

Tropical Forest UPDATE

A newsletter from the International Tropical Timber Organization to promote the conservation and sustainable development of tropical forests



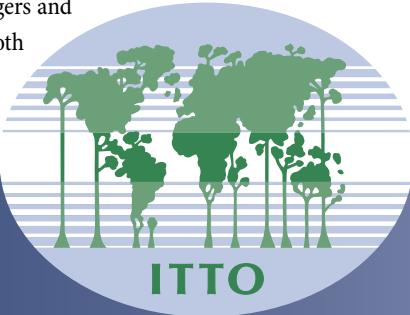
Borderline decisions

THE imaginary lines that divide the peoples of the world into nations have caused no end of trouble. International borders are the focus of disputes over territory and resources, over migration, over the passage of goods and services, over almost everything under the sun.

A good example was the formerly disputed territory in the border region between Ecuador and Peru. In 1995, those two nations fought an intense 19-day war along a 78-kilometre, un-demarcated section of their border deep in the Amazon in the Cordillera del Condor, or Condor Mountain Range.

It wasn't their first battle over this land, but hopefully it will be their last. Besides being of strategic interest, the Cordillera del Condor is rich in biodiversity and home to unique indigenous cultures. In 1998 the presidents of the two countries agreed to create a transboundary conservation reserve in the area, allowing its demilitarisation and the development of a cooperation program between protected-area managers and local indigenous groups on both sides of the border. Initially the area involved was small

**Inside ▶ transboundary conservation ▶
Council initiates more action ▶ more ...**



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Cover image A guard at the Pha Taem Protected Forest Complex in northeast Thailand stands ready to protect the reserve from poaching and other threats. Photo: A. Sarre

... Editorial continued

but it has since grown to more than 2 million hectares. Ponce and Alcalde (page 13) write about two ITTO projects that are helping to plan and implement a joint conservation and development program there.

The popularity of transboundary conservation areas (TBCAS), in which two or more countries cooperate in the management and conservation of ecologically important areas located in border regions, has increased substantially in recent years (Bakarr provides a typology of tbcas on page 4). In 1988 there were 59 such areas, concentrated in Europe and North America; in 2001 there were 169, spread all over the world. ITTO, for example, supports a TBCA program spanning 10 million hectares of tropical forest in eight countries.

As Sandwith (page 6) points out, this increase partly reflects a ‘rebranding’ of existing border reserves as TBCAS. But it also shows increasing recognition among policy-makers that the often rich biological resources found in border areas can be best protected by cross-border cooperation in which benefits accrue both to conservation at a landscape level and to local people through increased security and development.

A workshop run by ITTO and IUCN—The World Conservation Union in February 2003 in Ubon Ratchathani, Thailand, was the first international forum to review experiences in transboundary conservation (see report *TFU* 13/1 and the workshop statement on page 14 of this edition); many of the insights gained are presented here. Bakarr, for example, suggests clearly defined conservation targets that are linked to species, habitat corridors or ecological processes associated with an ecosystem. He also urges attention to stakeholder needs and suggests that international assistance will often be required to encourage local communities to buy in to TBCA initiatives.

Chai and Manggil (page 15) are both involved in the management of the Lanjak-Entimau Wildlife Sanctuary in Sarawak, Malaysia, which adjoins the Betung Kerihun National Park in West Kalimantan, Indonesia. They say local residents are starting to realise the benefits that conservation can bring to their lives—including clean water, which is in shorter supply elsewhere in the state. Moreover, with the assistance of

an ITTO project, Sanctuary managers are encouraging local people to find alternative sources of income by domesticating and commercialising local products, including fish and fruit.

Oviedo (page 8) writes that TBCAS can play a useful role in re-uniting communities of traditional peoples dislocated in the creation of nations and the forging of international borders—customary rights don’t always stop at a customs checkpoint. Convincing such people of the benefits of TBCAS can be difficult: many have suffered greatly from country politics, he says, and are suspicious of initiatives and policies originating in government agencies. TBCAS must be engineered, therefore, to support processes of community reconstruction and to increase the security of land tenure.

Trisurat (page 10) has other suggestions on how to increase local buy-in. He introduces the Pha Taem Protected Forests Complex, a system of conservation forests located in northeastern Thailand against the border with Cambodia and Laos. The Complex, which is being supported by an ITTO project, faces threats to its effectiveness that can be reduced by improving transborder cooperation and by increasing local enthusiasm for it. He suggests a range of measures, including the elimination of landmines in the area; a TBCA package combining biodiversity conservation, regional cooperation and military security must surely attract international support and financing.

To an observer on the boundary at least, TBCAS seem like a winning concept, offering benefits in conservation, community development and international relations. Do they actually work? According to James Gasana (page 32), who in the early 1990s served as a minister of both environment and defence in Rwanda, the TBCA between his country, Uganda and the Democratic Republic of Congo hasn’t stopped military conflict but it has helped protect mountain gorilla habitat in the most appalling circumstances. He says TBCAS need to fully embrace the economic and sociocultural development of the local people: when they do this they may fully realise their extraordinary potential for the promotion of peace and conservation.

Alastair Sarre

Conservation on the frontier

Transboundary conservation will form an important part of efforts to conserve tropical forests in the 21st century

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Border living: a family paddles across a river in the Tambopata-Madidi region, site of an ITTO-funded transboundary conservation project (PD 17/00 Rev. 2 (F)) being implemented by INRENA (Peru) and SERNAP (Bolivia) in association with Conservation International and with the participation of local organisations. Photo: © Judy Gire, Conservation International

By the close of the 20th century, the nations of the world had made a tremendous effort towards conserving biodiversity; tens of thousands of protected areas had been established, of which nearly 13 000 met relevant criteria for inclusion in the 1997 United Nations List of Protected Areas (IUCN 1998). Despite this remarkable progress, the world's tropical forests—and their rich biodiversity—remain among the least protected of all major terrestrial ecosystems. As tropical nations strive to sustain economic and social benefits from forests, the need for creating and strengthening the management of protected areas will become a priority if threats to biodiversity and ecological processes are to be eliminated in the 21st century.

Scaling up biodiversity conservation across increasingly larger landscapes is an important conservation strategy for maintaining viable populations of species and sustaining ecosystem processes

The current global extent and distribution of tropical forests reflect two contrasting realities. The first involves regions where the original extent of forest cover has been severely fragmented, with only a few significant blocks left, such as in the Guinean forests of West Africa and the Atlantic forests of Brazil. The second includes regions that still have large areas of relatively intact forest, such as the Congo Basin forests of Central Africa and the Amazonian forests of South America. While regions with severely fragmented forests are in urgent need of protected areas to avoid impending extinctions, those with relatively extensive forests offer opportunities to minimise habitat fragmentation and maintain intact faunal assemblages. In both cases, the establishment of transboundary

conservation areas (TBCAs) can serve as an important tool for securing and maintaining blocks of contiguous forests in cross-border landscapes.

Definition and typology of TBCAs

Although TBCAs are often equated with transboundary natural resource management areas, no single or consistent definition has been provided beyond the emphasis on conservation and management of natural resources across borders. TBCAs are important for biodiversity conservation because ecosystems and species do not recognise political borders, which are defined for historical and geo-political reasons without reference to ecological functions or processes (Griffin et al. 1999; van der Linde et al. 2001). As noted by Sandwith et al. (2001), the creation of transboundary protected areas (TBPAs) and 'peace parks' can play a crucial role in biodiversity conservation by strengthening the management of protected areas that adjoin across international borders. But TBCAs include more than just protected areas, because transboundary conservation initiatives may be undertaken in areas with no adjoining protected areas, or where the nearest protected areas are located far from the international borders themselves (Griffin et al. 1999). The *table* (page 4) presents a typology and description of TBCAs and their potential implications for protecting tropical forests.

Beyond protected areas

Despite the many achievements in protected area creation, threats to global biodiversity remain a major challenge, as attested to by the increase in the number of threatened species that were added to the IUCN Red List at the turn of

the century. For example, the number of threatened animals worldwide increased from 5205 in 1996 to 5435 in 2000 (Hilton-Taylor 2000). This suggests that simply focusing on the existing global network of protected areas will not be adequate to advance the goal of biodiversity conservation in the 21st century. Even more important is the likelihood that many threatened species are poorly represented in the existing global system of protected areas. Moreover, the growing evidence of global-scale change (biophysical, demographical and institutional) combined with increasing habitat fragmentation suggests that conservation goals will not be served simply by establishing and managing protected areas in isolation.

... to fully accommodate the range of biodiversity targets and ecological processes supported by tropical forest ecosystems, as well as to safeguard against the potential vagaries of global-scale change, conservation priorities must be scaled up across larger landscapes.

In order to fully accommodate the range of biodiversity targets and ecological processes supported by tropical forest ecosystems, as well as to safeguard against the potential vagaries of global-scale change, conservation priorities must be scaled up across larger landscapes. Landscape-level conservation approaches such as the ecosystem approach, bioregional planning, biodiversity corridors and even biosphere reserves have been proposed as innovative ways of integrating forest protection into broader land-use needs.

Although none of these approaches is entirely new (eg Miller 1996), the opportunities they present are crucial to the establishment of TBCAs that conserve biodiversity and safeguard ecosystem processes in tropical forests.

Scaling up biodiversity conservation across increasingly larger landscapes is an important conservation strategy for maintaining viable populations of species and sustaining ecosystem processes. Where such landscapes fall across geographical boundaries, an entirely new conservation challenge is imposed by the need to manage across two or more jurisdictions. The effectiveness of TBCAs depends on how well the social, political, economic and legal implications of management across borders are addressed.

Elements in TBCA creation and management

TBCAs should be driven by the need to build comprehensive protected area systems that represent the full range of known and documented biodiversity in tropical forests. This means having clearly defined conservation targets that are linked to species, habitat corridors or ecological processes associated with an ecosystem. Because transboundary conservation is not an easy undertaking, it is essential that the value-added be fully articulated and rationalised before investing in the establishment of a TBCA. This may involve examining data on species' distributions or movement patterns across borders, as well as on ecosystem values and processes that generate economic benefits (see Chai

Transboundary types

Typology of TBCAs and implications for protecting tropical forests

Type of TBCA	Implications for protecting tropical forests
TBCAs with no existing protected areas	This type of TBCA focuses primarily on the management of natural resources (eg wildlife movement, safeguarding watersheds) to mitigate the impacts of anthropogenic threats across borders. Biodiversity benefits can be harnessed by identifying important forest blocks for protection in the cross-border landscape to maximise representation and coverage of biodiversity targets (eg threatened species and habitats). This will require enlisting the participation of relevant stakeholders in decision-making concerning establishment of the protected areas and overall design of the TBCA.
TBCAs with protected areas on only one side of the border	The benefits of this type of TBCA will depend on the nature of land-use on the non-protected side of the cross-border landscape. Priorities for management should therefore be based on whether the adjoining land is amenable to protection (eg logging concession) or already converted to another land-use (eg degraded forest and cultivated land). Where the land-use is amenable to protection, prospects for expanding the adjoining protected area across the border should be explored. Where the land-use is likely to pose increased threats, an integrated approach to management of the landscape should be pursued.
TBCAs with a cluster of protected areas and intervening land managed as a unit	This type of TBCA is consistent with most landscape approaches to conservation that combine the primary goal of habitat protection with natural resource management and production practices in the matrix. Protection of tropical forests can be promoted by strengthening management of existing protected areas to secure biodiversity targets and leverage benefits in the cross-border landscape. The potential for creating additional protected areas should be explored where necessary to maximise the representation and coverage of biodiversity targets (especially all threatened and species whose total ranges cross national boundaries).
TBCAs with a cluster of protected areas managed as a unit, but no focus on the intervening land	Management of this type of TBCA focuses almost exclusively on strengthening the effectiveness of non-contiguous protected areas in cross-border landscapes. An obvious challenge for implementing such TBCAs in tropical forests will involve the intervening matrix. Priorities should include developing innovative ways to safeguard the individual protected areas and enhancing livelihood benefits to local people in the landscape. Whenever possible, efforts should be made to develop and implement an integrated approach to the management of the TBCA.
Two or more contiguous protected areas adjoining across national boundaries and managed as a unit	The focus of this type of TBCA is on management of adjoining protected areas as a single landscape entity. The rationale for a single management unit for two or more adjoining forest protected areas will be a major undertaking. Therefore, the need for this type of TBCA should be based on clear biodiversity targets and the potential to leverage benefits in the cross-border landscape. Opportunities for increasing the protected area status should be explored where the representation and coverage of biodiversity targets is of global significance. Where one protected area is a World Heritage site, efforts should be made towards extending the World Heritage status to the entire TBCA.

& Manggil, page 15). Further, habitat restoration activities should be undertaken as integral components of TBCAs in tropical forests; as noted by Maginnis and Jackson (2002), the tropical forest landscape in many parts of the world comprises a mosaic of habitat types under various degree of anthropogenic influence.

The creation of a TBCA does not automatically imply or guarantee conservation success. Effective management must therefore be based on a commitment to address the range of social, economic, political and legal implications associated with the target landscape (see Trisurat, page 10, and Gasana, page 32). This will require the harmonisation of management objectives across borders to ensure consistency in meeting priority challenges on each side. Clearly, these challenges cannot be dealt with without a unified and integrated approach to implementing the TBCA, including a need for standards to guide effective management so that the whole is greater than the sum of its parts.

Given the usual dilemma of political and legal differences between countries, progress with TBCAs will depend on the degree to which institutions are willing to operate under a common governance framework that is consistent across borders. Such a framework will promote consistency in decision-making processes that affect the management of the TBCA on each side of the border. The Pha Taem Protected Forests Complex and Lanjak Entimau case studies presented in this edition illustrate the complexity involved in developing a common governance framework, which also underscores its importance in formulating TBCAs.

Although TBCAs are often government-controlled, the potential for leveraging economic benefits will depend on the extent to which other stakeholders such as local communities and private-sector entities are engaged. The economic benefit of TBCAs to local stakeholders is certainly one of the greatest advantages of their creation; however, expectations for TBCAs in tropical forest ecosystems should be managed carefully because such economic benefits are difficult to achieve, even at the level of individual protected areas. Despite their inherent richness in biodiversity, tropical forest ecosystems are rarely as amenable to wildlife-based tourism as the savanna woodlands of eastern and southern Africa. The long-term value and benefits of tropical forests to local community livelihoods may be more reliably sustained through protected areas than through alternative practices that only result in short-term gain. The relative lack of immediate, tangible economic benefits does, however, point to the importance of international assistance in the creation and ongoing management of many TBCAs in tropical forests.

Capacity development is a crucial need for TBCAs if the relevant innovations necessary for their management are to be introduced. Scaling up conservation to encompass the broader landscape imposes a need to refocus the

thinking and management style of protected area managers, which has hitherto emphasised protection from the boundary inward; this approach is no longer adequate in tropical forests because non-anthropogenic threats are becoming increasingly more important than those created by communities located adjacent to protected areas. Landscape approaches are needed to foster shared responsibility and environmental stewardship involving a range of stakeholders and sectors operating within the landscape. For TBCAs to work, innovation in park management should emphasise the transformation of the core competencies and skills that are necessary for working beyond park boundaries.

Scaling up conservation to encompass the broader landscape imposes a need to refocus the thinking and management style of protected area managers

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Is it worth the effort and expense?

The scale of a transboundary conservation initiative should be determined after a thorough analysis of the costs and benefits

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WORLWDWIDE, the number of transboundary protected area complexes has been increasing exponentially. According to the most recent survey (Zbicz 2001), there were 169 in 2001 (involving a total of 666 protected areas) compared to 136 in 1997 and only 59 in 1988. To some extent, the apparent increase is due to the recent recognition (and therefore counting) of situations where protected areas adjoin one another across national boundaries, although actual cooperation might be minimal. But it also indicates that transboundary conservation has achieved greater prominence in the eyes of governments and non-governmental organisations in recent years as a means for regional cooperation and effective landscape-scale or eco-regional conservation.

At first glance this increase in effort and attention seems entirely positive, resulting as it might in better conservation and cooperation among countries to the benefit of all. However, transboundary conservation is but one of many options for the investment of scarce conservation resources; the added value of any given transboundary initiative needs to be examined critically to determine if it is really justified, given that the transaction costs of dealing with the political, social and economic dimensions of transboundary cooperation can be high. At present, however, no comprehensive critical review of the impacts of transboundary conservation programs has been produced to guide thinking and decision-making in this regard.

