotopes, also contributes to its durability.

• Outside actors tend to under-estimate the areas needed to ensure the durability of local production systems, because they tend to take into account only cultivated space, even neglecting sometimes long fallow periods. Moreover, the trend towards higher population densities is hardly never considered in land management plans.

c) Guidelines for action

• **Understand** how space and time are managed as well as the social organisation of work before redistributing land. This is crucial at the national level and with respect to protected areas.

• **Encourage** dispersed occupation of territory with appropriate modern infrastructures. Also encourage the diversification of activities in order to avoid excessive pressure on specific resources or areas.

• **Take into account,** notwithstanding the territorial legislation adopted, the importance of hunting, fishing and gathering territories. This can be done by either recognising such territories as belonging to the community or by allowing these activities on lands owned by others or on lands serving other economic functions. Conversely, prohibiting hunting, fishing and gathering activities may eliminate protein and vitamin sources from forest diets. It is thus vital to replace them with alternatives.

• **Be wary** of consequences that overly protectionist legislation can have on the well-being of forest populations. If hunting is prohibited, can we be sure that communities will know how (or be interested in) raising livestock to replace their game? Technical and psychological reluctance to engage in animal husbandry is considerable. In most forest societies raising livestock is rudimentary. It has more of a social and religious role than a subsistence one.

• **Estimate** carefully the risks, consequences and compensation which could be needed when access to territories is permanently restricted. Experience reveals that if compensation needs to be made, it should not take the form of monetary payments because this tends to go into the pockets of a few privileged individuals.

• **Identify** land reserved for village use in land management plans. Numerous legal models exist around the world. The most important consideration is that communities obtain reliable and sustainable guarantees concerning the land they use. If forest populations are allocated sufficiently large territories, not only will they not degrade their environment, but they will become ipso facto conservationists.

Preparing fish bait - Guyana (photo P. Grenand)

NTFPs - Vanuatu (photo F. Tzérikianz)

16. Do tropical forest peoples have an economy?

a) Importance of the question

The main objectives of these so-called stone age people are to satisfy immediate needs without any strategy for the long term... The only solution is to replace this permanent improvisation with 'real' techniques! Our ignorance about their economic strategies leads us to believe that development has to integrate them into the market economy. But this gravely disturbs the traditional ways in which goods are produced, traded, given, bartered… Doesn't development money thus hamper certain crucial social and economic functions?

b) Some answers

• Many economic systems co-exist today in the ACP area. They are integrated in different ways into the monetary and commercial economy.

- Isolated groups which are economically autonomous and have very limited contact with the outside world are becoming rare(especially in Amazonia and New Guinea).

- Groups with some contact produce surpluses through traditional activities which are exchanged for goods with neighbouring populations: normally these are non-monetary exchanges.

- Other groups with some contact are part of regional, monetary commercial networks which are themselves very old (and in this sense, traditional).

- Some groups respond to outside demands. They conserve a clear cultural autonomy but have modified their traditional self-sufficiency activities: this is the case for all of those slash and burn farmers who also produce cash crops such as coffee, pepper or cocoa, or those who harvest NTFPs.

- Many ‘traditional’ populations are the only ones which use their forest areas in non-destructive, rational ways, and are able ‘export’ some resources to other regions. They put inaccessible land for which no other sustainable activity might be imagined to good economic use in the interests of the state.

- Forest production systems in the ACP areas are characterised by many different activities (shifting agriculture, hunting, gathering, fishing). The techniques which are used are extremely complex and diverse. They involve a broad and organised field of knowledge. For example, the practice of slash and burn agriculture is based on numerous factors such as the type of soil, type of forest occupied, the diversity of plants which are cultivated, the duration of fallow periods, etc. In depth knowledge of seasonal cycles is linked to very elaborate calendars where agricultural and foraging activities overlap.

- Populations still know about resources and ways to exploit their environment even though they may have recourse to them only rarely. These may be particularly important in periods of cash shortage or production shortfalls.

Harvesting tubers - Santo (photo F. Tzérikianz)

- Cash earning activities such as cropping for export, sale of forest products or seasonal salaried work are on the rise. They are integrated into an economic system which already involves multiple strategies. These are additions to a calendar of activities, not substitutes. Such systems, based on multiple strategies, are becoming more complex and diverse, within new distribution networks.

- The 'economic opportunism' upon which forest societies depend should be applicable to other development situations. Models based on simplification and specialisation of economic activity which development experts have hitherto suggested should be more pragmatic and flexible.

c) Guidelines for action

- **Promote** economic education.
- **Maintain** the diversity of activities and thus their strategies.
- **Favour** regional supply systems (foodstuffs, NTFPs, crafts) rather than activities oriented toward bulk export (cash crops).
- **Promote** the inventory and conservation of the diversity of traditional techniques for their cultural role (as a contribution, for example, to eco-museums).
- **Do not prevent** seasonal mobility (but do not unconditionally advocate nomadism either).
- **Preserve** traditional local systems which still function. They contribute to poverty reduction and thus contribute to the reduction of rural migration. This in turn diminishes pressure on urban centres and urban hinterlands and the associated negative impacts such as environmental degradation, insecurity, risks of social violence, etc.

17. What are the roles of women in traditional forest economies?

a) Importance of the question

Terms of Reference for any kind of development or conservation project today include questions of gender. How pertinent is this for forest communities?

b) Some answers

- There was until very recently a strong division of labour between men and women in forest societies, based on a complimentarity of tasks. The role of one gender compared to the other remains highly variable in different societies.
- Other than housekeeping (cooking, childcare…) the female sphere of activity is centred on subsistence agriculture. Men are involved here mainly for clearing fields. Women choose the cultivars, plant, harvest and tend. In cases of surplus, women trade and keep what cash is earned.

• The introduction of cash cropping has caused gender imbalance because it is monopolised by men. This applies to both the work itself and to the sale of these crops. Women, nonetheless, help in harvesting.

• The intrusion of a cash-based economy creates a second imbalance. Men control cash earned (they may leave their villages, plant cash crops of sell game) while women remain in their home communities. Women are thus burdened with new tasks even though the distribution of earnings is not proportionate. *The most striking elements of inequality between men and women paradoxically emanate from modernisation.*

• Emphasis on agriculture in economic systems increases the importance of women in daily arrangements. This consequently marginalises men who were traditionally involved in this activity.

• The diminishing importance of hunting activities in village economies gives rise to a kind of male unemployment. This in turn translates into loss of prestige. To compensate, the responsibilities of women increase in order to maintain balance in the community.

• The increase in the economic role of women puts pressure on children, and particularly young girls who are thus forced to take care of the younger children or participate in other household chores. *This aggravates the difficulties when girls have to attend school.*

c) Guidelines for action

• **Do not create** conflict situations by destabilising economic structures that already work.

• **Ensure** that cash earnings go to women by favouring the sale of subsistence agricultural products.

• **Re-valorise** the role of men in village economies, notably when foraging activities become limited.

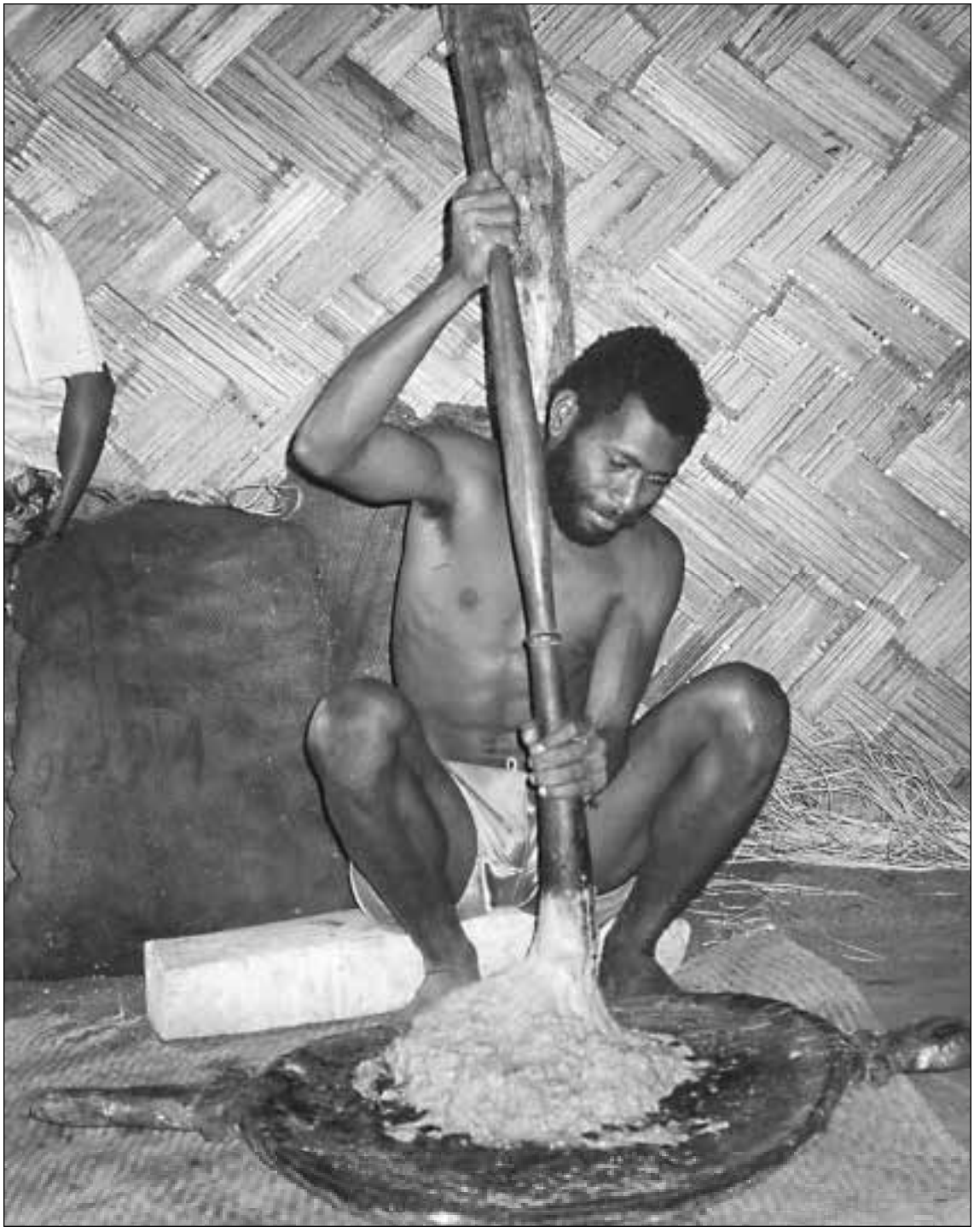
• **Monitor** the attendance of girls in school. Help uneducated women learn to read

• **Take into account** the female voluntary associations because they are important social factors and sources of stability (even modernisation) in villages.

18. Can the forest feed its inhabitants?

a) Importance of the question

Even with respect to development questions, it is crucial to know what preoccupies people the most. This preoccupation is food. It is common to all human beings. Everyone's activities are centred on food. When change comes to a society, food is the first thing to feel the consequences.



Preparing taro. Santo. (photo F. Tzérikianz)

b) Some answers

• Rainforest populations generally tend to have satisfactory diets. Diet is still largely based on subsistence production which depends significantly on an eco-system that provides variety and nourishment.

• In all cases, on all continents, agriculture provides staples (calories). The forest provides the majority of the proteins, taste and quality in a diet. Hunting, fishing and gathering take place in the forest.

• Unlike certain dry (e.g. Sudanese) climates, seasonal food supply ruptures in tropical forests are extremely rare. When they do occur, they are due to physical exertion associated with agricultural labours, rather than due to an actual shortage in the availability of essential foods. The impact is more psychological than nutritional.

• Forest populations are attached to the quality of their cooking to which they frequently devote a great deal of time.

• Food shortages become more significant as more time is spent growing cash crops as opposed to growing subsistence crops, hunting or fishing.

• Even though forest dwelling populations may be attracted to modern urban life and imported foodstuffs, they *do not have enough spare cash on a permanent basis* to completely abandon their local, self-sufficient systems of food production.

• The increased amounts of money spent on food comes from money earned by women. Cash earned by men is devoted to other things, rarely food. Large sums are spent on alcohol.

• The over extraction of wildlife is caused by a number of factors which make behaviour modification difficult in the short term. Continuing subsistence hunting and fishing is a major way of keeping diets balanced. It thus requires, along with effective control, maintaining a friendly and long term dialogue with communities. It is only in the longer term, along with well-designed awareness campaigns, that farming of wildlife can be envisaged.

c) Guidelines for action

• **Analyse** very carefully the variety of socio-economic solutions available to forest peoplesby using good quantitative data.

• **Guarantee** access to biodiversity. This alone allows populations to maintain balanced and healthy diets. The combination of domesticated and forest products is crucial.

• **Maintain** an interest in the forest and knowledge of ecological processes amongst the educated. They will thus be able to master the techniques needed to maintain balanced diets.

• **Base** programmes of applied nutrition, adapted to current local conditions, on the deep interest which forest populations have for subsistence production such as gardening and cooking, instead of importing inappropriate Western solutions.