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The term 'transboundary conservation' is used here to indicate a broad suite of possible arrangements where conservation programs straddle national boundaries. There is always a debate about typologies (see page 4), but it is perhaps most useful to regard all arrangements as forms of transboundary natural resource management (TBNRM); as Bakarr indicates in this edition, the term transboundary conservation area (TBCA) embraces most forms of TBNRM. At one end of the spectrum are situations where there is a need for cooperation across national boundaries for economic development based on natural resource management in shared ecosystems. At the other, there is a more restrictive concept of adjacent protected areas (coinciding with the last of Bakarr's typology on page 4), where a transboundary protected area (TBPA) is:

An area of land and/or sea that straddles one or more boundaries between states or sub-national units such as provinces and regions, autonomous areas and/or areas beyond the limits of national sovereignty or jurisdiction, whose constituent parts are ... especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and

managed cooperatively through legal or other effective means (Sandwith et al. 2001)

There are, of course, many combinations and permutations of situations between these two extremes; indeed this heterogeneity is one of the characteristics of transboundary conservation programs. There is no single recipe or formulation for all situations, and implementation really does require a flexible and adaptive management approach.

Bearing this in mind, a number of conservation agencies have sought to assist countries and authorities to plan and manage transboundary conservation programs more effectively. At a global scale, IUCN has promoted discussion regarding 'parks for peace' and provided guidance to protected-area managers regarding best practice in implementing programs for both biodiversity conservation and maintaining peaceful cooperation. This guidance (Sandwith et al. 2001) canvasses the following nine areas for the development of TBpas:

- 1) **identifying and promoting common values:** the purpose of the TBPA is paramount, setting a vision for the cooperative implementation of a conservation and development program. It is against this vision that the impact of the TBPA program for biodiversity conservation, peace and cooperation must be assessed;
- 2) **involving and benefiting local people:** the social impact of international boundaries has specific relevance for communities living there. In many cases, communities are divided by political boundaries or by economic marginalisation and are far from the centres of power and decision-making. Specific efforts must be made to involve communities in these transboundary situations and to ensure that they benefit from transboundary cooperation and development;
- 3) **obtaining and maintaining the support of decision-makers:** of necessity, TBPA programs involve multiple levels of jurisdiction within and between countries. It is usually necessary to engage with structures at all levels in parallel, because progress at a local level can be inhibited by the absence of a supportive mandate at the national level. Similarly, high-level cooperation does not automatically translate into cooperation on the ground;
- 4) **promoting coordinated and cooperative activities:** this should be done at two levels. First, expertise should be developed and exchanged through coordination structures, communication systems and joint working groups. Second, tangible and useful areas of cooperation should be developed; this could take the form of small, joint projects concerning shared problems such as fire management, or the management of animal populations that traverse the boundaries;
- 5) **achieving coordinated planning and protected area development:** planning is essential if the purposes of

- TBPAs are to be translated into effective management and development. Activities must be harmonised across the boundaries to avoid the juxtaposition of incompatible activities. Joint planning and zonation supported by shared information systems can be a powerful unifying process for TBPA development;
- 6) **developing cooperative agreements:** both formal and informal agreements can be used to declare common interests, agree on objectives, state guiding principles and plan and implement management programs. Agreements are required to secure the endorsement of relevant authorities and accountability among the stakeholders. The peace and cooperation guidelines provide examples of several legal precedents for transboundary protocols and agreements;
 - 7) **working towards funding sustainability:** one of the benefits of transboundary conservation is an increase in the efficiency of management and reduction in costs while ensuring increased economic and other benefits. In addition, a cooperative approach to seeking funds from donors, the private sector and NGO community may be more powerful in achieving appropriate thresholds of development and financial sustainability;
 - 8) **monitoring and assessing progress:** the evaluation of progress in TBPA programs against specified goals is essential if the investment is to be justified. The peace and cooperation guidelines provide some generic tools, including a means to assess the degree of cooperation; and
 - 9) **dealing with tension and armed conflict:** protected areas on international boundaries are often affected in situations of tension or armed conflict. The guidelines include a draft code for TBPAs in times of peace and armed conflict, supporting the maintenance of peace and cooperation and preparing and guiding authorities and agencies on how to deal with conflict situations.

How much cooperation?

The Biodiversity Support Program (bsp) examined TBNRM in sub-Saharan Africa and provided useful guidance on the process by which TBNRM takes place (van der Linde et al. 2001), particularly on the assessment of relevant issues in a given transboundary context as a means to guide the prioritisation of conservation programs. The peace and cooperation guidelines provide a protocol for analysing the threats and opportunities that affect the achievement of natural resource management objectives and targets. In a tropical forest, for example, one might start by examining the biodiversity or natural resource components on each side of the border and the implications for the neighbouring countries. In Park w, a TBCA named for the peculiar shape of the river in the area and shared by Niger, Burkina Faso and Benin, the poaching of elephants in Benin causes cross-border movement into adjacent countries and subsequent over-population on the Niger side. This is clearly a case where the objectives for managing elephant populations in one country are being affected by the policies and management regimes of the others, and a clear indication that a harmonised policy and management regime may be needed.

There are also social connotations and implications. Community rights to seasonal fishing are recognised in Burkina Faso, whereas the authorities in Niger do not allow any fishing. At the local community level, this has resulted in inequitable access to natural resources and conflicts among users. Managers also find it difficult to regulate use in a shared ecosystem by focusing only on one group of users.

In other cases, there may be no compelling rationale for transboundary management, since management activities applied nationally may be sufficient to counter existing threats. In these, cooperation might usefully focus on communication and the sharing of skills and experiences rather than on direct cooperative management.

Thus, different levels of need dictate the level and cost of the TBCA. In essence, the bsp argues for a strategic and focused approach to TBNRM, where the specific objectives of any program should determine the nature and level of any engagement.

... a cooperative approach to seeking funds from donors, the private sector and NGO community may be more powerful in achieving appropriate thresholds of development and financial sustainability ...

Be clear on purpose

There is a tendency amongst the conservation community to look for a 'one size fits all' solution to conservation management; a formulaic response to the transboundary conservation challenge has been called for in the past. However, contemporary guidance indicates that there is a need to polish the tools of transboundary conservation to accommodate the specific needs of particular circumstances. In general, an adaptive management approach should be adopted, guided by a clear rationale for the TBCA and by measurable targets for achieving impact in terms of that rationale. In TBPAs, this impact must be regarded as primarily biological, but large-scale conservation initiatives also carry significant social, economic, institutional and political implications. Transboundary conservation initiatives will always have value, but this value can be enhanced when the rationale and purpose of the program are clearly stated and supported by the monitoring and evaluation of progress against explicit targets.

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Re-uniting communities with their landscapes

Transboundary conservation won't work unless indigenous and other traditional people can reclaim their rights

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INDIGENOUS and other traditional communities and protected areas in transboundary contexts have a common legacy: the problems caused by insensitive policies in border areas, which have neglected both conservation and social needs. Hence, they also share a number of fundamental objectives centred on the revitalisation and maintenance of both the landscape and the inhabiting communities. This article explores how transboundary conservation initiatives can play a useful role in alleviating the problems faced by local communities in border areas.

How many?

Systematic and reliable data on how many protected areas of the world overlap with the traditional lands and resources of indigenous peoples are yet to be produced. However, a brief review of the literature suggests that perhaps more than 50% of existing protected areas worldwide have been established on the ancestral domains of indigenous and other traditional peoples. TBCAs are not different from other protected areas in this sense and also in the types of relationships, including conflict, that have characterised protected areas throughout history.

But in TBCAs, many local communities have traditionally practised land and resource use with specific patterns and under specific conditions. Perhaps the most typical condition of human habitation and use in TBCAs, particularly in developing countries, is the presence of extensive land-use in low-density habitats, due partly to the fact that areas surrounding national borders frequently contain scattered populations. These types of human habitation include, for example, hunter-gatherer societies who typically move around large areas following cycles of change in game populations, and pastoral peoples using transboundary areas as migration corridors according to the seasonal availability of pastures and natural displacements of animals. Both these forms of management involve a high level of human mobility, which is a condition for the low-intensity use of fragile lands and resources because it allows them to recover through cyclical human occupation.

... the boundaries of human settlement and occupation in TBCAs are typically natural and cultural, the latter following the former; they are flexible and porous and allow multiple groups to alternate in the landscape ...

Human communities in these areas tend to have flexible, changing borderlines as a result of both their inherent mobility and the frequent overlap of use rights between them. This latter is typically a feature of human use in large landscapes because exclusive land-use rights would lead to fragmentation; porous borders, on the other hand, allow socioeconomic and cultural exchanges and accommodate changes in communities and populations caused by the harsh nature of environmental conditions. Thus, the boundaries of human settlement and occupation in TBCAs are typically natural and cultural, the latter following the former; they are

flexible and porous and allow multiple groups to alternate in the landscape.

Country border politics and human communities

Contrary to this sociocultural configuration of community land boundaries, national borders are largely the product of modern war and conflict, imposition by dominant powers, and/or political negotiation among civil and military elites; few are defined on the basis of traditional, community-configured territorial boundaries. Modern country borders rarely respect natural boundaries or take into account how the historical interactions of communities have traditionally shaped sociocultural frontiers; this is especially true in countries that have undergone the decolonisation process in the last two centuries.

From ancient times, but especially within the context of political disputes around borderlines in the last century, states have displaced communities living in frontier regions and have applied restrictions to community life as a result of conflict and the predominance of military approaches to border politics and relationships with neighbours. Some of the most frequent impacts of such approaches on local communities have been:

- the forced relocation of people living in border areas to allow military control;
- the forced settlement of communities brought from elsewhere, as part of policies of 'living frontiers';
- the splitting of communities through imposed borderlines, creating enmity between neighbours who were once united and shared the same culture and landscape;
- restrictions on the movement of people and goods (eg restrictions on traditional migration and pastoral transhumance); and
- restrictions on access to certain resources and traditionally used places.

Militarisation is one of the inevitable facts of national-border politics. It is not only an instrument for imposing restrictions on communities and forcing new behaviour, but also a source of sociocultural disruption that often leads to the collapse of local institutions. In the case of armed conflict, the impacts on communities can be enormous and long-lasting. Ironically, the use of the military to impose national security in border areas has often led to a *decrease* in community security.

Today, armed conflict seems more widespread than ever, both in number and in the magnitude of people involved and affected. In some regions, armed conflict has had a sudden and dramatic affect on the lives, settlements and resources of traditional and local communities. This is at the root of refugee problems, which have now reached unprecedented levels and seem likely to continue to increase. Refugees tend to settle themselves in border areas, as these are less

occupied by human communities and tend to be away from power centres where disputes concentrate; also, crossing country borders may in some cases be a desperate option for people escaping war. The consequence is that large numbers of refugees occupy many frontier areas that otherwise could be or are dedicated to conservation. Apart from being a social and human catastrophe, the environmental impacts of the refugee problem are considerable.

Thus, the sociopolitical context in which transboundary conservation takes place is often one of fundamental conflict between the historical shaping of sociocultural boundaries and the processes of establishment and handling of national borders. Many communities have suffered greatly from country politics and have developed an understandable attitude of mistrust, suspicion and even active resistance and opposition to initiatives and policies originating in government agencies. TBCAs, which are generally initiatives negotiated and agreed to at higher levels of government and implemented through government agencies in areas often with a military presence, are therefore often attempted in a social environment marked by hostile feelings among communities and neighbours.

Human communities in transboundary conservation

Given such a context, are local communities interested in TBCAs? What are the possible issues of interest to local people?

In many cases local communities are indeed interested in transboundary conservation, essentially because they see it as an alternative to militarisation and as a tool to bring some degree of protection to the people and the local resources. Since the buy-in of the local communities is essential for their success, a major function of TBCA initiatives must be to protect the people, the communities, their resources and their rights affected by country border politics. They should also help protect and respect the fundamental human rights of local people—including the right to live in a peaceful and safe environment, with no threat to their lives or wellbeing.

One of the most important interests of local people in relation to TBCAs is the restitution of their lands and resources. Customary rights have been denied in many border areas, but without the recognition of such rights local communities will continue to see their lives as under threat—because they have no livelihood security.

Some of the other objectives and interests that local communities have in relation to TBCAs are:

- the free movement of individuals and animals across borders and in the interior of each area;
- the demilitarisation of areas inhabited and used by communities;
- the revitalisation of local institutions affected by conflict or the imposition of military structures;

- the reunification of communities and recuperation of community bonds where they have been lost, either across or within borders;
- participation in local decision-making, with information and communication flowing freely among communities and individuals; and
- participation in national and bi/multinational policies for the management of frontier territories, as they concern their own lives and communities.

TBCAs as a tool for social reconstruction

From the perspectives of local people, TBCAs can be attractive interventions if they support processes of reconstruction of communities and cultures that may have been affected by border conflicts and politics, and if they effectively offer more security to the people and the land. Securing land tenure and access to resources for communities, strengthening local cultures and institutions, tangibly improving people's well-being, and building mechanisms for the genuine sharing of decision-making with community institutions should all be fundamental components of TBCA strategies and actions.

Policies for TBCAs should take into account customary resource management and traditional land tenure systems. Further, they should accommodate the social, economic and cultural interests, values, rights and responsibilities of local communities living in and around their borders. TBCAs should also support and facilitate contact and cooperation between communities living across borders, especially if they belong to the same cultures, including activities in the economic, social, cultural, spiritual and environmental fields.

Encouragingly, a review of TBCAs in Africa (Singh 1999) shows that in many places this is already happening:

Culturally, transboundary conservation areas assist in the economic livelihood of indigenous groups whose traditional land areas have been divided by international borders ... Transboundary conservation areas assist in developing policies for the resumption (or at least legalisation) of cross-border movement of indigenous groups divided by political international boundaries.

The challenge for all TBCAs is to achieve such outcomes to the greatest possible extent.

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Defusing the transboundary minefield

A reserve linking Thailand's Pha Taem Protected Forests Complex with forest reserves in Cambodia and Laos will assist both biodiversity conservation and international relations

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River view: the Pha Taem Protected Forests Complex, the subject of an ITTO project, is bordered to the east by the Mekong River and comprises mostly monsoonal forest. Photo: E. Müller

THE Pha Taem Protected Forests Complex (PPFC), located in Ubon Ratchathani Province in northeast Thailand, covers an area of about 174 000 hectares and comprises four protected areas—the Pha Taem, Kaengtana and Phu Jong Na Yoi national parks and the Yot Dom Wildlife Sanctuary—and the proposed Buntrik-Yot Mon Wildlife Sanctuary (*see table and map*). The area slopes gently towards the southeast and is drained by the Mekong River, which forms the border between Thailand, Laos and Cambodia. The PPFC's buffer zone contains 82 villages populated by about 89 000 people, but the PPFC itself contains no human settlements.

On the Laos side, the 120 000-hectare Phouxeingthong National Biodiversity Conservation Area (NBCA) is located adjacent to the northern part of the PPFC, while the 190 000-hectare Chom Ksan Forest abuts the border on the Cambodian side. The tripartite border area has been dubbed, in Thailand at least, the Emerald Triangle because of its extensive tracts of monsoonal forest. The PPFC contains three main vegetation types: dry evergreen forest, mixed deciduous forest, and dry dipterocarp forest, while lowland mixed deciduous forest predominates in Cambodia and Laos.

PPFC planning must include attention to the broader landscape, encompassing both the protected areas themselves and the surrounding landscapes ...

The PPFC has some special protection needs that require close cross-border cooperation. In particular, biodiversity in the PPFC and the intervening landscapes is experiencing increased pressure due to cross-border poaching and trade in plant and animal parts. Large animal species such as wild elephant, banteng, gaur, tiger and possibly kouprey (a forest ox) are believed to occur only in the border areas. These are

large mammals that require considerable areas of habitat; their survival depends on contiguous habitats on all sides of the border and adequate protection from poaching. The PPFC has 18 ranger stations manned by eight park officials and 355 'casual' employees; their effectiveness in protecting habitats and species is severely limited by cross-border habitat destruction and poaching.

Project activities

ITTO PROJECT PD 15/00 (F) is being implemented by the Thai Department of National Parks, Wildlife and Plant Conservation to strengthen the management of the PPFC and to initiate cooperation in transboundary biodiversity conservation between Thailand, Cambodia and Laos. Under its first phase, which started in October 2001 and will be completed in September this year, the project has initiated a management planning process for the PPFC in a framework of transboundary biodiversity conservation. This involves establishing an effective organisational and management system for the PPFC, collecting basic data, the installation of an information system and database, and the commencement of a process of cooperation between the three countries.

Threats and opportunities

The PPFC project faces a number of threats to its effectiveness; these must be dealt with if the project is to meet its biodiversity, trans-border and socioeconomic objectives.

Threats

International relations: the management of cross-border reserves requires a high degree of cooperation. However, Laos is reluctant to nominate the Phouxeingthong NBCA for inclusion in the TBCA in the project's second phase,

even though this was agreed at the first tri-national meeting convened by the project in 2002. Cambodia has officially proposed that its Chom Ksarn Forest should become part of the TBCA, and has even formulated a project proposal for submission to ITTO. However, diplomatic ties between Thailand and Cambodia were downgraded and suspended after the sacking of the Thai Embassy in Phnom Penh on 29 January 2003 and the future of Cambodia's involvement in the TBCA is now in doubt.

Encroachment: forest in the buffer zone outside the PPFC is being encroached for agriculture; further forest-clearing could jeopardise the viability of already-rare large mammals. Forest is also being degraded in Laos and Cambodia, mainly due to unsustainable commercial-scale logging.

Poaching: wildlife is poached and plant parts collected for trading along the border of the three countries. The main demand is for bush meat, which is an important source of protein for rural households, particularly in Laos, the only country of the three that is not a party to the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES). In any case, only one of the region's eleven border crossings (between Thailand and its two neighbours) boasts a CITES checkpoint.

Capacity: Cambodia and Laos both lack the capacity at all levels to manage their protected areas effectively. Staff have little or no access to training, budgets for management are very small, and there are few park rangers on the ground.

Landmines: thousands of landmines were laid along the borders between Thailand, Cambodia and Laos in the 1980s and 1990s. These now constitute a major threat to local residents, park rangers, researchers and large mammals.

Opportunities

International significance: the PPFC is the only protected forest complex in Thailand that contains both terrestrial and aquatic ecosystems of regional ecological significance. The area features rare and endangered species such as freshwater crocodiles and tigers. It may also provide a sanctuary for the kouprey; scientists have not observed this species since 1988, but anecdotal evidence suggests that it may not yet be extinct. The area therefore has globally significant biodiversity value, which should help in attracting continuing international support.

Existing cooperation: multilateral cooperation in this region has strengthened in recent years. Regional bodies such as the Mekong

River Commission (MRC) and the Food and Agriculture Organization (FAO) have offered to mediate the conflict between Thailand and Cambodia and to help initiate cooperation at the decision-making level. They, and multilateral organisations such as ITTO, provide a basis on which cooperation in transboundary conservation can be built in the region. Recent international initiatives on protected area management that advocate a landscape-approach to protected area management and look beyond the boundaries of individual protected areas should also help. Lessons learned from ecosystem management in the Western Forest Complex—located in western Thailand and jointly implemented by the Royal Forestry Department and Danish Cooperation for Environment and Development—are also proving valuable in strengthening management in the PPFC.

... greater cross-border cooperation in the TBCA could conceivably help attract greater international interest in clearing the area of landmines ...

At the project level, the chief technical advisor and project manager are highly respected by junior staff, which assists greatly in the achievement of project aims. Moreover, ITTO's strong support for TBCAs in general and the PPFC in particular suggests a long-term future for the project. This offers the opportunity to improve cross-border cooperation and further raise management capacity, including in Cambodia if an ITTO project eventuates there.

PPFC planning must include attention to the broader landscape, encompassing both the protected areas themselves and the surrounding landscapes. Conservation corridors between existing protected areas should be considered and created where feasible. In a similar vein, conservation would be greatly improved if Laos would create a conservation reserve alongside Thailand's Phu Jong Na Yoi National Park.

Strategies to strengthen the TBCA

On the Thai side, the PPFC project is proceeding well and will be further assisted by a second phase, which will be

Park particulars

Key features of the Pha Taem Protected Forest Complex

Name	Establishment date ¹	Area (km ²) ²	Perimeter (km) ²	Country boundary km (%) ⁴	Shape Index ⁵	No. ranger stations	Officials ⁶
Pha Taem National Park	31 Dec 91	353.2	242.7	63.3 (27%)	3.64	5	3/100
Kaengtana National Park	13 Jul 91	84.6	62.5	30.0 (48%)	1.92	4	2/90
Phu Jong Na Yoi National Park	1 Jun 87	697.4	215.9	93.9 (43%)	2.31	4	1/90
Yot Dom Wildlife Sanctuary	11 Oct 77	235.9	88.2	33.2 (37%)	1.62	4	1/60
Buntrik-Yot Mon Wildlife Sanctuary	Proposed	365.9	186.2	96.4 (52%)	2.75	1	1/15
Total		1737	795.5³	316.8 (43%)		18	8/355

Notes: ¹Royal Gazette; ²Calculated by GIS; ³Excluding shared border; ⁴Length of country boundary; ⁵Perimeter/2(π x a); ⁶Government official/temporary employee



Tripartite tract

The Pha Taem Protected Forest Complex, with the location of villages shown on the Thai side of the border. Prepared by Y. Trisurat for the ITTO PPFC project, based on data from IUCN and DoNP



considered for funding by ITTO shortly.

However, there is an urgent need to strengthen cross-border cooperation for more effective transboundary management. Existing multilateral relationships in the region should be used as a gateway to rebuilding the relationship between Thailand and Cambodia, in addition to inviting international bodies to initiate cooperation among the three countries, especially at the decision-making level. Given the reluctance of authorities in Laos to participate in the TBCA, cooperation could start with 'soft' collaborative activities such as training programs or joint research programs on flagship species and be followed by visits on both sides by park officials.

Ecotourism will only work, though, if the local communities benefit from it and are fully involved in its management.

To further foster cross-border cooperation, an integrated joint task force could be established among the three countries to combat encroachment, poaching and illegal logging. International organisations such as ITTO, IUCN, the World Wide Fund for Nature, MRC and others should encourage the Vientiane government to develop sustainable forest management and reduce the impact of logging on biodiversity. In remote areas where accessibility is limited due to landmines, cooperation with military staff and border patrol police will be essential to reduce poaching and illegal logging. In fact, greater cross-border cooperation in the TBCA could conceivably help attract greater international interest in clearing the area of landmines, which will cost an estimated US\$70 million but would add greatly to the potential for ecotourism and also improve safety for residents.

Livestock

The cross-border transmission of livestock disease is a significant issue in the region and in some cases threatens biodiversity; addressing this as part of the TBCA approach would provide real socioeconomic benefits for local residents and generate goodwill for the TBCA itself. Veterinarians should be employed at border crossings to monitor animal health and prevent the entry of diseased animals. In addition, ecological management zones using the biosphere reserve zoning concept should be developed to define core biodiversity areas, buffer zones and transition zones where domestic animal-raising could be permitted.

Ecotourism

Another way of generating local enthusiasm for the TBCA—and therefore reduce encroachment and poaching—would be to promote it as a tourism destination. A TBCA not only offers excellent opportunities for the appreciation of nature, it can also provide a multinational and multicultural experience. The Mekong River has a mystique that attracts international tourists, whose visits will be greatly enriched by contact with Thai, Laotian and Cambodian communities. Ecotourism will only work, though, if the local communities benefit from it and are fully involved in its management.

Transboundary approach the key

Given that encroachment is perhaps the most important threat to the PPFC, its success ultimately rests on whether or not local communities can be convinced that the pursuit of conservation objectives is in their interests. A transboundary approach that helps to attract international funding, curb illegal activities, prevent the cross-border transmission of livestock disease, promote ecotourism and remove the safety hazard posed by landmines will provide a solid basis for effective biodiversity conservation, not only in the PPFC but also at a broader landscape level—on both sides of the Mekong.

The Condor corridor

Corridors are an important part of the conservation strategy in the Condor Mountain Range

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ITTO Project: Peace and Conservation in the Condor Mountain Range, Ecuador-Peru



Cloud cover: cloud forest between the Comainas and Kusu Nutmpatkaim rivers, Condor Mountain Range. Photo: © Conservation International

THE Condor Mountain Range has been the scene of a long series of armed conflicts between two neighbouring countries—Peru and Ecuador. Today, however, thanks to the goodwill of the governments of both countries and the support of the International Tropical Timber Organization (ITTO), this range is in the process of becoming a protected transboundary conservation area (TBCA) that will not only protect the region's rich biodiversity but also contribute to securing lasting peace between the two nations.

The Condor Mountain Range is part of the Andes. Its catchment flows into the Amazon Basin and is a key element in the Basin's hydrological cycle; for example, it is the birthplace of many of the rivers that bathe the Peruvian-Ecuadorian Amazon rainforests. Low, moist clouds cover the range's plateaus and peaks almost on a daily basis. Waterflows turn into innumerable cascades, which, as they descend, filter through the vegetation, crossing cloud and montane forests. The region is one of the most biodiverse in the world; it contains, for example, the most diverse floral communities known to science.

The local indigenous communities ... believe in the sacred nature of the waters in this region.

The local indigenous communities—of the Jivaro ethno-linguistic group—believe in the sacred nature of the waters in this region. They believe that these high areas are the source that gives life to all other elements that surround them. Hydrologists have formed a similar view.

Preserving peace and the environment

The Condor Mountain Range became prominent in the 1990s after several biological studies identified it as both a habitat of high biodiversity and a region under great pressures and threats. The studies identified several endemic species, including the marsupial rat (*Caenolestes condorensis*), the American butterfly (*Euselasia persiana*), and *Dendrobates captivus*, a frog. The names assigned to these animals by local indigenous tribes are still unknown to the outside world.

Even though the conservation community made several attempts in the past to find ways of preserving the exceptional biodiversity found in this area, these initiatives only became a reality after the signing of the Brasilia Presidential Treaty in October 1998. This treaty, which is in fact a comprehensive peace agreement between Ecuador and Peru, created a favourable environment for conservation, facilitating bilateral cooperation and peace. The agreement underscored the need to establish ecological protection areas on both sides of the international border. Further, both countries undertook a commitment to promote development and social and economic cooperation in the transboundary area.

After the treaty was signed and ratified, the Government of Ecuador established the El Condor Park in 1999 with an area of 2540 hectares. On its side of the border, Peru established an ecological protection area of 5440 hectares

Statement of the workshop on increasing the effectiveness of transboundary conservation areas in tropical forests

held 17–21 February 2003, Ubon Ratchathani, Thailand

This meeting recognizes the value of transboundary conservation areas as an essential mechanism for conservation and sustainable use of biodiversity, especially in tropical forests and other vulnerable ecosystems.

TBCAs are more likely to be successful in the long term if they meet social and economic as well as biodiversity objectives. Social benefits can include securing communities' land tenure, strengthening local cultures, building mechanisms for participatory decision-making and helping to promote reconciliation and cultural links in post-conflict situations.

TBCAs can embrace a range of conservation initiatives involving protected areas and intervening lands that establish appropriate ecological linkages and development opportunities in the local and national context.

The meeting commends ITTO for its role in supporting transboundary conservation in over 10 million hectares of tropical moist forest and recommends that ITTO and other organizations raise the level of commitment to transboundary conservation to ensure biodiversity

conservation and the equitable sharing of benefits with local and national communities in border regions.

Working across boundaries demands unique tools and strategies to ensure that the benefits of co-operation outweigh the costs. The meeting recommends that IUCN furthers its support for the World Commission on Protected Areas (WCPA) TBCA Task Force work program, and that the protected area community develops a learning network of regional TBCAs, to develop experience, capacity and methodologies relevant to effective TBCA management. Lessons should be disseminated to a broad audience including professional protected-area managers, land-use planners and policy-makers as well as communities that play a role, or could play a role, in tbcas management.

Further development of TBCAs requires strong public support, continued discussion at regional levels and, perhaps, an international enabling framework.

and followed this in 2000 by creating the Santiago-Comaina Reserve, which covers about 1.65 million hectares. Through these actions, Peru ratified its commitment in support of peace and conservation.

ITTO's role

It was in this context that both governments requested technical and financial support from ITTO to implement a base study through an ITTO pre-project to assess the viability of several conservation strategies for the Condor Mountain Range. As a result of this first study, two project proposals were submitted to and approved and funded by ITTO. The objectives of the projects ('Bi-national Peace and Conservation in the Condor Mountain Range Ecuador-Peru'—ITTO PROJECT PD 2/00 (F) in Ecuador and ITTO PROJECT PD3/00 (F) in Peru) was to contribute to the land-use management of the area, to consolidate a network of transboundary protected areas in the region and to establish a subsystem of natural protected areas within the context of a conservation corridor. The total area of influence of the two projects, including protected areas and buffer zones, is about 2.42 million hectares.

The conservation corridor

Conservation corridors interconnect protected areas and other relevant territories surrounding them. Human activities are promoted in these areas on a sustainable development basis; that is, activities are undertaken that do not endanger the rich natural resources contained therein and which benefit both nations in general and the local communities in particular. Conservation corridors are thus a flexible planning tool that interconnects protected areas through a combination of land-use strategies.

This approach is particularly significant because it includes the areas surrounding natural protected areas. Because of their unique characteristics, these areas are highly

vulnerable, as is the case of the Condor Mountain Range, where indigenous communities are occupying the lands neighbouring the mountain range.

The implementation of the conservation corridor proposal will not only help to link protected areas in both countries but also to create adequate spaces where transboundary interaction can become a reality. In this context, it is important to stress the significance of combining two conservation strategies: the conservation corridors and the transboundary conservation areas.

The conservation efforts in the Condor Mountain Range are not only contributing to the conservation of the extraordinary biological wealth shared by the two countries, but also to creating an environment of trust, an essential element for building a sound, imperturbable and lasting peace in the region. However, the end-product will be much more than the sum of these two objectives. The resulting conservation and peace will also create the ideal social environment for rekindling ancient relations between the indigenous peoples that have existed in the region since time immemorial.

Translated from the Spanish by Claudia Adan.

Thinking outside the box

The experiences gained in Sarawak's Lanjak-Entimau Wildlife Sanctuary will inform management across the border and elsewhere in Borneo, the region and globally

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Watershed: the linking of the Lanjak-Entimau Wildlife Sanctuary and the Betung Kerihun National Park in a transboundary conservation reserve provided a model for later ITTO projects. Nevertheless, transborder cooperation in managing the two reserves needs further strengthening. *Photo: P. Chai*

THE Lanjak-Entimau Wildlife Sanctuary in Sarawak, Malaysia and Betung Kerihun National Park in West Kalimantan, Indonesia, which comprise the region's first tropical forest transboundary biodiversity conservation area (TBCA), share many common values in landscapes, watersheds, ethnographic history, culture, and plant and animal resources. Lanjak-Entimau occupies 187 000 hectares and Betung Kerihun about 800 000 hectares; recently the Batang Ai National Park, which abuts Lanjak-Entimau on the Sarawak side, was added to the TBCA after approval by the Sarawak government, boosting the total area to 1.1 million hectares.

The TBCA constitutes the most important sanctuary in Borneo for orang-utan—perhaps up to 10% of the remaining wild population—and other rare and threatened plant and animal species. Such biota don't recognise political boundaries and are therefore best managed through parallel and cooperative conservation efforts.

Two ITTO projects are helping to raise management standards on both sides of the border. In Sarawak, the Forestry Department is implementing ITTO PROJECT PD 16/99 REV.2 (F) with the aims of improving management inside Lanjak-Entimau, supporting sustainable livelihoods among residents living on its periphery, and developing a cooperative transboundary management arrangement with Betung Kerihun; this project began in 1993 and is now in its third phase. On the Indonesian side, the World Wide Fund for Nature (Indonesia) and the Directorate General of Forest Protection and Nature Conservation are collaborating in the

implementation of ITTO PROJECT PD 44/00 REV.3 (F), the first phase of which commenced in 1995 with similar aims.

Increasing cooperation

The sharing of and benefiting from the natural resources of a TBCA requires a common, transborder vision. The ITTO Borneo Biodiversity Expedition to the TBCA in 1997 (Kuswanda et al. 1999) marked the first collaborative effort between scientists in the two host countries. It made many useful suggestions and recommendations for further cooperation, including bilateral research. Implementing the recommendations will help to sustain the cooperative effort.