19. Is malnutrition a malediction?

a) Importance of the question

Does the image of an African victim of famine apply to forest peoples? Is the fight against malnutrition a legitimate development priority? Conversely, does the tropical rainforest environment inherently impose specific constraints on projects?

b) Some answers

• The nutritional condition of adults in forest communities is generally good. This can be explained by the fact that predominantly starch-based diets are complemented with proteins from forest products.

• Serious cases of malnutrition arise when fish or game proteins are sold and not eaten.

• Conversely, the general condition of children is poor. They suffer from anaemia and slow growth which affects weight and height (this condition is referred to as *stunting*). This major public health problem is caused by a combination of factors, including debilitating parasitic illnesses. Food consumption patterns are thus not the problem. The high prevalence of intestinal worms is particularly alarming. Even though food is not distributed evenly in families, children do tend to have enough. They also have the opportunity to snack while engaged in fishing and gathering activities. Snack foods include fruits, insects, eggs, reptiles and small rodents.

• The forest appears as a particularly unhealthy hot and humid place. It is conducive to pathogens which emanate largely from transmissible diseases. Infant mortality is high, caused by viral infections (notably diarrhoea and measles). The high prevalence of malaria associated with intestinal parasites causes a general clinical anaemia (haematology), despite an animal rich protein diet.

• The isolation of villages, increasingly sedentary (as opposed to mobile) lifestyles, poor health care infrastructure, and a generalised circulation of viruses make the overall health situation in forest areas rather precarious.

• Unlike the diets of forest communities, the diets of destabilised populations seems to be more problematic. They have greater difficulties in procuring the protein which come from forest products and they are not available to do agricultural work, which also limits their access to food. Nonetheless, their greater access to basic health care appears to compensate for the nutritional imbalance. An indicator here is lower child morbidity and mortality.

• These populations tend to use the money they earn for prestige consumption as opposed to spending it on food. Even worse is the fact that imported foods which end up in villages are of poor quality; frozen foods are often defrosted and refrozen again; and are of little dietetic value (such as carbonated drinks, starches, sweets…).

• AIDS is spreading in forest boomtowns, even though in most forest villages AIDS is rare. In the future however, the contacts which forest communities have with gold miners or loggers will undeniably facilitate the spread of AIDS.

c) Guidelines for action

• **Fight** malaria at the local level by, for example, improving housing conditions or by systematically and periodically distributing appropriate anti-malarial drugs. Children and pregnant women should be protected first.

• **Orient** actions towards medicines and public health care (improved sanitation, vaccinations, oral re-hydration) instead of focussing on improved food. Diets tend to be satisfactory in the humid forest but infectious diseases and parasites are prevalent.

• **Take into account** repeated requests by populations for health care. Simple treatments and standard vaccinations could reduce mortality by half. Antibiotics and drugs against parasites (anti-malarials and anti-helmintics) could control the rest.

• **Fight** faecal contamination. Treatments must not be carried out sporadically and haphazardly but must be administered in an orderly and generalised way because of its rapid progression.

• **Avoid** any form of food aid during peace time in forest regions not subject to famine.

20. Do forest populations threaten biodiversity?

a) Importance of the question

Conservation projects are generally justified by the need to protect biodiversity against the activities of local or migrant populations. But what is the reality? To preserve biodiversity while contributing to sustainable development, it is important to know the intricacies not only of human impacts on fauna and flora but also the importance of the effects of natural phenomena.

b) Some answers

• Human activities, primarily agricultural activities, have influenced the structure of forest vegetation for many thousands of years. This agriculture is largely based on the natural cycles of forest regeneration.

• Agricultural practices themselves favour the maintenance of tree cover: trees are cut - not uprooted, specific trees are maintained in farm plots and fallow areas are by definition left to regenerate. This can lead to anthropogenic forests that are entirely constituted of useful species (for food, materials, medicines or commerce). Each tree has been either protected or planted by humans at some point in the past.

• When local populations are allowed to practice their traditional ways of life without outside interference (particularly with respect to their use of space) they do not degrade their environment. Given low population densities, their impacts are widely dispersed in terms of space and their impacts on the resource base are moderate. Outside factors are responsible for increased pressure on the resource base. Bushmeat is commercialised to feed city dwellers; industrialised countries import rattan furniture; outsiders working in logging camps or mining areas eat local foods…

• The adoption of modern techniques (firearms, metallic snare traps, nylon fish nets, outboard motor canoes, chainsaws…), all increasingly present, do not automatically result in an increase in extractive activities. New techniques are always somehow integrated into pre-existing practices. As long as production is based on self-sufficiency, the modernisation of means of production serves mainly to diminish the time and effort involved in tasks. Conversely, these techniques facilitate the commercialisation of forest products (notably game) when there is an outside demand for it.

• The very wide range of plants cultivated in each village reveals that forest populations generate biodiversity themselves through selective breeding.

c) Guidelines for action

• **Systematically carry out** studies of how wild animals and plants are introduced/cultivated/stocked along with the dynamics of these processes before attempting to implement a programme of change.

• **Make sure** that the genetic diversity of domesticates is maintained. Inventory and conserve cultivars, preferably in situ, by involving farmers themselves.

• **Study** realistic regulations which take into account both subsistence economies and the ecological capacities to reconstitute plant and animal stocks.

• **Promote** research that integrates agricultural systems within biodiversity conservation strategies conceived on the level of the regional landscape, instead of focusing on protected areas alone.

21. Does money lead to development?

a) Importance of the question

Western economies are based on the use of money and all activities can be translated into money. Is this the case in forest communities involved in development projects? Largely instigated by countries in the North, such projects are based on commercial logic. But is this universal? What is the relationship between the wealth or poverty of a state and the wealth or poverty of its inhabitants?

b) Some answers

• Many forest communities are not yet completely dependent on money. When they have money, it is not necessarily part of daily life. It remains limited to contacts with the outside world (cities) through individual transactions. The spread of money has been associated with administrative constraints (taxes, school fees, health care) and due to the development of colonial activities (cash cropping, harvesting of products such as rubber, balata or sandalwood). Forest populations have thus become inextricably caught up in cash-based economic systems.

• All development projects are based on the market economy. They all create new needs in communities that only money can satisfy.

• *Poverty* is a Western notion based on the use of money. It is evaluated according to criteria and standards defined in the North. It cannot be applied directly to rural ways of life. Moreover, the statistics used today are broad-based and thus do not take into account the specificities and disparities which exist within a single country. One country has to be understood as comprising different categories, such as cities, rural areas, displaced populations, etc.

• *Integration into the market economy frequently causes the pauperisation* of people and not their development. In order to deal with basic needs, such as health and education, people see themselves as being forced to sell the surpluses which would be useful in times of shortage. Thus, hunting, fishing and forest extraction may occur at levels which are unsustainable.

• Conversely, there are also populations which are unable to sell their surpluses outside of their communities because roads and markets are inaccessible. The profitability of agriculture is not the question here; the problem of commercial networks is. It is thus crucial to deal with commercial networks before dealing with productive activities.

• Cash-earning activities imply a certain rhythm. Exporting cash crops necessitates a labour force which can be available for work at the time of harvesting. But, the earning period is short lived. The efforts of a whole year are remunerated just once, when the harvest is sold. Some associated expenses are incurred all year long, such as buying fertilisers or paying occasional workers. The attraction for commercial hunting in Central Africa lies precisely in the fact that remuneration and work take place more or less simultaneously and all year long.

• Cash-earning activities are structurally linked to an *individual* – not to a group. An employer or a buyer enters into a relationship with an individual. The risks associated with developing commercial activities are:

- competition between individual gain and community needs is to the detriment of sharing. The elderly and poor families (widows and orphans for example) are the first victims.

- the creation of conflicts when collective gains are distributed (for example compensation or royalties). This is linked to the weakness of local-level political structures and the absence of uncontested authority.

• Because development programmes are based on the growth of the export production sector, international commercial policies have deep and severe consequences for ACP forest communities. They suffer from lack of protection and absence of regulatory mechanisms. The liberalisation of international trade agreements such as through GATT and WTO has led governments in developing countries to abrogate their regulations with respect to the purchase of agricultural products. They have likewise stopped subsidies for fertilisers and seeds. The fluctuations in international prices, which are no longer compensated by national mechanisms, lead to considerable loss of income at the village and household level. Sometimes a whole year's work can be lost. Cash needs consequently push peasants to earn money in whatever way they can, hence the increase in commercial bushmeat hunting.

Drying cacao beans - Cameroon (photo S.Bahuchet)

Comestible palm worms. - Cameroon - (photo S.Bahuchet)

c) Guidelines for action

• **Encourage** the maintenance of subsistence cash crops at the expense of cash crops for export.

• **Guarantee** export products a stable basic price.

• **Develop** agricultural activities on a regional scale by establishing distribution networks.

• **Privilege** local distribution networks in order to circumvent recourse to expensive intermediaries.

• **Support and rely** on pre-existing voluntary associations and local schemes for advancing small loans.

22. Is bushmeat a Non Timber Forest Product?

a) Importance de la question

NTFPs are perceived as being able to provide cash earnings for forest populations in a manner that is close to their interests and activities and which is considerably more environmentally friendly than logging. But what is the reality? How can these new forms of commercial activity be integrated into village economies? In contrast to the opportunities provided by NTFP extraction, it is the commercial bushmeat trade which is spontaneously developing in response to logging. Why? Is this a sustainable activity?

b) Some answers

• A large number of vegetal NTFPs play key economic roles in forest societies. They provide both food and materials. Each community has particular uses for them and they have been part of fairly large commercial networks for centuries. In Africa, some such products include Baillonella oil; nuts from *Irvingia* and *Ricinodendron*; *Eremospatha* and *Calamus* rattans; Raphia fibers and palms; leaves from Marantaceae plants used as food wrappers… In the Guyanas, *Mauritia flexuosa*, *Jessenia bataua* and *Euterpe oleracea* palms provide fruit, starch foods and other products; ‘Brazil’nuts come from *Bertholletia excelsa*; resins and latex (Couma utilis, balata); palm fibres from *Leopoldinia*… In Melanesia sago starch is derived from *Metroxylon*; fibre bags are woven from *Broussonetia*; bark cloth is made from the *Ficus* tree...

• *Animal products* are now part of regional trade. Fish, insect larvae (‘palm worms’ and caterpillars) and bushmeat are all examples. In Melanesia trade in bird feathers is considerable. Forest inhabitants also increasingly catch and sell live birds for luxury hotels and Western bird breeders.

• Development agencies tend to confuse the regional interest in NTFP trade (supplying urban markets) with exploitation destined for industries or shops in the North. This is a serious misperception of scale.

• The economic parameters necessary to set up trade networks for NTFPs are complex. They essentially depend on demand (primarily emanating from urban markets) and the cash needs of producers and harvesters in the village. The loss of revenues once earned by selling cash crops such as cocoa thus encourages villagers to engage in commercial hunting practices in Central Africa.

• The extraction of NTFPs can have considerable and unforeseen economic side effects:

- disappearance of resources caused by over extraction;

- misappropriation of earnings and networks by outsiders who settle in productive areas and compete with local populations;

- exploitation of producers and harvesters by intermediaries who control marketing dynamics and transportation arrangements.

• From an ecological standpoint, the question of sustainable use remains open. Can NTFPs be harvested sustainably? In other words, what is the relationship between extraction and regeneration? Extraction necessitates *scientific knowledge of forest products and their cycles.* This is far from being the case today. Extraction also *necessitates legal mechanisms to regulate trade.* These are not easy to put into practice.

• With respect to medicinal plants, some problems are inherent. In cases where dried plants are to be harvested, the risk that harvesters sell substitute products is high. Conversely, multinational pharmaceutical companies are combing through tropical forests in search of products that can be synthesised. Once this happens the original forest product looses its value.

c) Guidelines for action

• **Study** the locations and distributionpatterns of NTFPs prior to setting extraction rates.

• **Study** ways to estimate NTFP commercial values and utility.

• **Organise** cooperatives, associations or interest groups in order to control sustainable extraction rates, to ensure regeneration and to organise trade networks in such a way as to limit the involvement of outsiders.

• **Sensitise** national and Western users and buyers about sustainability of NTFP extraction and about the quality of craft products sold.

• **Work** with states to help them apply commercial regulations favourable to village households.

• **Privilege** networks which supply local markets rather than the extraction of NTFPs destined for the export market.

• **Develop** animal husbandry or fish farming projects to feed city dwellers. This is one avenue to reduce urban demand for bushmeat.

23. Do roads lead to development?

a) Importance of the question

A new road provokes a series of contradictory reactions. Roads are desired by neighbouring populations. They are likewise considered by the development community as a foolproof form of development aid. Conservationists on the other hand fear that roads will undermine protected areas in particular, and the forest in general. What do we need to know about this dilemma?

b) Some answers

• Roads underscore the deep opposition in the conservation-versus-development debate. Defenders of wilderness see them as scars on the landscape (even though the forest is not as virgin as they would like to believe) while development experts want to use roads to reduce the isolation of forest populations.

• The consequences of road building are both negative and positive. Roads degrade the environment, which in turn impoverishes populations. Roads often exacerbate pre-existing problems. At the same time, the road helps transport agricultural produce to market and thus serves to integrate communities into the regional (or even national and international) economy. Roads can likewise enable people to get to school or a clinic.