Orang-utan conservation is one of the most important objectives for sustaining the TBCA and could provide a unifying force for action. The species could be adopted as a common logo and used as a visible symbol of cooperation. Another unifying force could come from a recent agreement between Malaysia and Indonesia to nominate Betung Kerihun, Lanjak-Entimau and Batang Ai as a Clustered World Heritage Site and to establish a second TBCA encompassing Pulong Tau National Park in northeastern Sarawak and Kayan Mentarang National Park in North Kalimantan (the latter already benefiting from an ITTO project—PD 38/00 REV.1 (F)).

Landscape approach needed

Mechanisms to promote common values in the TBCA must involve stakeholders from all levels: governments (national, regional and district), private sector and local communities. Through the ITTO expedition, Lanjak-Entimau has been shown to constitute an extremely rich pool of biodiversity

and is the largest totally protected area in Sarawak. However, its function as a water catchment in the protection of soils and water is often overlooked or taken for granted. Lanjak-Entimau is located within the headwaters of the Batang Lumar and Rajang rivers. It occupies two main watersheds comprising three major and four minor drainage blocks, covering about 35% of the area in the southwestern region of Sarawak and serving a population of several hundred thousand people. Across the border, the watershed of the Kapuas River occupied by the Betung Kerihun National Park in West Kalimantan is even more extensive. Protecting the TBCA as a single catchment complex is another shared goal that is important to a wide range of stakeholders and can be used to benefit people on both sides of the border.

In fact, promoting biodiversity conservation at the landscape level has many benefits, particularly in Sarawak in view of the relatively small size of its totally protected areas, which are widely scattered and mostly surrounded by timber concessions and oil palm plantations. The concept of management at the landscape scale is in line with the intention of the government to designate suitable sites in each timber concession area within the permanent forest estate for biodiversity conservation and gene banks. These reserves, together with Native Customary Rights' forests adjacent to the totally protected areas, where available, can be linked and managed to ensure the maintenance of biodiversity, water quality and other values.

Local people

The involvement in and acceptance of a TBCA by local people is essential for success. Since becoming associated with the ITTO project, local communities in the buffer zone of Lanjak-Entimau have begun to realise the many benefits that conservation can bring to their lives. The sanctuary continues to provide them with a fresh and healthy environment—clean air, clean water and an abundance of plant and animal life—that many of their relatives and friends living elsewhere in highly disturbed and deforested landscapes have not been able to enjoy. Some residents have made a conscious effort to protect the environment and their assets by requesting Parks and Wildlife authorities to include their customary forest land (located in the buffer zone) in future extensions of the Batang Ai/Lanjak-Entimau protected area complex. Those involved in ecotourism in Batang Ai National Park have also become aware of the need to protect the orang-utan as a tourist attraction.

In the past year or so, however, there has been increasing evidence in Lanjak-Entimau and Batang Ai of encroachment by people living outside the buffer zone. Many of these people have no privileges to hunt or fish in the sanctuary but have ventured there because game animals in their traditional hunting areas have become scarce and the rivers are heavily laden with sediment. This suggests an urgent need not only for stronger enforcement but also for awareness campaigns targeting schools and special interest groups throughout the state—because this has become an issue that affects all Sarawakians.

The traditional users who have been granted privileges in Lanjak-Entimau will continue to hunt, fish and collect jungle produce for subsistence needs. However, they have also been encouraged to develop and undertake their own farming and fish-culturing activities to supplement their income. In time this should reduce their dependence on the forest.

Local communities are also playing an increasing role in conservation management. For example, representatives of local communities have been appointed honorary rangers and members of a Special Wildlife Committee for Lanjak-Entimau and a Special Park Committee for Batang

Ai. They contribute knowledge and ideas and participate in the planning and co-management of the two reserves. Through direct involvement in the committees, they can continue to receive appropriate training and guidance to upgrade their management capabilities. The project should create more opportunities for employing school-leavers in the communities.

From the lessons learnt during the last ten years, it seems that promoting conservation through active community participation in management and socioeconomic activities is feasible and can be successful, but co-management efforts between the relevant authorities and the local people must be sustained. The local people still require assistance and training in indigenous crop cultivation, entrepreneurship and financial management. Initially, wildlife rangers should be actively involved in the development of community-based economic activities by providing leadership and guidance.

Existing mechanisms to enhance active participation and co-management through the Special Wildlife Committee for Lanjak-Entimau and Special Park Committee for Batang Ai must be developed to full advantage, as they involve stakeholders from government, local communities and the private sector, including the timber industry. These committees form a vital link between the authorities and other stakeholders in the vicinity of the Batang Ai/Lanjak-Entimau protected area complex.

Putting 'transboundary' into management

One of the benefits of a functioning TBCA is the increased opportunity for the transfer of knowledge and experiences across political borders that have not always been very permeable to ideas. This process is at an early stage in the Lanjak-Entimau/Betung Kerihun TBCA, but the potential is huge. Lanjak-Entimau already has a network of field facilities that can be put to fuller use. It has been suggested that the new headquarters complex in Ulu Katibas could be turned into a rainforest research centre to promote research, conservation education and the training of young scientists. The centre, if established, would greatly enhance the image of Lanjak-Entimau and Sarawak as a pioneer in biodiversity conservation and transboundary management at the national and global levels and would have the potential to make a significant contribution to improving TBCA management.

The knowledge and experience gained in Lanjak-Entimau could be applied to initiate similar social and economic activities to benefit the local communities across the border in Indonesia, where this has not been done already. For example, the programs to promote community participation and sustainable livelihoods pioneered at Lanjak-Entimau could be used to train farmers in West Kalimantan. If necessary, wildlife rangers and trained local participants in Sarawak could be seconded to management partners in West Kalimantan to help initiate livelihood activities such as the cultivation of local fruits and the farming of local species of fish, both of which are being done successfully in the buffer zone of Lanjak-Entimau. Committees for co-management between the relevant authorities and the local people similar to those established in Lanjak-Entimau and Batang Ai could also be established in Betung Kerihun. Its park rangers can help to enhance the knowledge and awareness of the local people on the need for joint protected area management, biodiversity conservation and sustainable use.

Apart from activities such as fruit-growing and fish culture, it is also possible to develop potentially useful herbs as supplements for the food and health industries. For a long time, Indonesia has been well known as a producer and exporter of traditional herbs called *jamu*. This is an area where the local

communities of Lanjak-Entimau could benefit from the knowledge of their Indonesian counterparts.

Shared benefits could also be derived from joint ecotourism activities to promote culture, adventure and nature between Betung Kerihun and Batang Ai (Lanjak-Entimau is more remote and, given its special status as a wildlife sanctuary, less accessible to tourists). Tour agencies from both countries could be invited to participate.

Instituting cooperation

At a meeting in Jakarta on 7 August 2001 a joint task force between Sarawak and Indonesia was formed to collaborate, plan and implement short- and medium-term activities in the TBCA. Its terms of reference are:

- to formulate guidelines for collaborative management;
- to advise the respective governments on issues pertaining to the management of the TBCA;
- to exchange and share information and data on research findings;
- to assist each other in the protection of the TBCA's resources;
- to promote appreciation and support for measures to protect and manage the TBCA;
- to execute any other matters as requested by the respective governments consistent with the objectives of the TBCA; and
- to meet at least twice a year.

The task force has not yet had a strong influence on transboundary management. It could increase its effectiveness by employing its members on a full-time basis, enabling them to concentrate more fully on transboundary management issues. This would help provide continuity in the collaborative process. The necessary resources, both financial and human, should be made available for on-the-ground implementation.

It has been suggested that, for long-term cooperation, it would be useful to consider the establishment of a more permanent coordinating committee to draw up cooperative agreements for planning and development. The importance of such an agreement is stated in the IUCN good-practice guidelines for transboundary protected areas (Sandwith et al. 2001):

Both formal and informal agreements can be used to declare common interests, agree on objectives, state guiding principles, and plan and implement management programmes. They are essential to sustain co-operation in the trans-boundary context. They are needed to secure the endorsement of relevant authorities and accountability among the stakeholders.

These agreements can be extended to include the proposed TBCA between Kayan Mentarang National Park and the Pulong Tau National Park and the clustered World Heritage sites in due course. One joint permanent committee could be established to coordinate and co-manage all three projects as long as it had the full support of the relevant authorities and policy-makers, financially and institutionally. Implementation at the TBCA level requires the dedicated service of a team of permanent and full-time managers, scientific personnel, social workers, field assistants and rangers who are committed to biodiversity conservation and are willing to be posted to work in rural areas; for this, among other things, political commitment is essential.

ITTO's role

ITTO is a valuable supporter of transboundary conservation in the tropical world—its tropical forest transboundary conservation program is by far the



Hooked: a buffer-zone resident holds native fish bred in a nearby fish-pond. These fish are highly prized in Kuching, where they are marketed, offering a promising economic alternative to hunting and gathering in the wildlife sanctuary.

Photo: P. Chai

largest of its kind. ITTO should continue to act as a catalyst to seek high-level support for TBCAs and to fund their management. The benefits of a transboundary approach are many, not only from a conservation perspective but for political, economic and cultural reasons. Once the second TBCA between Sarawak and North Kalimantan is established, Borneo will have a total transboundary conservation area of over 2.3 million hectares, a globally significant contribution to the protection of biodiversity. More needs to be done. At the international level, governments must continue to seek the advice and support of active organisations such as ITTO in their effort to continue to pursue transboundary conservation issues.

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Is this the end for thin-panel tropical plywood?

New regulations in importing markets are adding to the woes of tropical timber plywood producers

by Mike Adams

ITTO Secretariat
Yokohama

GIVEN all their problems, the last thing tropical plywood exporters need is a new hurdle to market access—but that is just what they've got. In two of the major markets for tropical plywood, Japan and the European Union (EU), new and stricter standards on formaldehyde emission levels have been introduced for imported plywood. Mills will have to modify production processes as well as pay for external, third-party checking and this will increase the cost of plywood production.

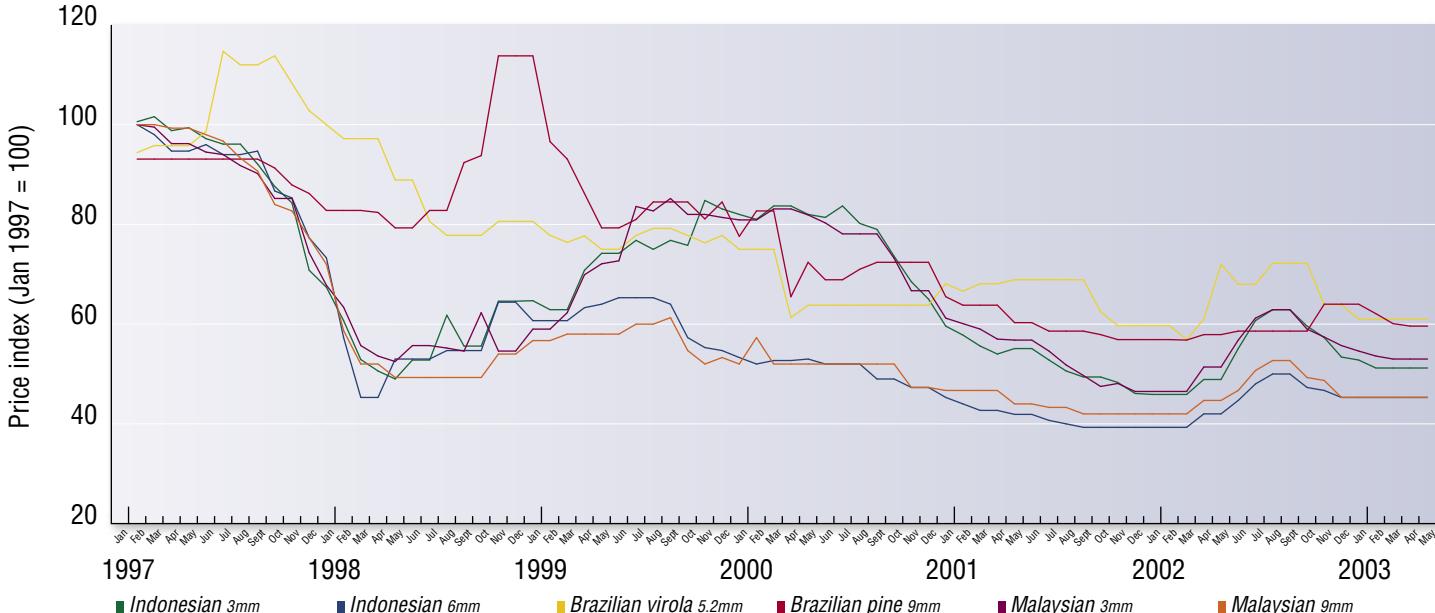
Coming as this new hurdle does at a time when market prices for commodity plywood are still extremely weak, the prospects for tropical hardwood plywood are not good. In fact, at the end of May 2003, prices were still at only 50–60% of those recorded before the crisis in Asia in 1997–98; the figure shows the doldrums in which plywood prices have dwelled since 1997.

In Malaysia, capacity utilisation is said to be only 40% and, while the numbers are difficult to confirm, the situation may be even worse in Indonesia ...

Minor recoveries over the period have been thwarted. After what appeared to be the beginning of a recovery in 2000, free-on-board (FOB) plywood prices retreated during 2001 through to mid 2002 when, following improving prices for Southeast Asian plywood, Brazilian producers announced price increases. In Europe, buyers jumped to secure stocks before prices went up further. This situation was mirrored in Japan where the buying momentum was spurred by a stronger yen, which made imports cheaper. The net result of the exuberant buying was overstocking. In these circumstances the only way for suppliers to advance sales was through discounts—so market prices slipped again. In recent months Brazilian plywood exporters have reduced prices considerably, widening the price differential between Brazilian and Southeast Asian hardwood plywood from its average of just over 10% to nearer 30–35%.

Be calmed

Tropical plywood FOB prices, 1997–2003



At the Annual Market Discussion in Panama last May (see page 20), Tan Seng Hock of Malaysia and Lamon Rutten of the United Nations Centre for Trade and Development (UNCTAD) presented early data from an ITTO study on the causes of market fluctuations and price instability in the tropical hardwood sector (the final report will be available in November 2003). They showed that the tropical plywood industry is going through major changes in most producer and consumer countries; Brazil, Malaysia, Indonesia, China and Japan have all seen upheavals in recent years, and in China and Indonesia further rapid change is anticipated. A large number of plywood mills in many countries have closed down in recent years; despite this, however, those that have survived are operating at very low levels of capacity utilisation—around 50% in the Asian plywood sector as a whole, 58% in Africa, and 65% in South America.

In Malaysia, capacity utilisation is said to be only 40% and, while the numbers are difficult to confirm, the situation may be even worse in Indonesia, where log shortages rather than weakness in demand are the main issue. Quite a few plywood mills, especially in Indonesia, have severe cash flow constraints; consequently, their marketing and processing operations are now driven by cash flow needs rather than profit optimisation and the international markets are taking advantage of this by capping moves to improve prices.

Tan and Rutten have produced preliminary data (see table) showing the change in wood-based panel production between 1992 and 2001. Tropical plywood production fell by just over 17%—in stark contrast to strong growth in production in temperate species' plywood, medium density fibreboard (MDF) and particleboards (including oriented strand board (OSB)).

According to responses to a questionnaire issued by Tan and Rutten, market players see poor price transparency and

Performing panels

World production of wood-based panels (million m³)

Panel type	1992	2001
Tropical plywood	23	19 ↓
Other plywood	25	36 ↑
MDF	na	19 ↑
Particle board (including OSB)	49	83 ↑

Source: ITTO study on the causes of market fluctuations and price instability in the tropical hardwood sector (in prep—available November 2003)

price fluctuations as key problems for tropical plywood and identified market price risk exposure as the key variable affecting company performance—more important than sales volume, raw material costs, labour costs or capital costs.

The lingering influence of weak market demand is continuing to limit the opportunities for producers to increase prices and this situation is made even more difficult by the recent appearance of low-priced, Chinese-manufactured tropical plywood in the European and Japanese markets. China is importing huge quantities of tropical logs and its newly established high-tech plymills can take advantage of low production costs to produce a very competitively priced combi-ply—comprising a tropical hardwood outer veneer over several layers of low-density timber of either softwood or poplar.

Falling imports in Japan

Japan's Forestry Agency has released its latest projections for demand in 2003. It predicts that total plywood demand will fall to 12.9 million m³ and plywood imports to 7.2 million m³; if the forecast is accurate, 2003 will be the third consecutive year of decline in both plywood demand and imports. Against this background, a recently concluded plywood conference involving the Japan Lumber Importers' Association, the Japan Federation of Plywood Manufacturers Associations, the Indonesian Plywood Association (APKINDO) and the Malaysian Panel Manufacturers' Association agreed that plywood exports to Japan in 2003 would not fall below 7 million m³. Indonesia is likely to supply 150 000 m³ less than last year because of the significant reduction in the annual allowable timber harvest in that country. To help address this, Malaysia's exports and Japan's domestic production will both increase by 50 000 m³.

These volumes have been set on the assumption that the plywood mills in Malaysia and Indonesia can meet the new plywood standards. Malaysian mills are reporting progress in acquiring the necessary certification under the Japan Standards Association, so their target is set close to last year's shipments of 1.76 million m³. However, because it is thought that Indonesian mills are yet to adjust production to meet the new standards, with only two mills being certified as of May 2003, their exports to Japan will likely fall below the agreed target.

According to ITTO's *Annual review and assessment of the world timber situation* (now available from itto-stats@itto.or.jp or www.itto.or.jp/inside/review2002/), tropical wood product imports to Europe declined in 2002. Plywood imports fell about 10%, with Indonesia and Malaysia seeing significant declines in their exports to the EU, although because of the weak *real* and through aggressive pricing Brazil managed to achieve a modest increase. Prospects for plywood demand in Europe in 2003 are not very encouraging, with most economies expected to post only moderate growth rates; in Germany and probably in Holland there is a danger of negative growth. The recent strengthening of the euro against the dollar, the currency of preference in the international plywood trade, may give a slight boost to plywood imports. However, on past evidence it could well be that any increase in demand will be snapped up by low-priced hardwood plywood manufactured in China rather than translating into better opportunities for tropical producers.

... it could well be that any increase in demand will be snapped up by low-priced hardwood plywood manufactured in China rather than translating into better opportunities for tropical producers.

Conclusion

The tropical plywood industry is under serious threat from falling prices, weak demand, Chinese production based on imported logs, problems of log availability and stiff competition from other wood-based panels. Those manufacturers who have managed to retool to produce higher-value panels have been weathering the market downturn with the least pain, but for tropical commodity plywood manufacturers the good days may be over.

Recent trends in production and in the international trade suggest we may be witnessing the end of the line for the thin-panel tropical commodity plywood sector. With the availability of tropical logs declining in some countries and with falling export prices, it is becoming increasingly difficult to profitably produce thin ply requiring a good-quality face and back veneer to sandwich a single, low-grade core.

More funds for tropical forest policy and action

The International Tropical Timber Council adds projects and activities worth US\$4.9 million to its program



Considered opinion: a delegate from Cameroon takes the floor during the recent Council session. Photo: © F. Dejon, IISD Earth Negotiations Bulletin

WITH the financial backing of the governments of Japan, Switzerland, the United States, Norway, Australia, Finland and the Republic of Korea, the International Tropical Timber Council has pledged an additional us\$4.9 million in grants to assist member countries in forest management and to expand the tropical timber trade.

The commitment was made during the 34th session of the Council, which was held in Panama City, Panama, 12–18 May 2003. The Council is ITTO's governing body, promoting the sustainable management of tropical forests and the expansion of the tropical timber trade through policies and field action. The Organization has an active portfolio of about 150 projects throughout the tropics.

The new funds pledged by the Council will be used in a range of activities. For example, a us\$0.5 million project will help in the conservation and reforestation of threatened mangrove forests along Panama's Pacific coast. Panama's mangrove ecosystems are extremely rich in biodiversity and support the livelihoods of many communities, but are under threat from over-harvesting and clearing.

The Council also continued its significant support for improved forest harvesting. It decided to finance a training program for reduced impact logging in the Brazilian Amazon and another for forestry and forest concession management training in Central African forestry schools.

Several important policy initiatives were approved during the session. One will investigate the implications of new and evolving product standards and technical regulations for the trade of tropical timber; this study will also report on tariffs, negotiations and the negotiating process related to tropical timber products in the context of the Doha Development Agenda. Another will evaluate the costs and benefits of the certification of good forest management in several ITTO producer member countries, including through field-level case-studies.

The Council decided on several significant actions related to phased approaches to certification, which are designed to facilitate market access for timber while forest management is being improved to a level eligible for certification. For example, it will undertake work to develop procedures on how phased approaches might be implemented in tropical timber-producing countries. This work will be followed by an international workshop that will, among other things, help raise awareness among governments, markets, donor agencies, non-governmental organisations and multilateral development banks on the merits of phased approaches to certification and possibilities to encourage their implementation.

The Council also continued its strong support for reporting on the status of forest management. It decided to fund eight workshops in producer member countries to train officials, forest managers, forest concessionaires and others directly involved in forest management in reporting on the state of forest management at both the national and forest management unit levels. These workshops will complement seven similar workshops that have already been convened and a further three that are planned. The Council also decided to convene, with FAO, another international expert meeting on criteria and indicators for sustainable forest management, and to support stakeholder participation in the Asia Forest Partnership.

The Council also agreed to strengthen its collaboration with the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) on mahogany (*Swietenia macrophylla*), which was listed recently in CITES Appendix II, and to assist countries to develop projects to facilitate implementation of the Appendix II listing.

A summary of Council outcomes, and a day-by-day account, can be found at www.iisd.ca/forestry/itto/ittc34/ The full texts of Council decisions are available at www.itto.or.jp/ittcdd_ses/decisions.html

Tropical timber producers fret about new regulations

New timber import regulations in the European Community could have a dramatic impact on the tropical timber trade, according to speakers at the ITTO Annual Market Discussion, which was held during the 34th session of the International Tropical Timber Council in Panama.

According to Ivan Tomaselli, a trade expert from Brazil, the European Community is changing its standards on wood-based panels. As of 1 April 2004 it will be compulsory for exporters to apply the 'CE Marking' based on European Union (EU) Standard EN 13986.

Under the CE Marking system, wood-based panels traded in the EU must satisfy new health and safety requirements. To do so, manufacturers will need to install quality-control systems in their factories for the regular testing of products and use a certified testing laboratory with third-party auditing.

Speaking during the Discussion, several tropical plywood producers, including from Ghana, Malaysia and Brazil, voiced concern that these new regulations would severely affect the tropical timber trade, since many tropical timber producers do not have the necessary certified testing laboratories. Moreover, the time allowed to meet the new requirements was too short.

According to these speakers, exports of wood-based panels (especially tropical plywood) to Europe will decline sharply once the new regulations come into force and exporters such as Brazil and Ghana would lose important market share to European producers (see also the article on tropical plywood on page 18).

Also during the Discussion, Wendy Baer, Executive Vice President of the International Wood Products Association (IWPA), alluded to the recent listing of Big-leaf Mahogany in CITES Appendix II. An Appendix II listing is designed to regulate trade in species not threatened with extinction but which may become threatened if trade is uncontrolled.

"The IWPA and many others did not support this up-listing because extensive research has clearly shown that Big-leaf Mahogany is regenerating," she said.

"The experts have agreed that Big-leaf Mahogany is a hardy species in no danger of extinction, least of all by trade," she said. "Its native range extends across 235 million hectares in Latin America, primarily in Brazil, Bolivia and Peru. The actual volume of mahogany in international trade is less than 1% of the estimated stocks. The fact is that the uplisting to Appendix II for mahogany was not supported by science."

Nevertheless, Baer stressed that a CITES Appendix II listing was not a trade ban. In fact, she said, the new CITES listing offers buyers and consumers twice the assurance that the mahogany they purchase and use has come from well-managed forests.

Changing the landscape of international forest policy

ITTO has been a successful experiment in international negotiations and has much more to contribute towards the sustainable management of tropical forests, according to a new book by Professor Duncan Poore launched during the 34th session of the International Tropical Timber Council last May.

Changing Landscapes, which is published by Earthscan, reviews the evolution of policies for the sustainable use of tropical forests through a history of ITTO. It provides an introduction to the ecological, historical and socioeconomic trends that have influenced contemporary forest management and explores the complex political forces that have shaped the trade in tropical timber and its regulation.

The book also traces the origins of the International Tropical Timber Agreement (ITTA) and shows how it gave rise to a unique intergovernmental organisation, perhaps the first of its kind to promote both the development of a natural resource and its conservation. The book gives a candid analysis of the Organization's performance in both its formulation of policy and its efforts to implement such policies in the forest.

For example, Poore finds that "no doubt [ITTO] could have been more effective; it has missed some important opportunities". But he concludes that the Organization "has been influential in altering and refining the nature of the forest debate out of all proportion to its size and budget. It has also been able, within limits, to transform policy into practice. It has been a good international investment."

Professor Poore urges forest negotiators to heed the lessons learned from the ITTO experience, particularly since negotiations are about to commence on a successor agreement to the ITTA.

"Intergovernmental bodies ... are often criticized for being bureaucratic, expensive and ineffective, yet the rapid trend towards globalisation means that they will play an increasing, and important, role in shaping the world's future. New models for the way such bodies should work are, I believe, desperately needed. ITTO was first devised to address a specific concern but it has evolved into something much broader; in the process, negotiators have created something new, and the lessons to be drawn from it are many."

See review on page 26.

Preparing for negotiations

The first session of the Preparatory Committee (PrepCom I) for the Negotiation of a Successor Agreement to the ITTA, 1994 took place on 20–21 May 2003 in Panama City, Panama. Approximately 100 participants attended the session, representing 37 member countries, two potential members, two intergovernmental organisations and specialised agencies, and three non-governmental organisations.

Over two days delegates engaged in preliminary discussions on the scope of and issues pertaining to a new agreement. The proposals made during the session will be consolidated and presented to the second session of the PrepCom (PrepCom II) in November. There was general consensus that: the successor agreement should remain a commodity agreement; the ITTA, 1994 should be the basis for the negotiations; and relevant new and emerging issues needed to be included in the new agreement. The nature of the issues, however, and the extent to which they should be addressed, remained a bone of contention. Upon leaving Panama City, delegates seemed satisfied with the fruitful exchange of views and hopeful that intersessional work to be carried out by the Working Group on Preparations for Negotiating a Successor Agreement, as well as PrepCom II, would pave the way for smooth negotiations in July 2004.

Adapted from IISD Earth Negotiations Bulletin; a full report a full report is available at www.iisd.ca/forestry/itto/prepcom1

Fellowship report

An ITTO fellowship allowed the author to attend a training course on forest management planning in Paris, France

by Reine Félicité Eteta'a Edzimba, épouse BETI

Senior technician for water and forests (Technicienne supérieure des Eaux et Forêts)

National Office of Forest Development (Office National de Développement des Forêts) (ONADEF)

Yaoundé, Cameroon



Carrying the can: ITTO fellow Reine Félicité Eteta'a Edzimba tends a community nursery in Cameroon.

THE tropical forests are under immense pressure from a wide range of destructive forces. One of these is intensive logging when it is conducted without due regard to the rules of sustainable forest management. It is therefore necessary to find strategies for improving the tropical timber resource base that can lead to the preservation and sustainability of our tropical forests.

In Cameroon and elsewhere in West Africa, the logging industry can be highly profitable (particularly in the first cut), but it is often carried out in a disorderly fashion. Misdemeanours by the various parties (which include approved forestry developers, non-approved foresters—illegal operators—and village populations living near the forests) range from the disregard of forest regulations to the pure and simple pillage of the forests.

The timber collected is intended for the forest industry (logs and timber), sale to private individuals and in

timber markets, and utilisation according to users' rights (structural timber, firewood). In order to avoid the total desolation of the forests we need to systematically regulate and uphold the standards of forestry development. To that effect, a number of measures must be taken to ensure sustainable forest management. In this article I outline a proper approach to forest management that ONADEF and other agencies are striving to achieve.

Forest analysis and knowledge of the resource

To ensure that our forests are managed sustainably it is essential to develop a sustainable forest management plan for each forest management unit (FMU). This should contain some basic features.

First, it should include a detailed description of the natural and socioeconomic contexts in which the forest must be managed. Generally speaking, this includes the climatic and topographic characteristics of the forest land, such as rainfall (average annual or monthly), temperatures and sunshine; the terrain type and conditions; topography; other vegetation and non-forest areas; and so on. As regards the socioeconomic environment, the aim is to take into account both the timber potential of the forest to be managed and the 'society-forest' relationship, and to integrate the concerns of all the stakeholders; this should allow the logging concessionaire to establish itself without clashes or conflicts. In other words, it is necessary to study the living conditions, users' activities and rights of the local populations, to investigate the prospects for employment of the villagers and young graduates, to develop local training programs to assist villagers in

Fellowships awarded

Twenty-eight fellowships worth a total of US\$150 000 were awarded at the 34th session of the International Tropical Timber Council in May 2003. Awardees were:

Mr Jorge Luis Medina (Bolivia); **Mr Nsorfon Innocent Forba** (Cameroon); **Mr Francis Emmanuel Ngome** (Cameroon); **Mr Marcellin Tonye Mahop** (Cameroon); **Ms Wynet Vera Smith** (Canada); **Ms Sandra María Leiva Bustillo** (Colombia); **Ms Sandra Eliana and Ms Candelaria Restrepo** (Colombia); **Ms Llinet Marcela Serna González** (Colombia); **Mr Alain Noël Ampolo** (Congo); **Mr Jean-Paul Obame Engone** (Gabon); **Mr Samuel Nsiah** (Ghana); **Mr Eric Donkor Marfo** (Ghana); **Mrs Edith Abruquah** (Ghana); **Ms Lina Karlinasari** (Indonesia); **Mr Teguh Rahardja** (Indonesia); **Dr Untung Iskandar** (Indonesia); **Ms Made Hestilestari Tata** (Indonesia); **Dr Hin Fui Lim** (Malaysia); **Mr Balram Dhakal** (Nepal); **Mr Ashok Kumar Mallik** (Nepal); **Mr Thakur Silwal** (Nepal); **Mr Israel Fufuse Bewang** (Papua New Guinea); **Ms Carolina de La Rosa Tincopa** (Peru); **Ms Elsa Sara Arias Ninán** (Peru); **Ms Irma Icatlo Palanganian** (Philippines); **Ms María Eugenia Benítez Torres** (Venezuela); **Mr Edgar Alexander Trejo Avila** (Venezuela); **Mr Yoston Jaime Contreras Miranda** (Venezuela).



finding employment in the forestry operation, and to determine possible sources of conflicts between the population and any eventual logging concessionaire.

It is also important to determine the standard of living of the populations and to carry out a survey of the state infrastructures from which they benefit. The management plan should specify the local population's rights in the use of the forest resources.

Collecting and documenting the best possible information is essential to the management decision-making process. Existing mapping, satellite and radar images, and aerial photographs should be used to stratify the forest in preparation for detailed forest resource inventories. General management inventories should quantify those forest resources, including but not limited to timber resources, that would be available for immediate harvest, as well as the resources that would become available in the medium term. The results of inventories should then be translated into a report including maps and tables containing the available information.

Forest productivity after the first harvest should not be overlooked. Growth-and-yield data, where available, should be used to assess the forest's potential sustainable yield. If such data are not available, permanent sampling plots should be established.

Planning for harvesting

Generally, the management plan will span between 20 and 40 years, with reviews usually every five years. Normally, it will specify the main management parameters, such as rotation, period of validity, allowable cut, minimal diameter, etc, in the FMU. Silvicultural operations such as thinning and other improvements must also be described.

Production inventory

The production working circle is that part of the FMU that is to be harvested. Pre-harvest inventories must measure all individual trees of valuable timber species with a diameter greater than 20 cm. Moreover, the number, usable

volumes and crop stems of all other marketable individuals must be measured. Those trees to be harvested should be plotted on a map and marked in the field.

Training, monitoring and control

The implementation of the management plan must be closely monitored; the requirements for monitoring and control should be specified in the management plan. The training needs of all categories of staff should also be specified.

Conclusion

By the end of my training, and also through my own study, I can humbly claim to have improved my knowledge of forest management. I have acquired greater experience and valuable knowledge, which will have to be preserved and developed wherever it will be needed within my profession. Indeed, these lessons can already be put to practical use in my professional life, especially during the field meetings that our services organise regularly for the populations, either at the beginning of each logging operation, or to settle disputes between operators and residents.

Translated from the French by Yvonne Cunningham.