• Roads help provide access to forest beyond the village, but only, of course, if there are cars or trucks which circulate in the area. Logging lorries alone do not help much.

• For most villagers, a new road will not lead to increased revenues through selling agricultural produce unless there is more general economic growth, which is again largely dependant on increased vehicular traffic. This growth is also related to greater agricultural activity, which means that larger forest areas are cleared. This can shorten the length of fallow periods

• Roads do not create social problems such as prostitution, alcoholism or insecurity. They can, however, exacerbate these problems. Moreover, the slowness of transport in many regions handicaps the setting up of appropriate administrative and legal infrastructures.

• Many states are no longer able to maintain roads. Communities themselves chose not to maintain them either. The ambivalent attitude people have of roads is also influenced by colonialism: forced road work is still associated with the injustices of the colonial past.

• Roads by themselves do not translate into economic opportunities but the structures with which they are associated do (sawmills for example). But the roads that are associated with opportunity are also associated with social problems such as prostitution, sexually transmitted disease or accidents. Environmental problems also emerge in the forms of pollution, uncontrolled land clearing, poaching…

Aerial view of the forest (photo S.Bahuchet)

c) Guidelines for action

• **Acquire** precise and quantified data on the positive and negative effects of road construction with respect to the impacts on conservation and development.

• **Consult** people before starting road work, respect their wishes concerning road location in order to minimise problems with habitat, fields, cemeteries or other sacred areas. Make compensation equal to foreseen disturbances

• **Limit** negative consequences caused by a new road. Keep speed in villages slow by using speed bumps; impose the respect of techniques which minimise environmental degradation; prohibit the transportation of bushmeat on logging lorries…

• **Privilege** the development of public transportation on new or improved roads.

• **Do not neglect** other means of transportation suitable for forest environments such as trains, waterways or air.

24. Is eco-tourism a harmless form of development?

a) Importance of the question

Tourism enables contacts and understanding between worlds, adds value to protected areas and is a source of cash. Eco-tourism, its fashionable offspring, is present in all forest projects. Do eco-tourism advocates take into account the point of view of village communities to measure its impact and potential? For whom is eco-tourism a form of development?

b) Some answers

• Tourism is already the world's most important economic sector. Eco- and ethno-tourism likewise have considerable growth potential even if there are few eco-tourism success stories. Some questions still remain however. What is the sector's long term elasticity, i.e. doesn't too much tourism spoil everything? What is the demand? Even for an exotic experience eco-tourists are unwilling to invest in conservation or sacrifice comfort and security

• Intelligent tourism can contribute to poverty reduction and thus indirectly to conservation because poverty is a major contributing factor to environmental degradation. The sector can create skilled and unskilled jobs but the viability of economic activities associated with tourism depend to a large extent on the long term environmental, social and cultural contexts

• Development possibilities generated by tourism do not necessarily require large investments. They can thus be initiated at the local level, which means that economic benefits remain at the local level. Another positive result of eco-tourism is the improved way that local populations see themselves. It may boost their self-esteem and valorise their natural resources and know-how

Basket weaving -
Guyana -
(photo P. Grenand)

Basket -
Gabon -
(photo A. Binot)

• When eco-tourism becomes ethno-tourism, it reveals not only an interest in nature but in the 'authentic' and 'exotic' traditions of forest peoples. One risk here is confining these populations to the image which Western tourists wish to see. This can result in the loss of autonomy, dignity or even free choice.

• There are indeed numerous risks and unforeseen side effects. It is absolutely indispensable that ethno and eco-tourism initiatives be carefully planned on all levels (local, national and regional). It is essential to preserve the *dignity* of local populations while maintaining at the same time the integrity of their environment. The expertise of anthropologists is crucial here. Anthropologists can help in the identification, elaboration and follow-up processes. *Improvisation in the domain of eco-tourism must be ruled out.*

c) Guidelines for action

• **Initiate** eco-tourism projects by negotiating with local village communities. Local people must be fully informed of any plans. Their implications must be made explicit (jobs, visitors...) and constraints must be discussed openly (visits, infrastructure…).

• **Negotiate** with communities any possibilities for integrating their habitat into itineraries prior to the arrival of tourists. Communities are not natural resources: ethno-tourism cannot work if people are not prepared/informed/involved at the outset of activities.

• **Make sure** that benefits really reach the community (and not only through the direct and random gifts of visitors). This can be done by working with communities to improve their infrastructures and services. Be certain that these benefits do not fall exclusively into the hands of intermediaries

• Regularly **monitor** the 'touristification' of communities.

• **Avoid** mass tourism by establishing visiter quotas.

25. Can traditional knowledge contribute to sustainable development?

a) Importance of the question

The failure of development projects can often be attributed to the gap between their conceptualisation by Westerners and the expectations and technical know-how of their beneficiaries. Local knowledge and techniques elaborated gradually over centuries could probably be integrated in small-scale development projects better than in larger ones and are better suited to local reality. To what extent can these techniques and knowledge become sources of inspiration for the elaboration of more efficient projects?

b) Some answers

• There is little debate today over the knowledge which forest populations have of their environment. This can be explained by the fact that until the present time, studies have focused on inventorying indigenous taxonomies. Some studies have focused on the knowledge of interactions within eco-systems. While we have a fragmented understanding of their traditional knowledge, the populations themselves understand it in its *totality*. It is upon this very detailed knowledge of ecological systems that sustainable development projects should be based.

• Local knowledge of environmental resources can only be usefully understood in a given social context because it is diffused through social networks. If it is isolated from the system in which it is embedded, it looses its relevance.

• Knowledge and know-how are not permanently set in time. They respond to outside influences which lead to new dynamics (e.g. diffusion of new cultivated species, assimilation of new tools, etc.). Development agents have to be particularly sensitive to these issues.

• Western scientific knowledge is not superior to traditional knowledge. The two are complementary and should mutually enrich each other. One should not replace the other. The failure of 'scientific' solutions makes this clear.

• The knowledge acquired by forest populations is based on intellectual reasoning. It is not based of concocted ideas or superstitions. By recognising the degree of seriousness of these thought systems, development technicians could be able to dialogue more efficiently with forest people. *The success of any development plan depends on the respect of all parties concerned.*

c) Guidelines for action

• **Rely** on pre-existing systems when introducing new techniques or when trying to modify local practices.

• **Introducing** new techniques to a society is likely to fail if the knowledge gap between them and locally used techniques and practices is too wide.

• **Seek** hybrid technological solutions based on the complementarity between Western scientific knowledge and local know how.

• **Do not export** specific techniques which may have proven useful in one place to another community without carefully analysing the likelihood of success.

• **Test** small scale alternative solutioons, chosen on the local level, study them carefully and then reapply locally.

• **Promote** cultural and craft activities which have the potential to valorise the heritage of populations.

26. Languages or dialects?

a) Importance of the question

Most European languages which have become national or local languages in former colonies lead to a negative perception of maternal languages in forest communities. Are languages with oral traditions necessarily arbitrary and rudimentary? Have they neither grammar nor vocabulary? Do written languages alone have the right to exist? Aren't many so-called local languages just dialects that should be eradicated for the common cause of national unity? Most importantly, what is the future of indigenous languages?

b) Some answers

• Tropical forest societies use traditional oral languages, but this does not mean that they have neither memory nor history. They share the same disposition for language with all of humanity and have developed, with the support of complex grammars and precise vocabularies, cognitive capacities which are unique in being able to account for the wealth of their knowledge and know how.

• These languages are currently the only ones where they are spoken *which have rich nomenclatures to encode local biodiversity.* They have, in other words, specialised vocabularies capable of covering the entire surrounding environment.

• Each language can present local variations, referred to as dialects. These are in fact geographic or historic markers. *A dialect is not a sub-language but a state of language.* The tendency of Western countries to privilege one dialect as a standard national language that the state imposes for writing and literacy was exported beyond Europe's borders. This distorts the image of the world's use of language.

• The combined efforts of colonisation, Christian evangelism and schooling have had major impacts on the languages used by tropical forest peoples. Many of them have become extinct and many others are threatened.

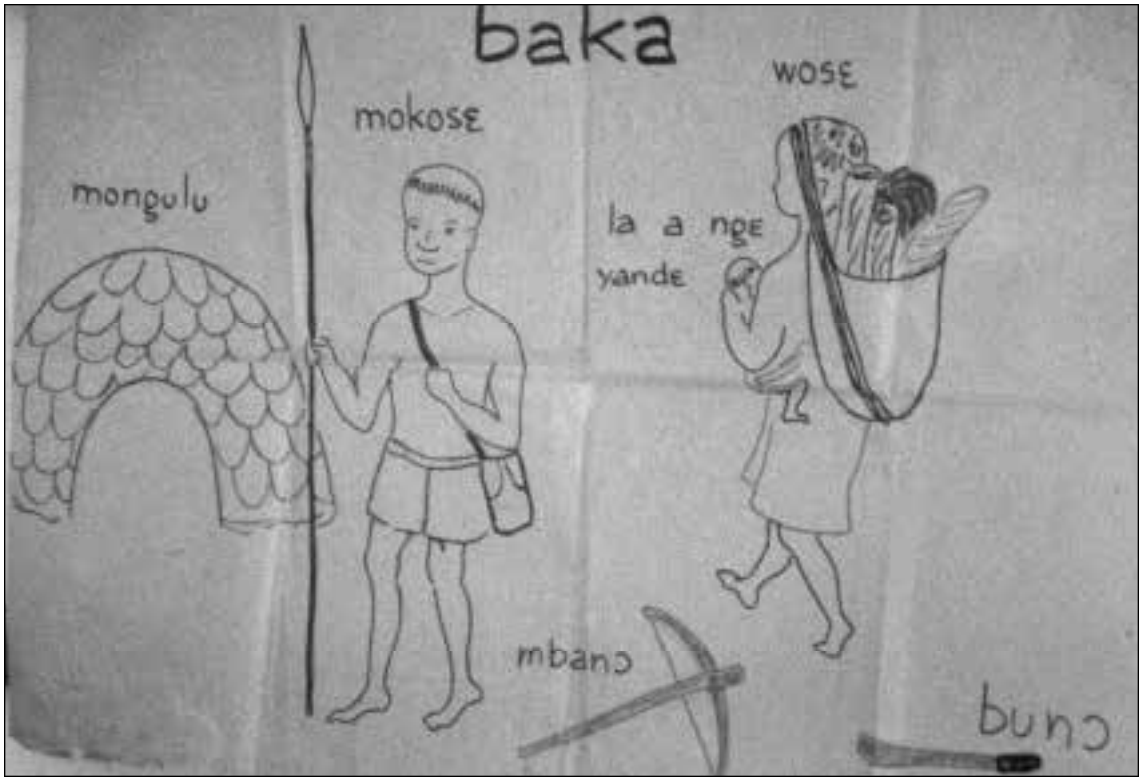
c) Guidelines for action

• **Favour** the diffusion of vehicular languages used in forest areas because they make their speakers multilingual. This allows people to increase their contacts with the outside world.

• At the same time, and in ways which are not counter-productive, **give maternal languages the means to survive.** This is important because the number of people using them is high.

• **Consider** the rich vocabularies of these maternal languages as valuable world heritage. Forest workers, eco-tourist guides or agronomy technicians who master them are important for development projects.

Village school - Cameroon - (photo G. Philippart de Foy)



Teaching in local language - Cameroon - (photo S.Bahuchet)

27. What scholarship for which students?

a) Importance of the question

The need for all children to have access to education is widely accepted. The problem of teaching efficiency and local appropriateness of curriculum is however more complicated than articulating good intentions. Which language should be used? Should children be educated or taught how to read? How is national education integrated into community structures?

b) Some answers

• All communities want education for their children. Yet, the expectations of populations are rarely analysed by educators.

• Educators sometimes forget that the teaching language is not the mother tongue of their students. For them it is a foreign language. School curricula likewise are usually designed by outsiders, copied from Western schemas. These are often inappropriate for local populations.

• As the population in developing countries is young, generally under 15 years old, it is not surprising that states do not have sufficient resources to invest in educational infrastructures. Actions should be taken to help improve education, to make it more democratic and make it reflect different world views.

c) Guidelines for action

• **Do not weaken** traditional forms of education through schooling. Traditional education alone is capable of transmitting techniques and knowledge about the local environment.

• **Adapt** school calendars to local patterns of activity. Reduce study requirements.

• **Introduce** maternal languages in school when the number of speakers is sufficient. Teach national languages using the same techniques as used to teach foreign languages in order to achieve better results.

• **Elaborate** technical teaching which is diversified and adapted to the Nation's needs.

• **Insist** on the very best quality of education for those students who are able to train for the professional and technical is badly needed in these countries.

28. What is the role of religion?

a) Importance of the question

This question is important because the majority of forest people have either been converted, or are at least in direct contact with world religions, for centuries in some cases. What is the impact of these foreign religions on communities? The representatives of these religions often have agendas which are similar to those of development agencies. What is the real situation? What role can religion have in education, development or conservation programmes?

b) Some answers

• While the penetration of Catholicism and Protestantism is relatively old in Africa and Amazonia, the forest areas of the Guyanas and Melanesia are increasingly subject to the intrusion of radical protestant groups. They vigorously oppose the traditional belief systems of forest communities. The influence of Islam is slight amongst the forest peoples of most ACP countries.

• Through the creation of health, transportation, and educational infrastructures independent of state support, churches participate in the Westernisation of these forest communities. They also constitute in some cases the only links with development.

• Christianity has both positive and negative influences.

- The positive aspects include health, hygiene (especially for babies), diffusion of cultivated plants, education (but based on Western models) and the fight against alcoholism.

- The negative aspects include the introduction of food taboos which influence diet, destruction of local social systems, opposition to birth control which leads to population growth, and the loss of self-esteem through the introduction of notions of ‘shame’ in connection with traditional practices and values.

c) Guidelines for action

• **Analyse** carefully, case by case the specific roles of Churches on both the regional and community levels in order use them, where appropriate, as vehicles for development and conservation projects.

• **Identify** clearly the roles which religious associations play in a community. These apply particularly to the roles of converted women and their groups.

• **Avoid** giving unwarranted support for evangelisation and be wary of its unforeseen side effects.

29. What is the potential for change?

a) Importance of the question

Are forest populations conservative, passive, unwilling to accept change? Are all projects bound to fail? What are the best ways to get forest peoples interested in accepting development and conservation projects?

b) Some answers

• Social change is not new to forest peoples. Over the course of their history, characterised by conquest and migration like our own, forest peoples have developed various adaptive strategies. Sometimes foreign cultural traits have been adopted, sometimes they have been rejected. Some techniques are more easily accepted than others: a hunting rifle or chain saw more easily than bulldozers or helicopters.

• Used to adapting gradually over time, forest societies have difficulty adopting to the rapid pace imposed by modernity. The evolution of human societies, despite what some may think, is never linear. It is a process of the will to change just as much as it is a process of the desire to refuse change.

• Local populations are heterogeneous, comprised of many sub groups and diverging interests. They distinguish themselves by their capacity to appropriate the resources of a project.

• Development activities tend to be presented as able to dispense the well-being which local populations can benefit from. These populations consequently take this well-being for granted and welcome projects in a passive way. Because they do not participate in the realisation of a project, they rarely appropriate the structures put in place (sometimes at great expense). Maintenance and repair of a project infrastructure is considered the responsibility of the development agency which created it. This lack of interest, seldom considered in its proper context, is always taken to be proof of a chronic incapacity to change.

• Actors arriving from the outside must realise that things change rapidly and slowly at the same time. Thus, the economic impacts of a new road can be felt by a community in less than a year, while cultural references may remain embedded in peoples' minds for generations.

c) Guidelines for action

• **Never forget** that the success of innovation is contingent upon acceptance by a critical mass of individuals having been trained to make that innovation work.

• **Make sure** that development projects are embedded in the community's expectations and needs.

• **Make** public expectations **transparent** in order to define the population's real needs, including those of socially inferior groups, if they exist.

• **Accept** communities as partners whose objectives must be integrated into programmes from the beginning. These objectives may be different from ours and different from those of donors. Dialogue and re-evaluation have to be integrated into the entire project cycle.

Women's association - Cameroon - (photo M. Romainville)

Rotating Credit Association in action - Cameroon - (photo M. Romainville)

30. Can local associations serve as vehicles for modernisation?

a) Importance of the question

Decentralisation and participation are the major foundations upon which modern development strategies are based. The concept of participatory management is supposed to be consistent with local structures. Outside development professionals attempt to form social groups on this basis necessary for the functioning of a project. Should these associations be created according to Western models? Are there alternatives? Or on the contrary, what is the merit of development initiatives elaborated by local populations themselves?

b) Some answers

• Traditional rural communities are driven by social sharing and self-help mechanisms which go beyond the circulation of products to 'share risk'. These systems tend to be threatened by the cash economy which encourages individualism.

• Voluntary associations are is very diverse in the ACP zone. We are all familiar with local associations in the form of NGOs which are generally created by outside initiatives and inspired by Western models. Dependant on outside funding, these become interfaces between national and international bodies. But local voluntary associations, which work along local lines are often neglected. Their activities are largely oriented towards collective help in order to respond to the precariousness of living conditions.

• These associations integrate various overlapping activities in a single organisation. They include collective economic and social help activities as well as festive and convivial community events. In one way or another they all serve the redistribution process.

c) Guidelines for action

• **Identify** and **inventory** local voluntary associations and self-help mechanisms in a community before a project starts.

• **Integrate** these associations as full-fledged partners in development and conservation projects.

• **Support** savings initiatives rather than allocating credit.

• **Use** associations as intermediaries in public awareness campaigns, notably during group meetings.

31. How can NGOs help?

a) Importance of the question

NGOs are increasingly present as development and conservation actors, a situation made easier by the decline in public authority and service. But are they really the best allies that forest peoples have? Should these latter not seek other forms of partnership?

b) Some answers

• The current success of NGOs can be explained by the decline of the state. War, corruption and economic crisis. hamper the role of the state, which is unable to provide basic public services such as health, education, food security and natural resource management.

• 'NGO' (Non Governmental Organisation) is a catch-all expression with no legal foundation (there are as many statutes as there are nations). The term likewise masks extreme diversity. Some NGOs are local or national, but many are international, such as IUCN. Some international labels are in reality sub-divided into national associations which have their own 'corporate'strategies, such as WWF.

• Three major (partially overlapping) areas are covered by NGOs relevant to the interests of forest peoples. environmental protection; defence of minority populations (usually referred to as 'indigenist'); and charity and development in poor countries (often church-based organisations).

• The NGO label is not in itself a guarantee of legitimacy vis-à-vis 'indigenist' populations. Most have origins outside the local community.

• The ways in which NGOs function is full of risks, even though they should be guaranteed political independence.

- Funding comes from private donors and gifts are raised by public awareness campaigns. This means that NGO strategies are basically established by rich world contributors. But these people are rarely informed of the problems and priorities of people living in the South. Programmes are thus rarely based on local expectations or realities. In addition there are seldom structures in place to control the operations of these NGOs.

- The second risk is the cost of the organisation itself. In the case of the major NGOs, operating costs undeniably surpass the costs of their field activities. Like numerous other organisations, bureaucracies or administrations; there is the risk that the objective, in this case development or conservation, becomes secondary to the need to perpetuate the organisation itself and pay salaries to its employees.

- Another direct consequence is that the agendas of NGOs based in the North are increasingly caught up in their own logic and priorities.

• As the international community has clearly decided to allow NGOs to address conservation and development issues, partly because state systems in the South are either unwilling or unable to do so, a vicious circle is created. The perception that the state is weak in fact contributes to the weakening of the state itself and the disengagement of those civil servants might be best motivated.

• Conversely, local communities increasingly try to set up their own organisations. They seek help in setting up management structures that will enable them to control the projects that address their needs.

c) Guidelines for action

• **Analyse** the decision-making processes and capacities of the big NGOs carefully prior to selecting them as development or conservation intermediaries.

• **Exercise** budgetary control and monitor field activities of NGO managed projects.

• **Make sure** local level public officials are involved in NGO managed projects.

• **Verify** in situ the local integration of NGOs and their modes of establishing participatory approaches with target communities before setting up a project.

• **Give priority** to small local organisations rather than large international organisations to ensure that the appropriate scale of intervention is achieved.

• **Train** local professionals.

• **Provide** communities with legal assistance at the outset of a project.

32. How can anthropologists help?

a) Importance of the question

Aren't anthropologists dogmatic intellectual idealists? Can they contribute to the success of projects or are they merely partial intermediaries? The question is important for anthropologists themselves (is there really any relevance to their work?) as well as for development agents, who often perceive them as creating obstacles and not providing solutions.

b) Some answers

• The history of anthropology reveals how closely this subject has co-evolved with the colonial enterprise. It also reveals that anthropologists were always perceived as being obstacles to colonialism. Even though de-colonisation has been achieved, anthropologists still have the same reputation. Today they are viewed suspiciously by politicians at all levels, by NGOs and even by certain local leaders who are sometimes confounded in their strategies concerning power.

• It is true that contemporary anthropology, when it seeks to be applied, has the tendency to demonise all outside intervention while glorifying local communities. Anthropologists are always divided by two responsibilities. They are accountable to their peers and funders on the one hand, but accountable to the communities they study on the other. If fieldwork was sufficiently long, the anthropologist is the foreigner who knows a given population the best.

• It is often the case that anthropologists, when consulted, are reduced to the role of facilitator within a given community. Even worse, the anthropologist may be consulted after the fact, when the project has already been compromised by rejection by the local population.

• We should distinguish two types of anthropology.

- Academic anthropology which finds justification in the study of the diversity of human societies and in the universality of grand social and cultural theory.

Supporting participatory management - Cameroon - (photo APFT)

Vanuatu - (photo APFT)

- Applied anthropology which is multi-disciplinary and in constant contact with the reality of peoples' lives.

• In the framework of sustainable development, the role of the anthropologist is above all else that of an interpreter and a critical observer whose objective is to make links with the concerned parties. If the modern world and its fast pace does not allow for a combined practice of these two types of anthropology, it is at least desirable that they should not develop as independent practices. Ideally researchers should be able to do both at different times in their career.

c) Guidelines for action

• **Create** 'help desks'within the structure of the EU where anthropological and other forms of expertise can be made available.

• **Train** anthropologists from the South. Not only to work in their own countries, but more importantly to work in other countries, even other continents. This task is urgent.

• Have anthropologists **evaluate independently** the viability of local practices and structures.

• **Encourage** the diffusion and the popularisation of research results through an ambitious publishing policy. Local demand here in increasingly being heard.

• Have anthropologists **evaluate** the contents of projects and involve them in the drafting of Terms of Reference.

• Have anthropologists **monitor** projects and their real impact on the satisfaction and well-being of communities.

33. Whose forest is it?

a) Importance of the question

The cleavage between state and society is clear with respect to the forest and has major historical Guidelines for action. Projects are obliged to adhere to national legislation which does not necessarily recognise local communities as it should. The question of boundaries, dues, or compensation is predominant, as is the question of the evolution of law, whose origin is colonial and thus not necessarily adapted to the cultural realities and needs of tropical forests.

b) Some answers

• For the majority indigenous forest groups, relations with land are *community* based. The community owns the land and its members have the right to work it. But they possess the products individually, which is a usafructory right. An individual does not have the right to turn land over to someone outside of the community and cannot sell it. The group as a whole alone has this right.

• Community rights extend beyond plots cleared for agriculture. All community members undertake hunting, fishing and gathering activities within community territory.

• Boundaries, as well as their degrees of precision, vary according to the characteristics of waterways, mountain formations, topographical particularities, trails, etc. But these boundaries always exist in some form or another. Sites of old villages, graves, toponyms which feature in mythsare also territorial markers, even when they are isolated deep in uninhabited forest. *Land that is not used must not be confused with unclaimed land.*

• In many societies rights are maintained by the families that clear land when it is left to fallow. Planted trees are not considered as part of the land: they belong to the person who planted them. They are considered personal property. Products coming from wild trees tend to 'belong' to the person who found them first.

• The colonial process had the effect of dispossessing local people of their territorial rights because most forest areas were classified as state domains. Land tenure is characterised by considerable ambiguity. Indigenous populations live in forests according to their traditional land tenure systems but nation-states set up modern legal frameworks for land which *override* the traditional ones. Traditional law is thus only tacitly *tolerated* by the state which maintains the privilege of using land as it sees fit – without consulting the people who may consider it as theirs. A large share of problems and conflicts today result from the surprise of indigenous communities who see their ancestral territories invaded and transformed by outside activities without being involved and without receiving any benefits.

• Two fundamental differences divide customary land tenure and modern (meaning European-inspired) land tenure systems.

- For indigenous communities, *land belongs to the group*, never to an individual. In modern law, property can be individual.

- For indigenous communities, land is an inalienable space, belonging eternally to the group. In modern law, land can be ceded.

• Tropical forest peoples are generally vulnerable to outside forces with respect to negotiating new land use patterns or concerning ceding exploitation rights. This results from the way power is being redistributed in these societies.

c) Guidelines for action

• **Evaluate** all land tenure implications of a project before starting work.

• **Identify**, with the communities themselves, sacred and other culturally important sites as well as the spaces used for agriculture, hunting, fishing, gathering, etc.

• **Do not support** projects which do not guarantee fair compensation to communities and do not be satisfied with the assertion that all development within a region benefits all the country's inhabitants. Make sure that compensation (as well as the benefits of development) effectively reaches those who they are supposed to reach.

• **Establish** spatial and tenurial arrangements of a project with the communities based on commonly defined and negotiated contracts.

• **Influence** states to apply existing laws on community management of land and forests.

• **Subject** all projects to long term control by independent organisations to verify the application of contracts and the efficacy and justice of compensation and fees promised.

34. What rights for intellectual property?

a) Importance of the question

The increasing commercial value of biodiversity (through patents on genes for example) makes it more and more difficult to remunerate indigenous populations for the products taken from their territories. It is in this context that intellectual property rights were put forward as a possible means of compensation. But is the reality as simple as it seems? What knowledge and what practices need to be taken into account? How can they be evaluated? To whom should they be attributed? How can lines be drawn between the individual, the community, the local and regional levels?

b) Some answers

• Traditional knowledge is diffused throughout a population according to local modes of transmission. The knowledge of resource quality is acquired during the lifetimes of individuals, mainly from parents. Ethno-biological knowledge is frequently diffused on a regional level even though use of a specific product may well have a specific local value.