Editor's note: the ATO/ITTO principles, criteria and indicators for the sustainable management of African natural tropical forests (see TFU 13/1, page 19) provide further guidance on the ingredients for an effective forest management plan in African tropical forests. For a copy, please contact the ITTO Information Officer (address on page 2), or downloaded at www.itto.or.jp/policy/principle

ITTO Fellowships offered

ITTO offers fellowships through the Freezailah Fellowship Fund to promote human resource development and to strengthen professional expertise in member countries in tropical forestry and related disciplines. The goal is to promote the sustainable management of tropical forests, the efficient use and processing of tropical timber, and better economic information about the international trade in tropical timber.

Eligible activities include:

- participation in short-term training courses, training internships, study tours, lecture/demonstration tours and international/regional conferences;
- technical document preparation, publication and dissemination, such as manuals and monographs; and
- post-graduate studies.

Priority areas: eligible activities aim to develop human resources and professional expertise in one or more of the following areas:

- improving the transparency of the tropical timber market;
- improving the marketing and distribution of tropical timber species from sustainably managed sources;

- improving market access for tropical timber exports from sustainably managed sources;
- securing the tropical timber resource base;
- improving the tropical timber resource base, including through the application of criteria and indicators for sustainable forest management;
- enhancing technical, financial and human capacities to manage the tropical timber resource base;
- promoting increased and further processing of tropical timber from sustainably managed sources;
- improving the marketing and standardisation of tropical timber exports; and
- improving the efficiency of tropical timber processing.

In any of the above, the following are relevant:

- enhancing public relations, awareness and education;
- improving statistics;
- research and development; and
- sharing information, knowledge and technology.

Selection criteria: Fellowship applications will be assessed against the following selection criteria (in no priority order):

- consistency of the proposed activity with the Program's objective and priority areas;
- qualifications of the applicant to undertake the proposed fellowship activity;
- the potential of the skills and knowledge acquired or advanced under the fellowship activity to lead to wider applications and benefits nationally and internationally; and
- reasonableness of costs in relation to the proposed fellowship activity.

The maximum amount for a fellowship grant is US\$10 000. Only nationals of ITTO member countries are eligible to apply. The next deadline for applications is **4 September 2003** for activities that will begin no sooner than 1 December 2003. Applications are appraised in May and November each year.

Further details and application forms (in English, French or Spanish) are available from Dr Chisato Aoki, Fellowship Program, ITTO; Fax 81-45-223 1111; fellowship@itto.or.jp (see page 2 for ITTO's postal address).

On the conference circuit

Further-processing process initiated

Report of the Joint ATO/ITTO Ministerial Conference on the Further Processing of Tropical Timber

26–27 March 2003

Libreville, Gabon

Participants at this conference included ministers of African Timber Organization (ATO) member countries or their representatives, ITTO's Executive Director, Dr Manoel Sobral Filho, African and international experts, the representatives of regional and sub-regional projects and programs, donors representatives, operators of the timber sector and a number of environmental non-governmental organisations in the sub-region. The main objective was to develop and adopt a regional plan of strategic actions to promote the further processing of tropical timber in Africa.

In his keynote address, Dr Sobral expressed his gratitude to the Government of Gabon as well as to the conference organising

committee. He further noted the excellent relationship between ATO and ITTO, the convening of this conference being just one manifestation of this.

Dr Sobral said that ITTO firmly believed the processing of timber at the local level within tropical countries was essential for financing the sustainable management of tropical forest resources. ITTO had sponsored this conference to: allow governments to focus on the benefits that could be derived from efficient forest industries; undertake a critical review of the current status of further-processing activities in Africa; and enhance inputs for the development of national strategies and programs aimed at promoting further-processing activities in each country of the region.

The Chairman in office of the ATO, H.E. Jules Moota Yuma, said that the ATO was the sole African intergovernmental organisation for forestry cooperation. The development of timber-processing industries was one of the foci of this cooperation, together with the sustainable management of forest resources and the marketing of timber products.

There were huge gaps between the timber production outputs achieved by ATO member countries as a whole and those of other timber-producing regions, he said. Such a weak performance could be explained by low production figures but also by the inadequate capacity levels of timber-processing industries established in these countries. For several years, therefore, ATO had been seeking new ways and means to contribute to the development of timber-processing industries in its member countries.

This conference, said H.E. Moota Yuma, was the result of a large joint cooperation program between ATO and ITTO. The expected industrialisation plan would constitute the master plan for investments in the sector, at both national and multilateral institution levels.

A number of timber industry experts presented papers designed to assist in the formulation of the action plan. For example, Dr Roszehan Mohd Idrus presented the Malaysian experience in the promotion of further timber processing. Dr Markku Simula detailed the objectives and conditions required for the promotion

General policy statement on further processing of tropical timber in Africa

We, the Ministers in charge of Forests and the Heads of Delegations of ATO Member countries: Republic of Angola; Republic of Cameroon; Republic of Congo; Republic of Côte d'Ivoire; Republic of Gabon; Republic of Ghana; Republic of Equatorial Guinea; Republic of Liberia; Republic of Nigeria; Democratic Republic of Congo; Republic of São-Tome and Príncipe; Republic of Togo;

Assembled in Libreville (Republic of Gabon) from 26 to 27 March 2003 during the Joint ATO/ITTO Conference on the Further Processing of African Tropical Timber;

Considering that forest resources are indispensable to the livelihood of communities and efficiently contribute to the socioeconomic development of our countries;

Considering that these resources should be rationally managed and sustainably used for the benefit of present and future generations;

Considering that the local processing of timber contributes to increasing the value of the forest resource base and generates employment opportunities;

Considering that the multiple constraints facing the development of forest industries in Africa are a major obstacle to the expansion of these industries;

Considering that the industrialisation of forest industries constitutes one major concern for all ATO members;

Acknowledging the need for the international community to provide a significant level of assistance to the industrialisation process of forest industries, thus contributing to the conservation and sustainable management of forests;

Recalling the efforts deployed by each of our member states and the need to secure those significant achievements at social, economic and environmental levels;

Convinced that cooperation at the sub-regional level has a supporting role to play in promoting the further processing of timber in consistency with the international commitments made by the international community;

Aware of the role the states should play in the development, adoption and application of laws and regulations to enable the sustainable development of African timber industries;

Considering the new partnership for the sustainable management of Congo Basin forests initiated by South Africa and the United States of America during the World Summit for Sustainable Development in Johannesburg (South Africa);

Determined to develop incentive policies and mechanisms aimed at promoting the further processing of timber at local level;

- **Approve the Industrialisation Action Plan for African Tropical Timber annexed to this Declaration;**
- **Reaffirm the support of our countries to the approach contained in the Lagos Plan, concerning in particular a better integration of the forest and timber sector in the economic and social development;**
- **Reaffirm our commitment to promote the development of industries adapted to both the resources available and the requirements of local and international markets, through the identification and elimination of constraints on the expansion and competitiveness of forest industries;**
- **Approve the recommendations formulated by the Expert Panels of the Joint ATO/ITTO Conference on the Further Processing of African Tropical Timber;**
- **Invite the international community to associate themselves with the actions that we decide to either reinforce or undertake for the benefit of all.**

The Industrialisation Action Plan for African Tropical Timber can be obtained from ATO, BP 1077, Libreville, Gabon; Tel 241-732 928; oab-gabon@internetgabon.com

of further processing, Dr Timothée Fomete presented a framework strategy for the development of the further processing of tropical timber in ATO Member countries, and Mr. Paul Emmanuel Huet of the Inter-african Forest Industries Association and the Honorable Roger Nkodo of Cameroon gave perspectives from the private sector.

Before the close of the conference, the ministers met behind closed doors in order to consider and adopt the conference findings, and they issued a general policy statement on timber industry development (*in box*).

UNFF 3 adopted six resolutions on: enhanced cooperation and policy and program coordination; forest health and productivity; economic aspects of forests; maintaining forest cover to meet present and future needs; the UNFF Trust Fund; and strengthening the Secretariat. UNFF 3 also approved two decisions: on the voluntary reporting format; and on the terms of reference for three ad hoc expert groups.

Expert groups

This second decision, on the establishment of three ad hoc expert groups—on approaches and mechanisms on monitoring, assessing and reporting (MAR); financing and transfer of environmentally sound technologies (ESTs), and consideration with a view to recommending the parameters of a mandate for developing a legal framework on all types of forests (parameters)—was an outstanding issue carried forward from UNFF 2. Delegates debated the composition of the three groups and the number and timing of their meetings. The G-77/China insisted that the expert group on parameters have universal membership and make decisions based on consensus. The European Union argued that universal participation may undermine the efficiency of the expert group, and supported limiting composition. In the end, it was decided that membership would be open to one expert from each UNFF member country. The final decision:

- establishes three ad hoc expert groups, one each on MAR, ESTs and parameters;
- designates the terms of reference for each ad hoc expert group;
- invites each of the five United Nations regional groups to nominate six country experts for the MAR ad hoc expert group, as well as six country

experts for the EST ad hoc expert group, by 15 September 2003;

- invites all UNFF members to nominate a country expert for the ad hoc expert group on parameters by 31 March 2004;
- invites UNFF members to submit their views and CPF members to provide information on preparations for the meeting of the ad hoc expert group on parameters; and
- states that the expert group on parameters will convene once after UNFF 4 and complete its work three months before UNFF 5.

UNFF 4 will be held in Geneva on 3–14 May 2004.

Adapted from the IISD Earth Negotiations Bulletin; a full report is available at www.iisd.ca/linkages/vol13/emb13105e.html

UNFF establishes expert groups

3rd Session of the United Nations Forum on Forests

26 May–6 June 2003

Geneva, Switzerland

During this two-week meeting of the United Nations Forum on Forests (UNFF), delegates addressed progress in the implementation of the Intergovernmental Panel on Forests/Intergovernmental Forum on Forests proposals for action related to the following substantive items: economic aspects of forests; forest health and productivity; and maintaining forest cover to meet present and future needs. Delegates also considered agenda items common to each UNFF session, including: enhanced cooperation and policy and program coordination; country experiences and lessons learned; emerging issues relevant to country implementation; intersessional work, including further discussion on the ad hoc expert groups; monitoring, assessment and reporting; promoting public participation; national forest programs; trade; and enabling environment.

A multi-stakeholder dialogue was held on Tuesday 27 May. During this session, delegates heard presentations from

► Poore, D. 2003. **Changing landscapes: the development of the International Tropical Timber Organization and its influence on tropical forest management.** Foreword by Jeff Sayer, WWF. Earthscan Publications, London, UK. ISBN 1 85383 991 4 (paperback), 1 85383 990 6 (hardback). £19.96 (paperback; online price), £54 (hardback; online price)

Available from: Earthscan Publications Ltd, 120 Pentonville Road, London, N1 9JN, UK; Fax: 44-20-7278 1142; Tel: 44-1903-828 800; earthinfo@earthscan.co.uk; www.earthscan.co.uk



On the brink of the negotiation of a successor agreement to the International Tropical Timber Agreement (ITTA), 1994, this book provides a solid basis for understanding the key issues to be considered in that negotiation.

Launched in Panama City at the 34th Session of the International Tropical

Timber Council, the book and its author received an enthusiastic reception, many noting the significance of the timing of publication.

Duncan Poore's work has long been recognised and appreciated by the Council and its member representatives. His many contributions to ITTO have been influential in the development of policies affecting the tropical timber trade and tropical forest management. His first book, *No timber without trees*, was a seminal work, but this new book will have a far wider impact—if introduced to the right audience.

The book puts the sustainable management of tropical forests in a historical and policy context known in the past to only a few policy-makers with global experience in forests and multilateral organisations and agreements. *Changing landscapes* not only identifies the history of the ITTA and ITTO, but also the multilateral geopolitical and policy context in which ITTO was conceived and born and in which it grew. I consider this book to be a fundamental primer for anyone concerned with forests and forest policy—and not only to those relatively few individuals with an interest in ITTO. I found it a fascinating book to read; having worked with ITTO for almost a decade, it gave me a breathtaking, 360-degree view of what I experienced as a policy-maker and negotiator in ITTO and also in the Intergovernmental Panel on Forests, the Intergovernmental Forum on Forests, the United Nations Forum on Forests, the Convention on Biological Diversity, and other multilateral processes.

Some of the quotes in the book are jewels in the crown of sustainable forest management, concepts I will consider

in decision-making in the future. Forest management, for example, "may be for various purposes (for production of timber or non-wood forest products, for protection, etc); the important point is to be clear about the objective and stick to it! ... To be strictly accurate, all that can be said about any management is that it is *consistent with sustainability*" (page 20, author's emphasis). Another underlines the need for more connectivity between processes, institutions, politics and bureaucracy. "Policies should be imaginative and designed to adapt to changing circumstances: in the balance between populations and resources; in economic well-being; in relation to climate change; in world energy policies, in the balance of trade; and in the attitude of people to environmental issues. Many land use policies are obsolete before they are implemented. Conservation policies for tropical forest lands must, therefore, look forward, be integrated as far as possible with policies for population and for all sectors of the economy, and aim to hit a moving target" (p 25). These are words that negotiators within the ITTC would be wise to keep in mind.

Poore ends his book with a plea for what, these days, is called human resource development: "results will only be as good as the people who are striving for them. Good management of forests depends not only on sound science but also on accurate observation and sensitive judgment. Sustainable forest management will only succeed when there are many people with such talents in positions where they are able to shape the future forest landscape" (p 258).

Without this master forester, *eminence grise* and consummate visionary, the sustainable management of forests would certainly not be within our reach. He gives a challenge and perspective to the good people of the globe with concern not only for ITTO, but for all the world's forests.

*Review by Jan L. McAlpine
Vice Chair, International Tropical Timber Council
(Senior Negotiator, Forests, USA)*

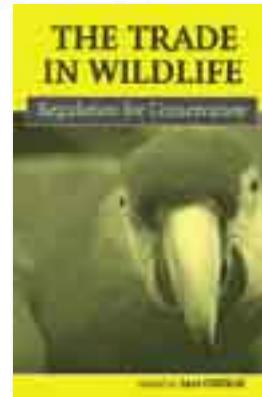


Penned in: Duncan Poore signs copies of the book during its launch in Panama City.
© F. Dejon, IISD Earth Negotiations Bulletin

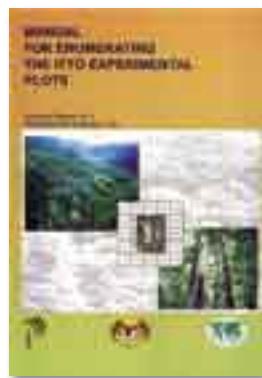
► Korsgaard, S. 2002. Manual for enumerating the ITTO experimental plots. *Technical Report No 1, ITTO/MAL/PD 24/93 Rev. 2 (F)*. Forestry Department Peninsular Malaysia, Kuala Lumpur, and ITTO, Yokohama, Japan.

Korsgaard, S. 2002. Manual for editing and tabulation of data from the ITTO experimental plots. *Technical Report No 1, ITTO/MAL/PD 24/93 Rev. 2 (F)*. Forestry Department Peninsular Malaysia, Kuala Lumpur, and ITTO, Yokohama, Japan.

Available from: ITTO Information Officer, Yokohama, Japan (full address given on page 2); itto@itto.or.jp



This book is based on a seminar titled 'Regulation, enforcement and the international trade in wildlife: new directions for changing times,' which was held in 2001 at Cambridge University. The seven case-studies presented therein look at a range of species—including the rhinoceros, the elephant and an Indonesian parrot—and at the trade in timber and bushmeat.



The first of these technical reports contains instructions for enumerating the permanent sample plots established by two phases of an ITTO project (PD 10/87 (F) and PD 24/93 (F)) in Peninsular Malaysia. The second provides instructions for using the computer-processing programs for editing, correcting and tabulating the enumeration data.

► bin Mohadad Ismail, S., Thai, S., Yap, Y., bin Deris, O. & Korsgaard, S. 2002. Proceedings of the Malaysia-ITTO international workshop on growth and yield of managed tropical forests, 25–29 June 2002, Kuala Lumpur, Malaysia. Forestry Department Peninsular Malaysia, Kuala Lumpur. ISBN 983 9269 17 8.

Available from: Forestry Department Peninsular Malaysia, Jalan Sultan Salahuddin, 50660 Kuala Lumpur, Malaysia.



This workshop was organised to disseminate early results of an ITTO project designed to study the effects of different harvesting intensities and different silvicultural treatments on the growth of residual stands at four selected sites in the states of Pahang, Perak, Selangor and Trengganu. In addition it included papers from growth-and-yield specialists from Australia, Brazil, Papua New Guinea, Indonesia, Germany and the United Kingdom. The book is nicely produced and includes a number of colour plates.

► Oldfield, S. (ed) 2003. The trade in wildlife. Regulation for conservation. Earthscan, London. ISBN 1 85383 954 X. US\$29.95

Available from: Earthscan Publications Ltd, 120 Pentonville Rd, London N1 9JN, UK; Tel 44-20-7278 0433; 44-20-7278 1142; www.earthscan.co.uk; earthinfo@earthscan.co.uk

► bin Nik Mustafa, N., Emori, K., Ang, L., bin Kamaruzaman, M. & Yap, Y. 2002. Forest plantation for the future: a record of the multi-storyed forest management project in Malaysia and the small-scale fast-growing forest plantation project in Peninsular Malaysia. Forestry Department Peninsular Malaysia, Kuala Lumpur. ISBN 983 9269 18 6.

Available from: Forestry Department Peninsular Malaysia, Jalan Sultan Salahuddin, 50660 Kuala Lumpur, Malaysia.



This book presents the background, results and findings of two projects—on multi-storyed forest management, and small-scale forest plantations—conducted between 1991 and 2002 in Peninsular Malaysia.

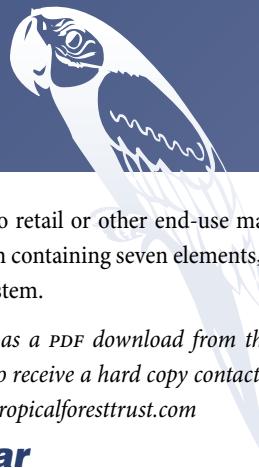
► Landell-Mills, N. & Porras, I. 2002. Silver bullet or fool's gold? A global review of markets for forest environmental services and their impact on the poor. International Institute for Environment and Development, London, UK. ISBN 1 89982 592 4. US\$22.50

Available from: Earthprint Ltd, Orders Department, PO Box 119, Stevenage, Hertfordshire, SG1 4TP, UK; www.earthprint.com; orders@earthprint.co.uk



This very thorough literature review includes 287 cases where markets for environmental services are being pursued and emphasises the risks to and opportunities for increasing the welfare of the poor. The authors observed 'a growing willingness to pay' by the beneficiaries of such services, which they attribute to: an increasing appreciation of the benefits provided by forest services; the efforts of companies to improve their public images and to head off criticism by NGOs; the

identification of niche markets associated with environmentally friendly products; and ethical concerns and the desire of beneficiaries to contribute to nature conservation. The authors also offer some recommendations for developing 'pro-poor' markets, although curiously they devote little attention to the need to stimulate far greater demand than currently exists.



Edited
by
Alastair
Sarre

New faces in Brazil

Mr Carlos A. Vincente has been appointed director of the National Forest Program in the Brazilian Ministry of Environment. Mr Vincente has a master's degree in natural resources administration and vast experience in Amazonian forestry. He replaces Mr Raimundo Deusdara, who is now Deputy Secretary of the Environment in the state of Amazonas.

New appointments have also been made in the Brazilian Institute for Environment and Natural Resources (IBAMA). Dr Marcus Barros, from Manaus in Amazonas, was recently appointed IBAMA's president, having previously served as president of the Amazonian Research Institute and as rector of the Amazonas Federal University. Meanwhile, Antonio Hummel was appointed IBAMA's Director-General of Forests. Mr Hummel has a master's degree in forest management and has also been associated with ITTO PROJECT PD 68/89 (F), which developed a management plan for the Tapajos state forest in Pará.

Reported by Rubén Guevara, ITTO Regional Officer

Certification and consumers

A research brief distributed recently by Oregon State University describes an experiment conducted at two Home Depot stores in Oregon, USA in which consumers were offered a choice between "virtually identical" ecolabelled and non-ecolabelled plywood products. The amounts of each type sold were monitored to determine if the presence of the ecolabel affected sales. The researchers found that the ecolabelled product outsold the non-ecolabelled product two to one—as long as the price was the same for each product. When the ecolabelled product was priced at a 2% premium, the non-ecolabelled product outsold the ecolabelled product by 1.7 to one. The study also detected a difference between locations, with higher sales of the ecolabelled product in the store situated in the "more liberal" city of Eugene.

This study had several limitations, as the authors point out. First, the two products were not identical: the ecolabelled product was a 5-ply board while the non-labelled product was 6-ply. Moreover, the research was restricted to just two sites, focused on a single product and measured the effect of a single price premium. Nevertheless, a study that measures the real buying habits of consumers versus 'attitude' surveys deserves attention and, perhaps, replication at a larger scale.

For more information on the study contact: Roy Anderson at Roy.Anderson@orst.edu

Buyer's guide to legal wood

The Tropical Forest Trust (TFT) recently published what it says is "a practical, industry-oriented guide to excluding illegal and other unwanted wood" from a timber supply chain. Written for senior managers of companies that

produce and/or supply wood products to retail or other end-use markets, the guide proposes a wood control system containing seven elements, and a six-step process for developing such a system.

Good wood, good business is available as a PDF download from the TFT website at www.tropicalforesttrust.com. To receive a hard copy contact: Scott Poynton, Tel 41-22-9990137; s.poynton@tropicalforesttrust.com

Poplar not so popular

Vivek Saxena, Deputy Conservator of Forests in the Indian state of Haryana, has conducted a detailed study of the local-level marketing of agroforestry products in his home state. Among other things, he documents a decline in the prices obtained by farmers for poplar between 1998 and 2002, in contrast to prices for *Eucalyptus*, which remained steady or increased over the same period, and he identifies some of the marketing and other reasons for this.

Copies of the paper can be obtained from the author at viveksaxi@yahoo.com

Peru directory available

The Peruvian consultancy company Tropical Forest Consultores recently published a directory of the Peruvian forest sector, which includes information on the country's timber producers, exporters and manufacturers. *Direcfor 2003* costs US\$90 and is available from: Mr Eduardo Rios, Lima Sur 961 Ave, Lurigancho Chosica, L-15, Peru; Tel 511-360 0433; tropicalforestc@viabcp.com; www.peruforestal.org

Europeans communicate on forest law enforcement

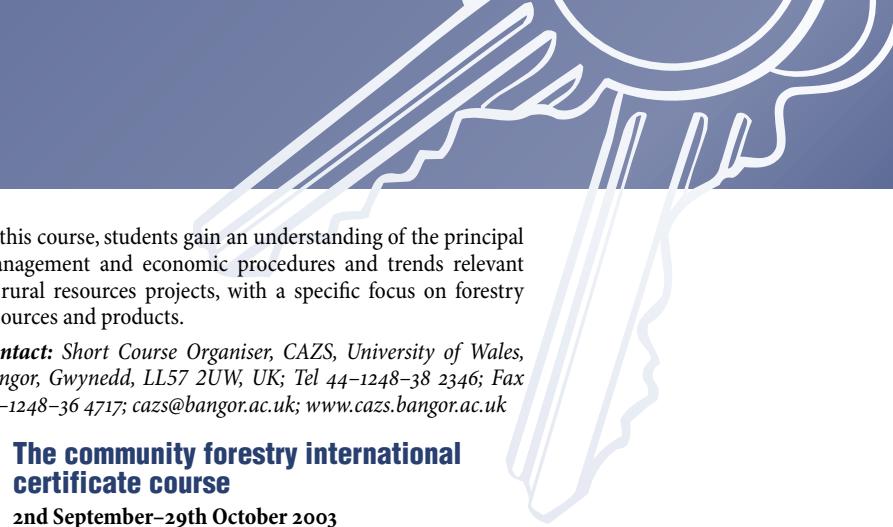
A recent Communication from the European Commission (EC) to the Council and the European Parliament on forest law enforcement, governance and trade sets out a process and a package of measures through which the EC proposes to address illegal logging and related trade. The European Union (EU) Action Plan for Forest Law Enforcement, Governance and Trade, which is contained in the Communication, emphasises governance reforms and capacity building, supported by actions aimed at developing multilateral cooperation and complementary demand-side measures designed to reduce the consumption of illegally harvested timber in the EU (and ultimately in major consumer markets elsewhere in the world).

The report is available in English, French and German at http://europa.eu.int/eur-lex/en/com/cnc/en_cnc_month_2003_05.html

Trade in timber from Liberia prohibited

On 6 May 2003 the United Nations Security Council adopted Resolution 1478 (2003) prohibiting imports of wood products from Liberia. The ban comes into effect on 7 July 2003 and will run for ten months. According to the Security Council, revenue from timber exports has been used for illegal arms' transactions since restrictions were placed on diamond imports from Liberia. ITTO statistics show that Liberia exported 225 000 m³ of logs in 2001; no data are available for 2002. The Security Council identified 37 countries that have been buying timber from Liberia.

Reported by the ITTO Tropical Timber Market Information Service



The Smithsonian environmental leadership course

7–19 September 2003
Cost: US\$2750

Washington, DC, USA

This course provides specific tools to improve personal and team relationships, instil self-confidence, conduct successful negotiations, initiate strategic planning and create effective communication in and across organisational cultures.

Contact: MAB Program, Smithsonian Institution, 1100 Jefferson Drive, SW, Suite 3123, Washington, DC 20560-0705, USA; Tel 1-202-357 4793; Fax 1-202-786 2557; simab@ic.si.edu; www.si.edu/simab

An introduction to agroforestry

September–December 2003
Cost: £5100

Bangor, UK

This course examines agroforestry practices, their relevance in farming and forestry systems, and the ecological, economic and social principles that influence them.

Contact: Short Course Organiser, CAZS, University of Wales, Bangor, Gwynedd, LL57 2UW, UK; Tel 44-1248-38 2346; Fax 44-1248-36 4717; cazs@bangor.ac.uk; www.cazs.bangor.ac.uk

Forest management

January–April 2004
Cost: £5100

Bangor, UK

This course covers the principal concepts and practices underlying the management, the utilisation of timber and non-timber forest resources, and the basic economics behind forestry and agroforestry decision-making. Students will also have the opportunity to look at the principles of remote sensing, GIS & EIA and their use in land resource management.

Contact: Short Course Organiser, CAZS, University of Wales, Bangor, Gwynedd, LL57 2UW, UK; Tel 44-1248-38 2346; Fax 44-1248-36 4717; cazs@bangor.ac.uk; www.cazs.bangor.ac.uk

Rural resource management—forestry option

January–April 2004
Cost: £5100

Bangor, UK

Social forestry for sustainable rural development

9 September–20 October 2003

Cost: US\$3780

This course will enable participants to articulate recent concepts, issues and strategies in sustainable forest and rural development; evaluate the applicability of new people-oriented approaches in forest resource management to their own work situation; and design, manage, monitor and evaluate a forest community development program/project through the active participation of the different stakeholders.

Participatory approaches in forestry and natural resources development projects

21 October–1 December 2003

Cost: US\$3780

This course will enable participants to appreciate the need for participation of local communities in natural resource development projects; acquire the necessary knowledge and skills to apply participatory principles and techniques in all aspects of project cycle; and formulate an action plan that integrates the participatory concepts, strategies and techniques in their own work situation.

Biodiversity monitoring and assessment

20 April–31 May 2004
19 April–30 May 2005

Cost: US\$3780

This course covers a wide range of topics including scope and relevance of biodiversity in the terrestrial ecosystem, planning and approaches in assessing and monitoring biodiversity, genetic and population inventory methods, fauna

In this course, students gain an understanding of the principal management and economic procedures and trends relevant to rural resources projects, with a specific focus on forestry resources and products.

Contact: Short Course Organiser, CAZS, University of Wales, Bangor, Gwynedd, LL57 2UW, UK; Tel 44-1248-38 2346; Fax 44-1248-36 4717; cazs@bangor.ac.uk; www.cazs.bangor.ac.uk

The community forestry international certificate course

2nd September–29th October 2003

Bangkok, Thailand

Cost: US\$6950

This course will help participants to understand, identify and analyse key community forestry concepts, strategies and principles. This theoretical base is supported by a combination of practical skills, such as participatory techniques, project planning and presentation tools, that are needed to plan and implement community forestry programs. The active sharing of experiences among the diverse international group of course participants is used to broaden personal perspectives on community-based forest management.

Contact: RECOFTC Regional Services Unit, Regional Community Forestry Training Center for Asia and the Pacific (RECOFTC), PO Box 1111, Kasetsart University, Bangkok 10903, Thailand; Tel 662-9405700 Ext. 1234; Fax 662-561 4880; Contact@RECOFTC.org

Masters and doctorates in forestry

São Paulo, Brazil

The Forestry Science Department of the University of São Paulo offers MSc and PhD courses in forestry science starting in February and August each year. The courses include specialisations in silviculture, forest management, wood technology, forest ecology and forest genetics. Course duration is in the range 2–3 years.

Contact: Forestry Science Department, University of São Paulo, Piracicaba, SP, Brazil; Fax 55-19-430 8678; ipef@carpa.ciagri.usp.br

and floral inventory, single and multiple-species inventory, ecosystem and landscape diversity inventory, and analysis and interpretation of biodiversity data.

Application of GIS in natural resources policy

11 – 24 May 2004

10 – 23 May 2005

Cost: US\$1575

This course provides administrators, managers, experts and other professionals in the fields of natural resources policy research the knowledge to include geographic and temporal dimensions in their policy recommendations and strategies.

Study tour on forestry and environmental training

11 – 24 May 2004

10 – 23 May 2005

Cost: US\$4500

This course introduces participants to various aspects of training management through visits and observation tours of different government and non-government training organisations in the Philippines in the field of forest resources conservation and environmental stability.

For all courses in this box contact: The Director, Training Center for Tropical Resources and Ecosystems Sustainability (TREES) College of Forestry and Natural Resources, University of the Philippines Los Baños, PO Box 434, College, Laguna 4031, Philippines; Tel 63-49-536 2268 or 536 2736; Fax 63-49-536 3340; trees@laguna.net; www.apafri.org/trees/trainings.htm

By featuring these courses, ITTO doesn't necessarily endorse them. Potential applicants are advised to obtain further information about the courses of interest and the institutions offering them.