• The art of traditional medicine is an example of forest populations' rare specialised knowledge. It is learned in part through apprenticeship. The remuneration of a traditional healer is always complex and can take on different forms according to the society.

• The philosophy of many forest societies is hardly harmonious with that of the West. It is based on different conceptions of the people-nature relationship and the place of the individual in an inter-dependant system comprised of all beings – be they human or not. For these societies, individual use can in no way hamper the reproduction of humanised nature.

• Many elements in the daily lives of forest communities can be exploited commercially in one way or another. This pertains to their way of life itself (through tourism); their image (film and photography); their knowledge (books, transmission of techniques); or their genetic materials (cultivated plants, human genome, DNA…). This commercialisation should never take place without the consent of the concerned parties, although this is far from being the case today. As forest populations are already involved in the cash economy, they have cash needs. They thus depend on commerce and must in no case whatsoever be deprived of revenues. In the absence of legal obligations, moral obligations or the principle of fair retribution can be put forward.

• The statute of genetic resources (under the terminology of ‘biological diversity’) is defined in the Convention of Biodiversity, Art. 3 as follows ‘States have the sovereign right to exploit their own resources according to their own environmental policies.’But the rights of populations who live in close association these resources is only mentioned vaguely. Tropical forest peoples have no rights over their own resources. Intellectual property rights are invoked in response to this situation. In reality, in cases where disorganised states have no redistribution structures, communities never benefit from awards made to the state.

• Intellectual property rights enable individuals to receive revenues from the transfer of their own knowledge, from their invention or creation. But, the application of these rights remains extremely complex due to the involvement of many actors at different levels.

It is particularly difficult to be sure of the specificity of knowledge or an invention. Continued study is needed for each precise situation.

• Depending on the case, other legal tools can be envisaged which may be more appropriate for local communities than the current system of intellectual property rights. Examples include copyright, trademarks, unlimited registration, patents and contracts.

• The important debate over intellectual property rights must not mask another equally important debate: applying the right to work in the forest. Indeed, the growth of NTFP extraction is in practice full of obstacles. These obstacles are due to the subaltern position which minority societies occupy. Their participation in regional and international trade is often unfavourable because of middlemen who modify to their advantage the value of products exchanged. Again the fair remuneration of work accomplished does not go to the community.

c) Guidelines for action

• **Create** independent organisations to control how indigenous knowledge and resources are used.

• **Help** communities understand the stakes and challenges of the system. Help them acquire negotiation capacity. This is the role of the EC.

• **Study** *contractual procedures* which guarantee a local population's monetary reward in cases of success (while not hampering scientific research by being overly rigid).

• **Make sure** that procedures are established which guarantee local populations some benefits when research (notably pharmacological research) has proven fruitful.

• **Treat** the community as a partner: inform, explain, negotiate with, discuss on an equal basis.

• **Make sure** projects provide measures which guarantee the populations themselves the *benefits of their work.*

• **Conserve** the shared *community* character of knowledge. Registering a patent, even one shared by a community, should in no case be done on a strictly local level when it concerns plants or other widely used products

• **Consider** cultivated plants as special cases when their use is geographically restricted, unlike forest resources commonly distributed over wider regions.

35. Should people be allowed to remain in protected areas?

a) Importance of the question

Does nature have to be preserved by creating isolated parks? This conception implies that people are everywhere environmentally destructive. Should people thus be excluded from the forest?

Conversely, others consider that the ecological knowledge of indigenous populations is positive for conservation. Should reserves be set up at all costs? Can local populations be involved in their management?

b) Some answers

• The creation of protected areas for nature conservation can be more catastrophic than the setting up of a logging concession or the building of a dam. Communities which were once free on a territory where them roamed for generations and which provided their sustenance suddenly becomes off limits. They are either deprived of their land or displaced onto other unknown land.

• Traditional activities are compatible with the maintenance of forest cover and diversified fauna. It should be recalled that *equatorial ecosystems as they exist today are the result of human activities. There is no such thing as virgin forest. Disturbances which exist in tropical forests today are provoked by commercial activities.* These include logging, peasant colonisation of new agricultural land, commercial hunting and harvesting. These disturbances are rarely the result of community subsistence activities.

• New conservation projects no longer seek to exclude neighbouring populations from their territories. On the contrary, they prefer them to keep their villages within protected areas. But this does not unfortunately imply a change in the traditional negative view of people in eco-systems. The behaviour of villagers is always considered as necessarily irrational and the source of environmental problems.

• From the point of view of the populations themselves, the achievements of conservation projects are characterised by two paradoxical approaches. On the one hand, conservation agencies set up development activities with local management committees. But on the other hand they maintain coercive structures with restrictive zoning policies and repressive capabilities. This paradox is reinforced by the fact that the participatory element (management committees, development projects…) is hardly, or not at all, operational. The coercive part however (such as zoning plans) are operational from the start of a project.

• Numerous conflicts between people and projects thus emerge. There is also a very low degree of participation on the part of local populations in the development projects proposed by the managers of protected areas. The idea that everyone should accept the notion of conservation for the benefit of future generations is just another Western illusion. In this case, it can lead to serious misunderstandings concerning the merits of protected areas.

• It is far from clear that participation in the form of managing committees and integrated development effectively contribute to conservation objectives. There is no socio-economic follow up within existing protected areas which means that it is impossible at the present time to evaluate when human activities become unsustainable with respect to resource use.

c) Guidelines for action

• **Devote** as much human resource capacity and as much time as possible to addressing the problems of human communities as to the technical and biological problems of conservation.

• **Conceive** of management tools which can help establish when human activities become environmentally unsustainable. Carry out biological and socio-economic evaluations in existing protected areas.

• **Elaborate**, through equal discussion with communities, land management plans which take into account all vital activities. They must provide for the maintenance of long fallow periods and must include realistic use of space for all forest activities.

• **Establish** the whole range of a community's economic needs, including those associated with commercial hunting in order to propose realistic substitution activities.

• **Conceive** of biodiversity conservation plans at the regional levels. These should take into account the specific wealth of the agro-eco-systemic mosaic, including that of traditional cultivars.

• **Do not adopt** participatory and integrated development approaches regardless of the situation, particularly when population densities are high.

• **Valorise** local knowledge of the environment in the framework of protected area activities.

• **Do not systematically link** visits to protected areas (nature tourism, eco-tourism) with tourist visits to indigenous villages (ethno-tourism).

Sharing the task of fetching water - Cameroon (photo E. Josse)

36. Conserve or develop?

a) Importance of the question

Since the Rio Conference, conservation and development have been linked together. How does this work in practice? Are these two objectives compatible? Can programmes succeed in coordinating them? How do local communities react to this combination?

b) Some answers

• The elaboration of a conservation or development project is a complex process. It involves multiple responsibilities. The project is proposed by a national or international 'promoter'; its shape is decided upon by one or many political authorities who are generally national. It is implemented at another level by nationals, often associated with expatriates. Such initiatives are practically never taken by local populations.

• It is important to make sure that local populations are aware of the fragility of their eco-systems and the disappearance of forest resources. But carrying out environmental education activities when commercial companies are destroying the forest discredits this kind of exercise.

• The identification of what is sustainably useable must be undertaken when decisions are made as to what is to be conserved. *Users must also be conservationists*. There is already some success in this respect: the Inuit of the autonomous state of Nunavut (Canada) and for rural Amazonian populations from reserves in some Brazilian states. Community management and planned hunting takes place in the first case, and management of NTFPs in the other.

• *Unsustainable development will never be more than exploitation.* With respect to both conservation and development, it is important to prioritise the *time factor*. Only respect for differentiated, even staggered, economic rhythms which necessarily involve the cultural notion of *quality of life* can lead to endogenous development.

• The creation of projects always leads to the re-questioning of state-citizen relations. The decision to establish a development programme responds to higher level national imperatives, often relating to economic interests. The project will provide revenues, even though they may be no more than the taxes imposed by the state. These projects are justified by the supposed fact that the revenues will benefit inhabitants from the entire region in which the project is based, through local public infrastructure investments such as roads, schools and health care installations.

c) Guidelines for action

• **Sensitise** all local and outside actors to the fragility of ecosystems.

• **Involve** communities in all phases of management plan development.

• **Inform** local populations of the logic and constraints of conservation. At the same time, inform outside actors of the local community's social mechanisms.

• **Impose** evaluations and follow-up on project promoters in the areas where projects operate.

Harvesting NTFPs - French Guyana (photo S. Bahuchet)

III

PROTECTING FORESTS OR PEOPLE?

Pygmy hut just made with natural materials - CAR (photo S.Bahuchet)

Pygmy 'settlement' - Cameroon (photo S.Bahuchet)

1. Why?

This report provides information on two simple assertions:

• That sound management of tropical forests is impossible without ensuring the well-being of the people who live in them.

• That forest is mostly anthropogenic forest. Consequently, the persistence of biodiversity rich areas demonstrates that human use of forest is ancient and compatible with biodiversity conservation.

The first assertion is seemingly accepted by many actors working in tropical forest areas. Nonetheless, the solutions these actors propose diverge significantly. The second assertion is contested by many conservationists and ecologists who believe that natural environments have to be protected from human activities.

We have been inspired neither by blind faith in tropical forest peoples, nor by belief in the fairly recent scientific concept of biodiversity. On the contrary, we have tried to embed our work in the *continuum* of scientific knowledge developed over the past century. This knowledge base reveals that people from all cultures are capable of managing their natural environments, if they have the appropriate social, political and economic conditions.

We have kept in mind that knowledge, know-how and the more modest daily practices described in this report, are part of an important heritage for humankind. But however rich and respectable this local knowledge may be, it must not be confused with a scientific approach which can alone contribute to sustainable development on all levels. This could foreclose any possibility of making links between local knowledge and more broadly-based approaches.

Having outlined these concepts, some comments on terminology used in this report will help clarify our message. First, we prefer the notion of ‘environmental management’ to that of ‘environmental protection’. Protection implies constraints on humans which favour non-human animal and plant species. Environmental management on the other hand implies that *people are the dominant elements within their natural environments* and that their actions *should be beneficial for the whole.* This view, however, should not be interpreted as excluding repressive measures in cases of serious violations. These should be considered as urgent responses because the major objective of environmental management is to help people take full advantage of their environment.

This brings us to the opposition between development and ecologically *sustainable* development. In principle, the first is oriented towards human well-being alone, but only in the short-term. It corresponds well with the rapidity and urgency which characterises the world today. Based largely on macro-economic indicators, it neglects the more intangible elements so important in people’s lives. Sustainable development, by contrast, introduces the idea of duration and *long-term* replication, implicitly accepting various economic and ecological rhythms. The cultural notion of ‘quality of life’ is implied. It also implies that global evolution is not straightforward or unilinear and that economic

systems are necessarily diverse and connected.

The second definition necessarily involves a political commitment: it is influenced by some simple observations.

- that attempts at environmental protection over the past thirty years have been a failure: environmental destruction is only becoming worse;
- that 'classic' development strategies have not, on the whole, improved the well-being of people in the South; poverty has increased along with social and political crises.

APFT has thus tried to understand the links between local realities, development strategies and environmental protection.

What are the North's objectives?

The North has clearly undergone political change over the past decade. But the apparent political unification of the world has not diminished social inequality, including the stratification created by the migration of people from the countries of the South to the North. These population movements indicate that *poverty has become intolerable* amongst *urban* populations in the South. Pollution, environmental degradation and decline in living standards does not only concern well-informed elites. These problems have entered mainstream global political debates. Environmental preservation has become a shared concern on both sides of the North-South divide.

But the perceptions we have of the environment in the South remain artificial: they are often biased by an overly globalising approach. We thus have the tendency to confuse the evident weakness of *states* in the equatorial region with the *communities* that make up these states.

It is in this context that we can understand why the developed North is trying to redress an imbalance which has the potential to become uncontrollable. In our sphere of research, i.e. the relations between people and their environment, reversing this situation is little more than wishful thinking given the absence of political will. Commitment to do so, however, is at least a first step.

Traditional societies were until recently considered as 'living harmoniously with nature'. This vision is still largely dominant in a political 'ecologism' which tends to idealise *peoples* such as Pygmies or Native Amazonians and to romanticise the past – even within the North. Nonetheless, for intellectuals in the North, human beings are no longer alibis for conservation programmes, they are essential actors. It is thus necessary to redefine threats to the environment and to rank their degree of severity and urgency.

• Sustainable development is no longer necessarily considered a panacea. It is accepted that local needs must be taken into account, even though it is not easy to identify them clearly. Moreover, it has only recently been accepted that these needs should not be created where they do not already exist. Very few populations really participate actively in development decision-making and implementation, and even fewer initiate them.

• The right to resource access must be extended to everyone, which implies the

need to preserve the sustainability of these resources. The more resource use generates wealth and well-being, the more resource users are likely to ensure the preservation of their ecological capital. While this is imperative, it is also characterised by ambiguity: the ways in which people exploit resources are often dangerous to themselves and to the resources in question.

These comments show that priorities for tropical forests clearly overlap with those of their inhabitants and vice versa. One of APFT's primary objectives has been to emphasise this overlapping relationship and to define how its understanding can be put to concrete use for conservation and development.

What are the South's objectives?

It is important to distinguish the objectives of urban elites who are generally cut off from rural areas from those of other individuals or social groups. Forest-city relations, which vary greatly from one continent to another are significant. Nonetheless, elites from Africa, the Caribbean or Melanesia have used the colonial past and globalisation to reinforce their power. This has led to debt repayment rhetoric. What has happened to all the development monies? What about the resources which the West pillages? (But are all of the people who benefit from multinational royalties from the North?) Have there been real efforts at creating strong democracies? Have there been real efforts at creating the emergence of a critical mass of citizens who are active and politically aware? Have there been real efforts at creating the construction of viable national economies? Despite these questions, rich local people as well as poor villagers, particularly in Africa, all seem to share some opinions about their countries' development:

- Western modernism signifies easy access to consumer goods, especially luxury goods;
- The West is criticised and coveted at the same time: it oppresses and yet is a source of benefits. Preserving good relations with the North is thus necessary, but only to a certain degree. Economic games and subtle politicking help maintain the right balance.

Beyond these shared characteristics, tropical forest peoples formulate specific demands in the context of outside pressures:

- control of land is a fundamental issue, but varies from one place to another;
- demands for basic infrastructure such as schools, health care, transportation are heard from all forest communities;
- respect for local culture is a less frequent demand but is one that is still heard, from the Guyanas for example, which is probably linked to frustrations over specific unfulfilled development aspirations.

The APFT regional reports (volumes 2, 3, 4) illustrate these trends. The political mechanisms observable on all levels in the South constitute strategies for accommodating expectations of progress within the constraints imposed by the North.

Wayampi house with traditional roof - Guyana (photo S.Bahuchet)

Wayampi house in a settlement - Guyana (photo S.Bahuchet)

Global Tendencies

It has become commonplace to assert that global tendencies are induced by the North, even though Southern voices were heard at the Rio Earth Summit in 1992, and even though 1993 was the Year of Indigenous Peoples. Yet, we cannot help being skeptical of the mechanisms, the actors and the motivations which inspired them – not to mention the demands made upon decision-makers in the North.

It is clear that the positions taken by indigenous peoples (of which a significant number live in the North, notably in the USAand Russia) diverge considerably. The groups which are the most active, are culturally, linguistically and economically the most threatened. Those whose 'cultural state-of-health' is more or less satisfactory, however, act less: people tend not to defend things or values until they are threatened. On a larger scale, the idea of federating peoples or communities, even on a regional level, is very much a Western concept. In this context, in those ACP countries where we have worked (except perhaps in French Guyana) there is little international activism on behalf of 'forest peoples'.

It was easy to understand why it should be indigenous *activists* and not indigenous *peoples* who organise the alliance between tropical forest communities and Western NGOs and lobbies. Yet, over the past twenty years, elites have emerged from indigenous communities, at least in tropical America and in Melanesia. They are struggling to reach a compromise between tradition and modernity.

One characteristic of this movement has been its connection with the green lobby since the 1980s. Although outside of the ACP zone, one catalyst was the assassination of Chico Mendès in Brazil in 1988. This classic conflict between poor peasants and well-to-do landowners was rapidly transformed by media in the North into an alliance of 'forest peoples' for the preservation of a life style harmonious with nature.

In many regions, but particularly in Africa and Papua New Guinea where 'indigenous movements' are practically non-existent and where everyone is supposed to be indigenous, the dominance of the Green lobby is obvious. This has involved concepts like 'participatory management' which are supposed to sensitise communities about the environment, development or more modestly, stable revenues. APFT has tried to analyse the reality of participatory management. While initiative remains low in the South, the North maintains its pressure and human rights discourse for very pragmatic reasons:

- in the South, nature is in a rapid state of transformation, in part linked to global climate change but also to the ever-expanding exploitation of natural resources. This has led to increased pressure from ecological movements for the control of resource exploitation through a series of legal mechanisms (certification, quotas, protected species...) and through frequent media pressure;

- environmental degradation and poverty are obviously linked to Green conflicts, even though they are not the only causes. The North is trying to deal with the two issues simultaneously but gives greater emphasis to subsistence agriculture and a viable exploitation of forest resources. Nonetheless, old stereotypes persist, concerning, for example, the destructive character of traditional slash and burn agriculture;

- last, and most notably, the North is trying to create the principles of good governance and economic efficiency.

All of the above tends to show that the countries of the South continue to be influenced by those of the North.

Banana and manioc field - Ntem Province, Cameroon. (photo S.Bahuchet)

Coffee plantation - CAR (photo S.Bahuchet)

2. For whom?

What are the North's interests?

The North has been accused of exporting its political and cultural models to the South in order to exploit their resources and to export surplus products to the South. Increasingly, it has been confronted by competition from newly rich Asian countries. The impact of this competition has been considerable in ACP countries and elsewhere.

At the same time, the North consumes products emanating from the South. Some, such as gold, tropical hardwoods, sugar cane or cacao, are closely associated with colonial extraction. Others, such as petrol or natural gas, have become essential to the economies of the North more recently. Somewhat unexpectedly the environment and development sectors have also become part of the economic relationship between North and South:

• After 'surf and sun', the *nature and cultures of the tropics*, under the label of 'traditional', have become important commercial products. The return of adventure tourism (which was one of the first forms of tourism in the 19th century), re-invented as 'eco-tourism', has succeeded in attracting a well-to-do safari clientele. This form of tourism also seeks 'authenticity' and the last remaining traditional communities, translated as a 'respect for man and his environment'.

• *Biodiversity*, ranging from gene banks to medicinal plants has also become big business linked to the renewed interest which the North has for tropical nature through the filter of 'ecologism'. Interest in medicinal plants is a good example of this ambiguous enthusiasm. While pharmaceutical laboratories rely relatively little (at least for the moment) on traditional knowledge, the situation is very different for numerous companies promoting green, paramedical or beauty products. Indigenous populations have tried to capitalise on this, though except in some special cases, the risk of disappointment has been high. Many of these plants have been used by tropical forest populations and colonialists themselves for centuries. Moreover, many entered the public domain years ago.

• *Poverty and development* provide direct benefits through food aid, the distribution of medicines and other materials. They likewise generate indirect benefits through employment. This can be high-level national and international positions, or mid-level positions in the broad NGO community. The charity industry pumps money from donors into associative networks. The money often goes into the pockets of expatriate experts and media campaigns. This strategy frustrates citizens and gives visibilty to NGO activities. The charity industry also supports a growing number of people from the local communities who share the benefits. The question of who really benefits from this type of activity, however, remains pertinent.

Paradoxically, these new dynamics take place at a time when technology and poverty continue to increase pressure on biodiversity. In this context, the North is trying

Roads in dry and rainy seasons - DRC (photo H.Pagézy)

to help create political and economic order in the South. APFT has tried to suggest some ideas to the South which might help ameliorate this situation.

What are the South's interests?

All of the states in which we have worked are relatively recent creations and do not yet constitute nation-states in the full Western sense. For many people in these countries, the 'state' is more of a virtual concept than a lived reality. Kinship systems which regulate power and cultural diversity contribute to weak state systems and are barriers to nation building.

Immediate development interests are capitalised by these traditional groups which tend to represent nebulous, changing and vaguely ethnic entities resulting from complex alliances. The 'public good'is constantly subordinated to individual interests and groups. Without a nation there are no citizens. Without citizens there is no nation. The impasse is obvious. Without a nation and without citizens, who is supposed to benefit from development – be it sustainable development or not? It is the villagers and urban poor who should be at the centre of the development process.

APFT has thus tried to show that village communities and urban solidarity networks serve people's needs best. Using indicators of the present state of tropical forests and their people and representative communities of regional groups, our work has attempted to understand basic social and ecological mechanisms. It is up to decision-makers in the North and in the South to choose the locally appropriate solutions on the basis of observations and suggestions that are put forward.

3. How?

Contradictory perspectives

States of the South are constantly confronted by currency, cash flow and resource problems. Balancing budgets remains a major problem. In the ACP zone there still remain important problems on the local and regional levels, such as how to provide health care and education. Economic choices remain difficult: forest conservation does not fill the state treasury. But, timber extraction is like killing the goose that lays the golden egg. There is a plethora of these kinds of dilemmas which come in part from the North. It is therefore not surprising that final choices are often ridden with conflict.

On the local level, future perspectives appear equally contradictory. After 150 years of colonial and missionary activity which inculcated negative stereotypes of traditional culture, how could it be otherwise? While the destabilising impacts of Protestant and Catholic missions have declined, new ones, such as the Millenarian aspects of Pentacostalism and Adventism are on the rise. Even though these contradictions may seem minor, they need to be emphasised because they have had serious consequences for tropical forest peoples. The list below is not exhaustive.

Goldmining - Guyana (photo J.F.Oru)

Tracing a road - Cameroon (photo S.Carrière)

• the inhabitants of forest communities worry about the disappearance of wildlife or forest cover, but they sell their game and work for logging companies. They likewise criticise conservation projects;

• they frequently emphasise the specificities of their political and social organisation but deplore the fact that biologists and anthropologists label them as living in a backward world;

• they want to live in and enrich their communities (notably through agriculture) claiming their share of development aid, but they migrate to urban areas aspiring for administrative jobs, or jobs in logging or mining camps. This is associated with well-being and fast cash;

• they are proud of the efficiency of their traditional techniques and knowledge but seek to acquire imported objects and ideas, affirming that the times when they were hampered by hostile nature have passed;

• they seek to protect their spiritual practices and medicinal plants but often prefer modern health clinics for treatment. They adhere to new religions out of both fear and enthusiasm…,

APFT has repeatedly observed a contradictory discourse and practice. Is this a tactic of the 'weak' who are tired of being manipulated? Perhaps. Is it a social uneasiness resulting from the loss of free choice? Most likely. Is it a generational issue? Certainly. The ambiguity between discourse and development objectives helps forest peoples distance themselves from their responsibilities.

Development experts are also responsible for mistakes because they base their approach on ideas of progress deep-rooted in the Western mind. Their logic starts with an observation and ends with clear broad-based problem-solving solutions, concerning, for example, the disappearance of elephant, lower cacao yields or public health issues.

But these developers are not always representatives of international development agencies. Profit-seeking entrepreneurs are also key actors. In principle, this is often presented as being generally positive. It is perceived as such by local populations, at least in the early stages of a project. On the *local* level, did anyone protest against the Chad-Ocean pipeline? On the *local* level, did anyone protest against gold mining activity in Guyana? No one did so *spontaneously*.

But problems start once the negative side-effects which should have been thought about first, come to the surface. Our anthropological and ethno-ecological approach helped us understand the realities of forest communities better. This is the knowledge decision-makers need to see beyond the appearances of ambiguous discourse.

Interrelations

Forest communities are affected by processes elaborated in the North (the *glocal* phenomenon). APFT has thus emphasised the need to rethink the old idea of communities in isolation. We did, however, try to examine whether or not a certain degree of autarchy might still be preserved in some tropical forest areas. On the other hand, isolation does

not necessarily mean absence of interference. Safari adventurers are anxious to find Pygmies in their little huts or they seek feather-adorned American Indians in the most isolated of villages. The degree of contact with the outside world continues to vary significantly from one community to another depending on their history.

From this perspective, each village can be considered a special case. The character of national and international contact as well as specific subsistence habits have to be taken into account. Outside actors have to realise that things change both rapidly and slowly: rapidly because the impact of a road, for example, can change economic patterns in less than a year; slowly because many cultural references remain deep-rooted in peoples' minds for generations.

The persistence of ostensibly traditional ways of life does not necessarily result from choice. It can also result from constraint. The inhabitants of North West Guyana still hunt with bows because gun permits are strictly controlled and Equatorial Guineans hunt with crossbows because the price of ammunition is prohibitive. Traditional techniques can be very destructive and commercially oriented as witnessed by the use of snare traps in Africa or traps set in trees in Guyana to capture birds. In these examples we can see the presence of the state as well as the importance of national (bushmeat) and international markets (birds for Caribbean luxury hotels).

Classical anthropology studied ethnic groups. Modern anthropology studies social groups. The anthropology of tomorrow should address more nebulous identities. APFT has observed the rise of individualism. This is a factor for change and a link with the urban world…but it is also a vector of compromise with tradition and sometimes the vehicle for the worse things modernity has to offer.

The underlying issue here is to know how the rules and implications of globalisation (democratisation, environmental conservation, market factors…) reach forest villages and how villagers perceive them. This aspect was addressed by APFT through the themes of psychology and the impact of schools.

An important question which we did not address pertains to how people in the North perceive those in the South: it could be fruitful to critically analyse how the knowledge of the South's communities and their demands are transmitted to and within the North.

Reconciling conservation and development

APFT has placed particular emphasis on how tropical forest peoples use and perceive nature. This is because preserving nature has become a global priority which is believed to be vital by people and decision-makers in the North. Most people in the North are now city dwellers. For many in the North, nature has become something to contemplate, to venerate, and more prosaically, an instrument for recreation. Our deep philosophic conception of nature is of an empty void. In the past we emphasised the need to triumph over nature. Today, now that it is threatened with extinction, we have decided to protect it. Most people in the North have universally embraced this objective, except for some rural people who are considered reactionary or backward.