Meetings

- 25–30 August 2003. **2nd Congress of Conservation of Biodiversity in the Andes and the Amazon Basin, and 4th Ecuadorian Botanical Congress.** Loja, Ecuador. **Contact:** Dr. Rainer W. Bussmann, Scientific Director, *Nature and Culture International*, 1400 Maiden Lane, Del Mar, CA 92014, USA; Tel 1-858-259 0374; Fax 1-858-259 1815; rbussman n@natureandculture.org; www.bi odiversidad2003.org/
- 25 August–5 September 2003. **6th Conference of the Parties to the Convention to Combat Desertification.** Havana, Cuba. **Contact:** CCD Secretariat; Tel 49-228-815 2800; Fax 49-228-815 2898/99; secretariat@uncd.int; www.uncd.int
- 26–30 August 2003. **ITTO National Workshop on Criteria and Indicators for Sustainable Forest Management.** Esmeraldas, Ecuador. **Contact:** Alfredo Carrasco, FOSEFOR, PO Box 1722-109, Quito, Ecuador; Tel 593-2-224 9181; pakarina@pi.pro.ec
- 2–6 September 2003. **ITTO National Workshop on Criteria and Indicators for Sustainable Forest Management.** Cochamba, Bolivia. **Contact:** Victor H. Acha, ESFOR; Tel 591-4-429 2343; viachaga@latinmail.com
- 8–17 September 2003. **V World Parks Congress.** Durban, South Africa. **Contact:** Peter Shadie, Executive Officer, 2003 World Parks Congress, IUCN Programme on Protected Areas, Rue Mauverney 28, 1196 Gland, Switzerland; Tel 41-22-999 0159; Fax 41-22-999 0025; pds@iucn.org; http://wcpa.iucn.org/wpc/wpc.html
- 9–12 September 2003. **Woodmac Asia/FurniTek Asia.** Singapore. **Contact:** Singapore Exhibition Services Pte Ltd; Tel 65-6738 6776;
- Fax 65-6732 6776; events@sesmontnet.com
- 11–13 September 2003. **2nd National Conference on Forestry Research.** Sponsored by ITTO. **Contact:** Julio O. Vargas; Tel 591-4-429 2343; etsfor@ albatross.cnb.net; or Rubén Guevara, itto.la@uol.com.br
- 21–28 September 2003. **XII World Forestry Congress.** Quebec City, Canada. **Contact:** XII World Forestry Congress, PO Box 7275, Charlesbourg, Quebec G1G 5E5, Canada; www.wfc2003.org
- 23–27 September 2003. **VI Plywood and Tropical Timber International Congress.** Belém, Brazil. **Contact:** WR São Paulo Feiras e Congressos, Rua Clóvis de Oliveira, 86 – Jd. Guedala, 05616-130, São Paulo, SP, Brazil; Tel/Fax 55-11-3722 3344; www.wrsopaulo.com.br; www.tropicalcongress.com.br; wrsp@wrsopaulo.com.br
- 29 September–4 October 2003. **VII Congreso Latinoamericano de Estudiantes de Cs. Forestales.** Pucón, Chile. **Contact:** Fco. Salazar No 01145 Casilla 54-D, Temuco, Chile; Tel 56-45-325641; Fax 56-45-341467; Vanefor2002@yahoo.es
- October 2003. **International Seminar on Community Forest Management.** Rio Branco, Brazil. Sponsored by ITTO. **Contact:** Marcelo Arguelles; Tel 55-61-223 3193; coordenacao@cta-acre.org; or Rubén Guevara, itto.la@uol.com.br
- 2–4 October 2003. **World Congress on Export Potential of Medicinal Plants and Primary Health Care for Tribal Development.** Delhi, India. **Contact:** Secretary General, World Congress on Export Potential of Medicinal Plants and Primary Health Care for Tribal Development, 'Vasundhara Bhavan', E-4 Patel Nagar, Raisen Rd, Bhopal 462 021, India; Tel 91-755-754 941; sugundh_09@satyam.net.in www.thegreenearth.org
- 3–6 October 2003. **3rd International Wildland Fire Conference & Exhibition.** Sydney, Australia. Sponsored by ITTO. **Contact:** 3rd International Wildland Fire Conference and Exhibition Managers, GPO Box 128, Sydney NSW 2001, Australia; Tel 61-2-9248 0800; Fax 61-2-9248 0894; wildland03@tourhosts.com.au; www.wildlandfire03.com
- 9–12 October 2003. **1st International Workshop on (Tropical) Forest Environmental Economics and Green Policy.** Beijing, China. **Contact:** Hou Yuanzao, Chinese Academy of Forestry, Beijing 100091, China; Fax 86-10-6288 4836; houyuanzhao@163.net; yuling@forestry.ac.cn
- 3–8 November 2003. **35th Session of the International Tropical Timber Council.** Yokohama, Japan. **Contact:** Collins Ahadome; Tel 81-45-223 1110; Fax 81-45-223 1111; itto@itto.or.jp; www.itto.or.jp
- 10–12 November 2003. **2nd Preparatory Committee (PrepCom II) for the Negotiation of a Successor Agreement to the ITTA, 1994.** Yokohama, Japan. **Contact:** Collins Ahadome, Tel 81-45-223 1110; Fax 81-45-223 1111; itto@itto.or.jp; www.itto.or.jp
- 12–15 November 2003. **Monitoring and indicators of forest biodiversity—from ideas to operationality.** Florence, Italy. **Contact:** Ms. Brita Pajari; European Forest Institute, Torikatu 34, FIN-80100 Joensuu; Tel 358-13-252 0223; Fax 358-13-134 393; brita.pajari@EFI.fi;
- Bhavan', E-4 Patel Nagar, Raisen Rd, Bhopal 462 021, India; Tel 91-755-754 941; sugundh_09@satyam.net.in www.thegreenearth.org
- 2–5 December 2003. **International Conference on Quality Timber Products of Teak from Sustainable Forest Management.** ITTO PROJECT PD 151/02 (1); IUFRO 5.06.02. **Contact:** K.M. Bhat, Kerala Forest Research Institute, Peechi 680 653, India; kmbhat@kfri.org; www.kfri.org/html/k500frm.htm
- 1–12 December 2003. **9th Conference of the Parties to the UN Framework Convention on Climate Change.** Milan, Italy. **Contact:** UNFCCC Secretariat, PO Box 260124, D-53153 Bonn, Germany; Tel 49-228-815 1000; secretariat@unfccc.int; www.unfccc.int
- 17–19 March 2004. **World of Wood.** Orlando, Florida, USA. **Contact:** International Wood Products Association (IWPA), 4214 King Street West, Alexandria, VA 22302 USA; Tel 1-703-820 6696; Fax 1-703-820 8550; info@iwpawood.org; www.iwpawood.org/convention.html
- 12–14 April 2004. **Management of Tropical Dry Forest Woodlands and Savannas: Assessment, Silviculture, Scenarios.** Brasilia, Brazil. IUFRO 4.00.00. **Contact:** Professor Dr José Imaña Encinas, University of Brasilia, Forestry Department Caixa Postal 04357 70919-970, Brasilia, DF, Brazil; Tel 55-61-2736026; Fax 55-61-3470631; iufro@unb.br
- 21–23 April 2004. **3rd International Symposium on Sustainable Management of Forest Resources—SIMFOR 2004.** IUFRO 1.00.00, 2.00.00. Pinar del Rio, Cuba. **Contact:** C. Fernando Hernández Martínez; Tel 82-779363; Fax 82-779353; fhernandez@af.upr.edu.cu
- 27 June–2 July 2004. **1st World Congress of Agroforestry: Working Together for Sustainable Land-Use Systems.** Orlando, Florida, USA. **Contact:** Mandy Padgett, Office of Conferences & Institutes, PO Box 110750, Gainesville, Florida 32611-0750, USA; mrpadgett@mail.ifas.ufl.edu; http://conference.ifas.ufl.edu/wca
- 20–23 July 2004. **36th Session of the International Tropical Timber Council.** Switzerland. **Contact:** Collins Ahadome, Tel 81-45-223 1110; Fax 81-45-223 1111; itto@itto.or.jp; www.itto.or.jp
- 26–30 July 2004. **UN Conference (1st Part) for the Negotiation of a Successor Agreement to the ITTA, 1994.** Geneva, Switzerland. **Contact:** Collins Ahadome, Tel 81-45-223 1110; Fax 81-45-223 1111; itto@itto.or.jp; www.itto.or.jp
- 28 February–5 March 2005. **17th Commonwealth Forestry Conference: Forestry's Contribution to Poverty Reduction.** Colombo, Sri Lanka. **Contact:** Libby Jones; Tel 44-(0)-131-314 6137; Fax 44-(0)-131-334 0442; forlib@sltnet.lk or libby.jones@forestry.gsi.gov.uk
- 8–13 August 2005. **Forests in the Balance: Linking Tradition and Technology.** XXII IUFRO World Congress. Brisbane, Australia. **Contact:** Dr Russell Haines, Queensland Forestry Research Institute, PO Box 631, Indooroopilly 4068, Australia; Tel 61-7-3896 9714; Fax 61-7-3896 9628; hainesr@qfrri.se2.dpi.qld.gov.au; http://iufro.boku.ac.at



initiatives should arise from a movement that is close to the border regions' grassroots or which can take on board actors who are close to the grassroots of those regions.

Thus, transboundary conservation as a form of governance of natural resources needs further conceptualising. It should be seen as a larger concept that embraces the comprehensive development of borderlands and aims to change policies to create an environment conducive to the collective emancipation of border societies. Transboundary conservation could be the basis for the construction of a new role for the border in which it is perceived less in terms of military defence and more as a meeting place between nations (and grassroots communities) for dialogue, cooperation, positive exchange and joint development planning.

Achieving this, however, presents an enormous challenge. In addition to safeguarding biodiversity, there is the multi-faceted challenge of making conservation, peace and peoples' development truly interactive. There is also the challenge of departing from vertical, top-down transboundary conservation initiatives to involve civil society and other non-governmental actors who are close to the borderlands' grassroots. And the biggest challenge is to overcome the dominant political culture, which in many cases is characterised by a rigid concept of sovereignty.

Making conservation and peace interactive

Why would political leaders choose transboundary conservation as an approach to engineering peace? In my view there are four main arguments:

- 1) the creation of TBCAs is based on a recognition of environmental interdependence between neighbour countries; politicians who are convinced that the boundaries of ecological functions or problems do not always (and in fact rarely) correspond to international boundaries will see the need for a transboundary approach to natural resource management;
- 2) transboundary conservation can be a cost-effective way of solving trans-border problems before they become a source of border tension and regional instability. Drawing on the many lessons learned from decades of work in community forestry and community-based natural resource management, transboundary conservation approaches provide an opportunity for non-military actors to participate and assist in borderland conflict prevention or conflict management. The bringing together of civil-society, military, administrative and political actors in borderlands can dilute military tensions both within and between countries;
- 3) transboundary conservation further strengthens peace through improved communication and transparency. This is achieved with bi-national or multi-national monitoring systems and taskforces comprising actors of the military, administrative and political sectors, and those of civil society; and
- 4) transboundary conservation may produce several economically beneficial spin-offs. Under what I would call *Pax ekologica*, parks would not need heavy eco-guard units, crime would be reduced, ecotourists would be safe, there would be collaboration on the implementation of international conventions and respective national environmental laws, and there would be cooperation on the detection of transboundary crimes such as poaching and illegal logging. A bilateral commitment to develop TBCAs may also assist in attracting funding from donors and the private sector: transboundary conservation is a legitimate area for the concern of international organisations such as ITTO and even at this early stage of development in the tropics is attracting considerable donor interest.

An appropriate model of transboundary conservation for peace would involve the demilitarisation of the TBCA and the identification of all the threats originating from any one country and directed to its neighbour within the TBCA. Areas of mutual assistance would also need to be identified. Based on this a system of detection and mutual information would be set up. With such coordination, military or police activities could be performed by eco-guards and local development initiatives. In cases where threats require the use of police or the military, cooperating countries would determine appropriate modalities for their deployment.

Conservation and peace may truly interact if TBCA projects are elaborated, not as unilateral initiatives that speculate on the possible collaboration of the neighbours, but through genuine bilateral cooperation. They should also have strong political backing in the design and implementation phases, and the signals for such backing should be given by the highest political authorities of cooperating countries. A good example of this is the Kgalagadi Transboundary Park, which was jointly inaugurated in May 2000 by presidents Thabo Mbeki of the Republic of South Africa and Festus Mogae of Botswana. Such a high-level gesture can change public opinion, build an irreversibly positive attitude to transboundary conservation, and influence the national leadership at lower levels in all the countries concerned.

Making conservation and people's development interactive

In addition to the goal of transboundary conservation, TBCAs should embrace the equally noble goal of supporting the economic and sociocultural development of the local people who depend on the transboundary resources for their subsistence. Indeed, among the perennial enemies of conservation in borderlands is poverty and lack of access to the elements of sociocultural emancipation. Border regions are often neglected in development planning, and border communities are similarly neglected and isolated. They are often adversely affected by unsustainable economic activities such as illegal logging and mining, or they may find themselves competing for space with biodiversity conservation programs and with few economic alternatives to engaging in illegal transboundary trade or serving in local conflicts. This may lead to conditions that fuel border tensions and conflicts and which can be exploited and controlled by the police or military groups. For example, because of the chaos caused by the ethnic conflicts in the tri-border region between Rwanda, Uganda and DRC, armed groups in the official and rebel armies reportedly engaged in criminal cross-border trade of timber and minerals. In economies of violence, as in the case of the wars in Liberia and Sierra Leone, using timber and minerals as a currency to obtain weapons became a strong incentive for war and complicated the search of peace.

Biodiversity conservation can be a building block for *Pax ekologica*, allowing the peoples of border regions to derive benefits through mutual understanding and friendship. For this to happen, the profile of transboundary conservation must be raised, particularly at the higher political levels, including in countries with the means to contribute financial resources to support TBCA initiatives. As border stability, border region development and biodiversity conservation interact, transboundary conservation should take on board analysts other than conservationists, including security agencies, not only to raise awareness about the link between border security and biodiversity conservation, but also to ensure that transboundary conservation is part of all border plans. If this happens, transboundary conservation could represent a new dawn for borderland communities.

Out on a limb



**On war and peace,
people and parks**

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IN the 1990s, Rwanda, the country of my birth, was torn by an armed conflict that culminated in genocide in 1994. From 1990 to 1993, I was a minister in the Rwandan government, first of Agriculture and Environment and then of Defence, giving me a close-hand view of the effects of armed conflict on the environment. The conflict's battlegrounds included Rwanda's two national parks, Akagera in the east along the border with Tanzania, and Volcanoes in the north along the border with the Democratic Republic of the Congo (DRC, formerly Zaire) and Uganda. Both were created under the Belgian colonial administration; Volcanoes National Park was part of a tri-border gorilla protection area in Rwanda, DRC and Uganda while, in contrast, Akagera was not part of any such scheme.

It is instructive to assess the status of these two parks in the aftermath of the genocide. Despite the damage caused to the gorilla habitat in Volcanoes National Park by fighting in 1991 and by refugee pressure in 1994 and after, and despite the absence of transboundary cooperation between Rwanda, Uganda and the DRC in the latter part of the 1990s, the gorillas continue to survive. I believe this is due largely to cooperation between protected area managers and conservation authorities in the three countries before and after the genocide, which created a political imperative to protect the mountain gorillas, avoid major damage to their habitats and maintain the integrity of park boundaries.

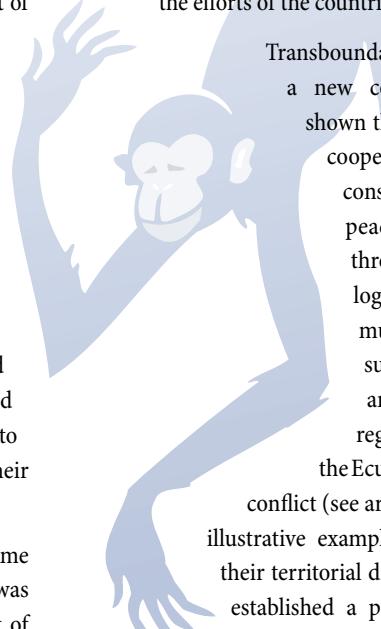
The situation is quite different in Akagera. After the regime change in Rwanda in 1994, more than half the park was converted to pastoral land and used for the settlement of returnees. This resulted in the loss of wildlife populations, including the local extinction of the lion. I strongly believe that if there had been a contiguous protected area

at the border, with a cooperative conservation program between Rwanda and Tanzania, the destruction of Akagera could have been limited, if not avoided.

The contrasting fates of the two national parks is evidence that transboundary cooperation can combine biodiversity conservation, peace and stability, and the needs of people, even in appalling circumstances. They also show that we cannot ignore the risks of border instability and tensions on biodiversity conservation in transboundary ecosystems.

The case of Rwanda also clearly illustrates

how the protection of valuable habitats near international borders requires a distinctive approach. In many cases, such habitats face conservation and development challenges due to the especially vulnerable nature of their often-untapped resources. They may face a diversity of threats from, for example, illegal mining, illegal logging, wildlife poaching and the trade of products thereof, or from war and the refugees it generates. In Africa, security and environmental concerns are strongly intertwined due to the cross-border movements of refugees and rebels in countries like DRC and Sierra Leone. Transboundary conservation could play an essential role in minimising such threats by allowing the coordination of the efforts of the countries concerned.



Transboundary conservation is not a new concept. Experience has shown that positive international cooperation for biodiversity conservation can promote peace and friendship through constructive dialogue and can strengthen mutual arrangements for sustainable development and stability in border regions. The settlement of the Ecuadorian-Peruvian border conflict (see article page 13) provides an illustrative example of this. After settling their territorial dispute, Ecuador and Peru established a peace park in the Sierra del Condor comprising two contiguous areas on both sides of their border; ITTO is supporting these parks through two projects.

Biodiversity conservation cannot lead to lasting peace based only on an understanding between governments; borderland peoples must also be willing participants. Real peace at the border is lived as a day-to-day experience and will be rooted in the cohesiveness of customary social, cultural and economic exchanges between border societies. Many transboundary initiatives may not lead to such a peace. Very often they are top-down driven, involving one government department in each country for the negotiations and implementation and failing at the outset to overcome national institutional boundaries. The reality at the borders is that the space for the interaction of border societies does not correspond to the space under state control. In the former, a dynamic of integration exists based on sociocultural interactions, economic networks and, often, transboundary ethnic solidarities. Ideally, transboundary conservation

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