In the South, the opposition between nature and culture in this way is hardly an issue. But the reality is more complex. Some societies feel deeply connected to nature. Others fear its invisible forces and try to dominate them. Others try to materially and ideologically domesticate it. But all are either totally or partially dependent on nature. This volume reveals that the loss of knowledge which governs the use of the environment will inexorably result in the asphyxiation of forest communities.

Outside economic pressure provokes changes in how forest peoples live. This rapidly leads to environmental destruction. This is so recent on the scale of their history that the situation may not be entirely irreversible. It is also for this reason that tropical forest peoples, unlike rural communities in the North, sometimes legitimately maintain their reputation for being good natural resource managers.

In the light of this, should forest peoples be excluded from protected areas, relegated to already degraded space? Such a choice implies a good knowledge of the environment and especially its capacity for regeneration. Helping forest communities generate alternative sources of income is the least we can do.

If stable commercial revenues are to be guaranteed, the purchase price of agricultural and forest products will have to be kept stable. But this would necessitate price regulations which are contrary to liberal market policies. Indeed, the fate of French *roquefort* cheese producers is similar if not identical to that of cocoa producers. We think we know tropical forests and how to decide their destiny. But it is unrealistic to suggest that tropical forest peoples have to continue living in their protected areas if they are sometimes no longer able to practice traditional ways of life. Addressing fundamental economic problems in ACP countries is the precondition to ensuring a *comprehensive management framework* for protected areas and buffer zones.

Every site where we have worked constitutes a particular case. Concrete actions have to be achieved there, on a *local* level, even if they are part of regional, and global strategies. These different levels provide a comparative research framework for our work.

APFT was unable to work outside the ACP zone. Our conclusions are thus limited to that zone. We were seriously handicapped by not being able to work in Indonesia and Brazil, which have the world’s largest tropical forest blocks. The impacts of deforestation are infinitely greater there and popular mobilisation far more intense. This broader comparative laboratory would have enabled us to identify major trends more clearly and comprehensively.

Drying cacao beans - Cameroon. (photo E.Dounias)

IV

FIVE PROPOSALS FOR IMPROVING THE SUSTAINABLE MANAGEMENT OF TROPICAL FORESTS

It will soon be time to commemorate the tenth anniversary of the Rio Earth Summit. There is considerable room for improvement with respect to tropical forests. Despite major efforts, the pace of tropical forest decline has not slowed down and their inhabitants are faced with serious problems. Despite lots of good intentions, there does not seem to be enough political will on the highest level to take the necessary measures and to subordinate the interests of a few for the collective good. Nor is there enough will to emphasise the importance of long term solutions compared to short term expedients which only alleviate problems temporarily.

We have to stop deceiving ourselves. We have to stop misleading the public. We are not doing all we can for the preservation of tropical forests. Situations are admittedly very diverse and the constraints are often enormous. But, there are numerous opportunities which could be exploited more efficiently.

This can only be achieved in many cases by placing increased demands on governments and administrations in the countries concerned, despite potential accusations of neo-colonialism. While the right or the duty to intervene where human rights are at stake is accepted internationally, the same is not the case for ecological issues. But the current plight of many forest communities raise important human rights issues.

By intervening more decisively, there is an increased risk of undermining the spirit of partnership which in principle governs ACP-EU relations. Even though it may be beyond the scope of this study and our competence, it is necessary to emphasise that all the following propositions must be embraced by real political will in the largest most noble way – meaning that of *collective good.* Not doing so simply perpetuates the illusion of action. The money of European taxpayers will continue to be spent without result.

Real political will is crucial but not sufficient, for a number of reasons.

• At the level of general strategy, the links between sustainable development, conservation, biodiversity and poverty reduction are complex. Their objectives are sometimes contradictory.

• *Approaches* are often too *compartmentalised*. Actions based on one policy sector treat forest issues in isolation, or where several sectors are involved without any coherence. This tendency is exacerbated by donor competition.

• There are numerous *prejudices, false truths* and *stereotypes* concerning tropical forests and their inhabitants. These unconsciously shape attitudes and actions, and they pose major dangers. Globalising our perceptions of tropical forest peoples or idealising (positively or negatively) populations and environments leads to unrealistically uniform policies.

• The approach is not only too reductionist, it is also too *static*. Yet, nearly all forest societies are in some way in contact with modernity and all the countries concerned are involved in globalisation. The accelerating rhythm of change affects activities, perceptions and discourse.

Opinion has also changed rapidly with respect to tropical forest conservation policies and sustainable development. Since APFT started in 1995 a number of assumptions have had to be radically revised. More and more people consider the constraints of biodiversity conservation in general and protected area management in particular, to be more of a broad social issue than simply a biological or legal one. Even though this analysis, which inspired the entire APFT approach is increasingly shared today, it has not resulted in a serious funding reorientation towards the social sciences. This applies to donors, large NGOs and ministries in the countries where APFT worked. The sector is still largely dominated by experts trained in natural sciences such as agronomy or forestry who are uninclined to invest in areas outside their immediate expertise. Six years later, the support of the European Commission for a programme such as APFT remains exceptional, despite the fact that our approach and accumulated experience is unique.

While taking into account the different documents which have shaped EC tropical forestry policy (notably *Forests in Development: the EC Approach*, 1999, and *EC Biodiversity Action Plan Discussion*, 2000), the propositions and recommendations below are based on this experience. They are intended to be *pragmatic and immediately applicable.*

Our goal is to supply decision-making assistance in the area of forest ecosystem management with the intention of reconciling extraction and conservation.

- *conceptual aspects:*
  - define objectives better,
  - understand the context better,
  - conceive of strategies at different levels;
- *methodological aspects:*
  - realisation of projects;
- *practical aspects:*
  - setting up projects, impact, monitoring, communication.

With respect to the philosophy of intervention, it is important to prioritise the process rather than the project and thus aim for long term actions and durability.

1. Define objectives better

The European Commission and Member States have identified specific themes in the area of sustainable development. These include poverty reduction, education, health and the environment. They have to be addressed simultaneously, even if their links are often complex.

Both general and specific objectives can benefit from being made more explicit. General notions such as 'biodiversity', 'conservation', 'poverty', 'development', 'sustainable development', although commonplace, have to be considered more precisely.

Biodiversity is a relatively vague term. Its initial use was more political than scientific. Application of this concept requires a detailed analysis of scientific, ideological, cultural and cognitive presuppositions. Understanding biodiversity means more than studying the millions of known species (or unknown micro-fauna and flora…). Understanding biodiversity also entails studying how the term is used.

Poverty is a very relative notion. Based on indicators defined in the North in ways which have some local applicability, when applied to the South its alleviation is often measured in terms of the progressive integration into the market economy.

Enormous amounts have been written on *development.* The notion of *sustainability* is vague and the question of time scales needs to be made more precise.

Many key concepts are in other words vague and hampered by presuppositions which are neither scientifically not ideologically neutral. It is necessary to be aware of this. *As concepts and aims are imprecise and subject to discussion, it is hardly surprising that the resulting objectives are also imprecise and contested.*

It is crucial to achieve greater coherence between sectors within the European Commission. Coherence is also needed between EC actors, Member States and other donors. If coherence cannot be achieved at the international level, it should be attempted at the level of ACP countries.

If we are aware that the objectives of the North and South diverge, at the governmental and grass roots levels, it is preferable to address the issues in as clear a way as possible. Once the objectives of the different actors have been made explicit, from the general level to the specific level, it is important to rank them according to degree of intervention.

Other principles also have to be taken into account:

- *ensure* the means (time, financial, human resources..) made available for a project are appropriate the scope of its objectives;
- *take into account* the social demands of a project from the outset;
- *give* projects a long term perspective and in so doing privilege processes rather than sporadic actions;
- *contribute* to local capacity building;
- *diversify* activities in ways which will develop synergies. Diversify in order to minimise risks associated with single-focus activities.

Some specific objectives

Given our field experience, the following specific objectives emerge as priorities.

• *In terms of training:*

- Train anthropologists from the South. This is urgent if they are to participate in development and conservation projects not only in their own countries but in other countries and continents as well.

- Train local experts. Help governments create civil services with the means needed to carry our their work.

- Participate in the civic training of youth and other new mediators.

- Give communities legal assistance, notably so that they can develop negotiation skills.

- Develop diversified technical teaching adapted to the needs of the Nation

• Communities have high expectations in terms of public health:

- Improve medical services: develop maternal and infant protection: fight against malaria, intestinal parasites and alcoholism: organise vaccination campaigns.

• *Valorisation objectives:*

- Carry out inventories of traditional techniques useful in conservation. Their cultural roles can be valorised through eco-museums. Promote cultural and craft activities which valorise the heritage of local populations.

Some preliminary principles

It is be useful at this point to reiterate some questions which need to be addressed from the very beginning of a project:

• Projects result from the evaluation of an opportunity. They imply choosing social priorities. But who are the beneficiaries? All projects have financial and social costs. Will those costs be met by the beneficiaries? These choices result in change. But for whom? Are they possible and reasonable? In other words, will the expected benefits be commensurate with the change some segments of the population will undergo?

• It is impossible to seriously discuss establishing a project without addressing the issue of state-society relations. Development programmes are associated with national interests, generally national economic interests. The project will earn revenues, even if no more than state tax revenues. Projects are thus justified by the supposed fact that benefits will trickle down to local inhabitants in the form of public infrastructures such as roads, schools and hospitals. But what guarantee does a promoter have that things will happen along these lines?

• Once a development or conservation project has been identified, the promoter has to persuade inhabitants of its merits. Otherwise it cannot be implemented. But shouldn't this issue be addressed before trying to suggest a solution? European politicians should know for which categories of citizens they work. Social choices always result in

some form of conflict. Were these evaluated? What do we know about the impacts decisions can have?

The creation of *help desks* in European institutions where anthropologists work with experts and researchers from other disciplines would be a way of preparing answers to these questions.

2. Know the context better

Principles

Every situation is unique and has to be treated as such. Within a single population or within a single ecosystem, there can be significant differences.

Despite what is said, foreseen or announced, the preliminary context is still poorly studied, poorly understood and poorly taken into account. Social aspects have to be given greater attention. At the beginning, all projects have to analyse the context and gather data relating to the physical environment as well as cultural, social, political and economic aspects. This has to be done for the local, national, regional and global levels.

It is necessary to question the implicit presuppositions of project designers with respect to the environment, beneficiaries or expected results.

Historical context

It is important to analyse the historical explanations of current situations and dominant policies. The history of relations between people and their environment is long and complex. Paleo-environmental studies and archaeology help clarify long-term processes. The same type of analysis is needed with respect to the history of relations between local populations and outsiders; the origin of traditional authority and its links with colonial power; former legislation and its (non) application; or the genesis of protected areas and their implications on populations. The history of policies and strategies at different levels, like the history of former development projects provide interesting lessons. Past experience influences what people expect or do not want from change. This experience conditions attitudes to projects.

Environmental context

The place and role of people in the dynamics of forest ecosystems is systematically underestimated. Even though these ecosystems evolved over millions of years prior to the appearance of humans, there are no known forest areas today that were not transformed or affected by human activity. The ways which forest resources were traditionally perceived, managed and extracted require additional detailed study.

For hunter-gatherers and farmers, forest diversity has led to strategies which co-evolve with natural ecological processes. This diversity, which is the major characteristic of the forest, influences the dynamics of the ecosystem.

The diversity of activities and strategies help to diversify risk, progressively adapt to change and avoid excessive pressure on a single resource. It also helps preserve food security. The interconnectedness of these activities and strategies in unanimously recognised today: it is imperative that it be maintained. The more diverse the ecosystem, the more stable and sustainable it will be. This is particularly true with respect to agriculture.

Shifting slash and burn agriculture is often falsely accused of being the primary cause of deforestation. But it is also remarkably diversified. Slash and burn farmers are very well adapted to the complex and fragile ecological dynamics of tropical forests. They likewise participate in forest dynamics and help in subsequent forest re-colonisation, particularly through their systematic refusal to uproot trees during plot preparation and by not clearing large plots for a single user. Imbalances in population densities, more than the decline of land availability or population growth itself, prolong the time of farming to the detriment of fallow time. It is this imbalance that thus compromises the stability, profitability and sustainability of agrarian systems based on slash and burn techniques. It is consequently crucial to improve our understanding of techniques which can help measure current trends. *New management tools* also need to be elaborated to understand *land carrying capacity.* What, in other words, is the threshold of tolerable extraction? This is particularly relevant with respect to hunting or harvesting quotas.

The social, economic and political context

In the areas of conservation, development or cooperation in general, *most project failures result from poor understanding or underestimation of the human factor.* Despite this, many projects continue to be set up without consulting the relevant social science specialists.

An important recommendation follows from this situation: give as much attention (in terms of funding, human resources and time) to social factors as to the technical and biological problems of conservation. This is particularly crucial with respect to tropical forests, their inhabitants and development and conservation projects because balances are extremely fragile, because situations are very complex and because prejudices are difficult to change.

On the socio-economic level

The following aspects must be determined:

• What social groups are present? What are their organisations, representations, expectations…? It is important not to favour some groups (such as hunter-gatherers) at the expense of others (such as farmers).

• What do populations think about change? What do they think about the future? Depending on the group, perceptions of change and rhythms vary. Temporal limits are fairly long, and influence the desire to sustainably manage the forest, instead of exploiting it to satisfy immediate needs.

• How do local people express their needs and aspirations?

• What is their seasonal mobility and what are its economic and social causes?

• What is their spatial and temporal mode of land use management and what is their social organisation of work? More specifically, how is harvesting, production, or use of NTFPs organised?

• What is their calendar of activities?

• What is their use of space and resources?

Special attention has to be given to the identification of endogenous local associations, their views and their ability to act. These associations should be crucial intermediaries when setting up projects.

On the political level

The following aspects must be specified:

• Who are the elites? What is their weight and their sphere of influence?

• How do they manage their links with urban areas, administrations, political parties…?

• Who is the right interlocutor belonging to a community? This crucial choice has to be made with great care and circumspection because in these generally 'uncentralised' societies, decisions are often made through group consensus.

• Are there ongoing conflicts? If there are, development projects have to be careful not to exacerbate them.

On the economic and environmental level

The following must be examined in all cases:

• What are the subsistence needs and thus the needs associated with harvesting of forest products and the maintenance of sufficiently long fallow periods?

• How are goods and products circulated? What are forest-city relations and exchanges?

• What are the legal and regulatory frameworks and are they compatible with customary practices?

• In the current economic context, what is expected of forest resources? What is the importance of the forest for the local and national economy?

• What companies are involved in logging and what is the source of their capital?

• How up-to-date is information and awareness concerning global climate change and ecological threats?

3. Adopt a multi-level strategy

The need to achieve a coherent approach at the regional and national levels as well as to clearly define development and conservation policies is universally accepted.

National forest policies should be elaborated through a step-by step approach: definition of objectives, project preparation, execution in the field, monitoring and evaluation. These latter phases can result in, for example, modifying objectives or reorienting the project.

But this rational model is somewhat idealistic because, in practice, the historic context of projects or policies is rarely taken into account. This history can sometimes be very long. Similarly, the relations between different actors can provoke the overlapping of project phases which should logically remain distinct. The weight of habit, of bureaucracy, of lobbying or the extent of negotiation are also insidious forces which influence political choice.

In the end, the crucial factor is not so much knowing how political decisions are made but to comprehend who has the power and influence to make political choices effective.

The objective here is neither to draft global strategies nor to criticise development cooperation, whose incoherence and contradictions have been amply denounced. Aid initiatives tend to suffer because they try to do too much at one time. An approach based on objectives and methods diverges with one based on sectors or themes. These latter are designed at trouble-shooting or at promoting values of social change inspired by Western models, rather than initiatives aimed at developing a partner country. The aid logic has to be one of accompaniment based on partnership. Emphasis on partner engagement is crucial.

In this respect, it would be foolhardy to underestimate the politicking which goes on between Western development and conservation project managers on the one hand, and local populations on the other. In order to establish partnership and relations of association, it is crucial to

- respect the other party;
- valorise local know-how (instead of comparing it to Western scientific knowledge);
- keep populations carefully informed;
- take internal village hierarchies into account;
- be more humble in dealing with project partners at all levels.

Partners will be more straightforward, committed and responsible if outside actors are less dominant. With respect to efficacy, it is absolutely necessary for governmental authorities and local communities alike to share the desired objectives. In defining strategies for the sustainable conservation and development of tropical forests, the APFT findings can help redress the twofold tendency to marginalise indigenous populations and simplify problems and solutions.

While it is essential to start with local (indigenous) populations, the approach must not minimise 'outside' actors such as city dwellers, NGOs, voluntary associations, religious groups and experts. Forest space must be considered an integral component of national territory while at the same time, not minimising supranational factors. Tropical forests are very much part of integrated *glocal* (global and local) and *rurban* (rural and urban) phenomena.

It is thus essential to harmonise conservation and extraction by integrating protected areas and buffer zones in National Biodiversty Strategies *(NBS)* zones. This can be crucial with respect to climate change. At the landscape level of NBS zones, agricultural ecosystems and peripheral secondary forests have become important for biodiversity.

Given the complexity of ecosystems, ongoing processes and the relations populations have with their diverse environments, it is essential to establish what we know and what we don't know. This is important because projects should not be launched until there is sufficient scientific knowledge available to make sure that they will succeed.

Specific attention should thus be given to regional level management policies

- Planning should take into account the *diversity of activities* and thus the strategies of local populations which translate into varied occupation of space and seasonal mobility. Dispersed habitat should be promoted and provided with appropriate modern infrastructures. Land management plans have take into account land used for agriculture, other territorial uses and the rate of predictable population growth.

- In order to deal with urban impacts of forest populations it is imperative to devise urban food supply plans. Commercialisation networks and exchanges of foodstuffs and NTFPs need to be addressed on a regional level. It is particularly important to favour actions leading to improved supply of local markets opposed to resource commercialisation for export.

4. Respect local partners

Speaking in terms of *processes* rather than projects helps us remember that we should be acting in the long term and that actions are elements in dynamic processes.

No conservation or development project will succeed if specialists from natural and social sciences do not work together.

People involved in a project should be governed by some simple basic principles: respect for partners; consideration of communities as equal partners; sharing of information; transparent explanations; negotiation as equals; and especially, involvement of communities throughout the entire cycle of elaborating land use plans.

Analysis of context for setting up a project locally

• Taking the local context into account is essential. Past experience rests in the collective memory of villagers which influence their present attitudes. If a project devised by outsiders tries to work where there is a climate of inter-ethnic conflict, where land has been degraded, or where international market prices for cash crops have ruined the economy of a community, the project is bound to fail.

• Projects will never be able to achieve their objectives without the *will of local social groups*, their organisation and their systems of representation. The way decisions are made is of particular importance. The same is true with respect to the way information is made available. Neither must links with urban elites be underestimated. These play important administrative and political roles. This context helps put villagers' expectations, and the way they are expressed, in perspective.

• *Project managers* need to inventorise how villagers use space for agriculture, resource extraction and cultural and religious purposes. Inventorising the calendar of activities and availability of resources is another element for project managers to bare in mind.

• *The production and circulation of goods* and products must be carefully observed in order to specify their true economic and cultural value. Inventorising existing associative structures and local micro-credit systems is an important step in project cycle management.

All of these data will help in establishing the *relevance*, *feasibility* and *viability* of a planned project.

Starting up

The systematic neglect of social science inputs in project design results in increased tension and conflicts. Social scientists are then called in as trouble shooters. Unfortunately, once the damage is done, an anthropologist's capacity to redress the situation is limited.

Communities themselves rarely have projects which are collective and realistic. Yet, careful analysis of the socio-economic context can encourage collective thinking which in turn can lead to the formulation of projects or the re-appropriation of proposals coming from outside the community.

• This approach needs time and is thus ill-suited to rapid evaluation techniques. These techniques tend to give the false impression that sufficient attention was given to socio-cultural factors. But given the complexity of local reality this attention is rarely enough. Moreover, public opinion surveys in villages are rarely corroborated by validation with respect to territories used, calendars, production, consumption, budgets, etc. When it becomes really necessary to use these methods, they do not produce useable data unless they are carried out by qualified social scientists with relevant experience.

• Partner identification is a crucial step. It is helpful to seek the support of local management committees. Project managers should be aware of how rotating credit

associations and women's groups operate. The social dynamics of these local practices and associations give them sufficient credibility to be privileged partners in conservation and development projects.

• Negotiating with village communities before setting up a project is crucial, particularly with respect to eco-tourism projects because villagers have to be informed of both advantages and disadvantages in advance.

• Taking into account pre-existing local techniques, notably those agricultural and tree cultivation techniques which have proven successful, is more useful than replacing them with Western style techniques which may be unsuitable. Local knowledge (which has been sufficiently documented) can potentially be integrated into sustainable eco-development.

Follow up and evaluation

Monitoring the impact of a project on a community is recognised as a necessary step. But socio-economic and ecological changes are rarely studied with sufficient time and detail. It is thus necessary to take into account:

• *effects on health and food* of economic changes, and notably when access to forest products is limited;

• the influence of *demographic* growth on land and the availability of resources;

• *socio-economic consequences* of proximity to projects on a community's revenues, micro-economic mechanisms and activities. In eco-tourism projects it is important to make sure that benefits effectively reach the community. Impact of 'touristification' on a community's functioning also needs to be observed.

• Managers should be required to conduct an evaluation and local follow up of a project being carried out.

It is recommended that anthropologists should be involved in the monitoring of projects and their impact on the well-being of tropical forest communities.

Legal and contractual aspects also need to be given special attention:

• Mining and logging regulations concerning environmental protection and impacts on neighbouring populations have to be strictly enforced;

• all projects have to be subject to long term regulation by independent bodies in order to verify the application of a contract, the efficacy and fairness of its compensations and other payments.

In the particular case of local knowledge and the commercial use of local products, independent organisations should be created in order to regulate exactly how they are used.

Information, education and communication

It is essential to keep *local communities* informed. Throughout a project's phases the sense of the project has to be explained, discussed and negotiated, including in local languages. Local associations, notably during their meetings, can be useful as information, education and communication intermediaries.

The *diffusion* and *popularisation* of research results acquired in the framework of projects should be developed. This could be done through a major publishing initiative. Local demand here is increasingly expressed. It is also important to promote campaigns to gather and publish local knowledge, largely to preserve it for future generations. The participation in school activities of the *elderly* (the village's 'library') should be promoted

Information and communication also need to be oriented towards urban areas. National leaders of today and the leaders of tomorrow are respectively based and schooled in towns and cities. Similarly, urban perceptions of the forest and its resources (particularly the perceptions of school children) need further study. This can be an important step in the conceptualisation of environmental education campaigns.

Communication *addressed to Westerners* comes next. This has to be based on solid data in order to stop the propagation of the stereotypes and falsehoods described above. It is incumbent upon the European Union to publish accurate information. This will also help in improving European public awareness with respect to the positive results the EU has achieved in the area of tropical forest peoples and their environments.

5. Conclusion: some unavoidable principles

• It is crucial to *harmonise idealism and realism* if a serious crisis in the South is to be avoided. A balance between the logic of ecological sustainability and the logic of economic opportunism has to be reached. How, in other words, can economic extraction of forests be harmonised with conservation? The balance here must be based on consensus and not on force.

• The inhabitants of tropical forests are mostly in favour of change, although they do not want to jeopardise the foundations of their modes of existence. But do they have the power and the means to choose the forms of development which they want? Wherever the proclivity for change exists, decision-making assistance is needed. It can ensure that participation is based on reciprocal exchanges between communities and decision-makers.

• But is development really necessary? It is important to remember that 'development is largely the result of increased domination of the South by the North, and seeks to address crisis situations affecting both people and their environment.

• The principle of non-intervention or discrete intervention has to be applied wherever communities are already living sustainably and healthily. If this principle had

been applied over the past 50 years, hundreds of thousands of people could have been spared from the mistakes of poorly managed projects. Such intervention entails a re-evaluation of the concepts of poverty and well-being.

• *Wherever possible, European decision-makers have to do their utmost to ensure that subsistence economies are maintained. Their disappearance causes real poverty.* The viability of these economies depends largely on populations being able to use their territories in ways which correspond to traditional practices. Conversely, consumer-oriented models insidiously penetrate into the heart of these forests. Poverty consequently results as well by separating forest peoples from their knowledge or by undermining their practices.

• Forest communities do not have an innate knowledge of nature. The sophistication of their knowledge and adaptation is entirely cultural, and should be respected and encouraged. In contrast to the widespread myth of harmony between forest peoples and nature, many of them have developed a respectful fear of the forest which encourages them to seek a tenuous and fragile balance. It is nonetheless important to remember that many destabilised societies today have seen their knowledge erode and their practices become less efficient or even become destructive. In these cases, education, and notably biological and ecological training, become particularly important.

• Environmental protection can only become a reality if it is integrated into the management plans of all of the states concerned. It is illusory to imagine that these plans can be elaborated solely with advanced technological methods, such as remote sensing. Fieldwork and 'ground-truthing' alone can provide the data needed to understand the diversity of situations and thus avoid the hasty generalisations and failures of ‘classic’ development initiatives.

• The reorganisation of the European Community's development policies is thus a necessity. Means include:

- the definition of projects starting with the real needs of communities;
- financing training of competent experts in both the North and the South;
- a coherent regional blueprint which involves relevant governments;
- redefining the role and number of NGOs by a general audit in order to agree upon a charter which stipulates clearly the criteria by which they qualify and the framework of their responsibilities;
- a better qualitative and quantitative understanding of state structures in forest regions; well-trained and well-paid civil servants should control and monitor (with scientific support) the evolution of development and conservation projects.

• Although not solely responsible, the North has contributed to the ongoing crisis in tropical forest countries. By adopting locally appropriate policies towards tropical forest peoples, the North can help improve the situation. The world is changing rapidly and the post-Rio years do not allow for much optimism. Yet, as this summary has pointed out, there are means to ensure the future of tropical forest peoples, their well-being and cultural survival.

Road - Cameroon (photo S. Bahuchet)

APFT
Avenir des Peuples des Forêts Tropicales

est un programme financé par la Commission Européenne qui associe sciences de la nature et sciences de l'esprit pour explorer en profondeur les problèmes auxquels sont confrontés les populations des forêts.