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can be found on the WWF/IUCN Forest Innovations website, at: <http://www.iucn.org/themes/forests>

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Protected areas are at the heart of conservation strategies as key instruments for ensuring the survival of rare species and habitats. We assume that protect areas protect biodiversity. But is this true? Environmental news-wires are full of stories about threats to protected areas, ranging from poaching to pollution. However, more comprehensive assessments are in short supply.



Researchers at Conservation International (CI) assessed management and threats in 93 parks in 22 tropical countries, all in IUCN categories I-II (strictly protected areas) and all subject to human pressure. Despite some problems, 83 per cent had experienced no net clearing since establishment and many had undergone regeneration. Illegal activities, like logging and poaching, were commonest near the edge, suggesting that larger protected areas are safer. Effectiveness was closely related to management effort and factors such as number of guards.

The CI results have been reported as 'proving' the effectiveness of protected areas. While we applaud the initiative and would like to be able to support CI's findings, our own assessments make us slightly wary. CI's use of questionnaires has limitations because it is often politically difficult for staff to criticise their own protected areas. WWF and IUCN have built up a portfolio of information on protected area management effectiveness, based on long-term country studies by experts. Our report *Squandering Paradise* outlines literally hundreds of cases of serious problems. Current WWF work in South Africa and WWF and IUCN projects in Russia are adding to this understanding. There is little doubt that protected areas are needed and many countries have a track record of which they can be proud. But sadly, many protected areas are experiencing an alarming decline – indeed their survival may be due more to their remoteness than active conservation. For example animal poaching has reached crisis proportions in many African countries, and to a lesser extent in Latin America and Asia, so that while vegetation may survive ecosystem dynamics are fundamentally altered. In addition, most protected areas are too small to ensure the viability of their biodiversity. If a protected area remains intact because it is well guarded but surrounding land is degraded, long-term biodiversity goals remain insecure.

We certainly have no arguments with CI's call for more and better-managed protected areas. A study by WWF Brazil shows that the most effective reserves are generally those with the greatest financial support. But major threats often stem from political and economic decisions made by governmental or business interests. Effective mitigation takes place not where the guards patrol, but in provincial and national capitals. Good governance – the rule of law, minimal corruption, and secure land tenure – is therefore essential for successful conservation through the use of protected areas. CI's work shows that protected areas are worth fighting for, but it should not be taken as an excuse for complacency – or for withdrawing resources from other, complementary conservation tools, such as sustainable forest management by the private sector and local communities.

The next issue of *arborvitæ* will be produced in August 2001 (copy deadline July 2001). If you have any material to send or comments please contact: Nigel Dudley and Sue Stolton, 23 Bath Buildings, Bristol BS6 5PT, UK. Telephone and fax: +44-117-942-8674 E-mail: equilibrium@compuserve.com



'Selective logging' in tropical forests can be enormously destructive. This 250 metre logging road on the borders of Cameroon and Congo Brazzaville was cut to extract just four trees.

Deforestation probably not slowing says WRI

The UN Food and Agriculture Organisation believes that the deforestation rate is slowing. The World Resources Institute isn't so sure.

The World Resources Institute has published a sharp critique about aspects of the UN Food and Agriculture Organisation's year 2000 Forest Resource Assessment (reported in *arborvitae* 16). In particular, WRI challenges FAO's claim that the global deforestation rate is slowing down, in part because FAO focuses on the net rate of global forest change, in which loss of natural forests is to some extent offset by establishment of plantations. In fact, WRI researcher Emily Matthews states that: 'based on FAO's own data natural forest loss in the tropics appears to have accelerated'. Tracking long-term trends has been made more difficult because FAO has produced new estimates for 1990 global forest cover that are much higher than their previous estimates made for the same year, due amongst other things to changes in the definition of a forest. The new study is therefore not directly comparable with any previous study, although FAO has tended to treat them as comparable. Any firm conclusions are also made more difficult because of the poor quality of much data on forest cover, particularly from many developing countries. Whilst complimentary of FAO's efforts, WRI concludes that: 'changes in assessment methodology explain much of what appears, at first, to be real change... Comparisons of global net deforestation rates in the 1990s with those reported for the first half of the decade are not valid'.

Source: *Understanding the FRA 2000*, World Resources Institute, www.wri.org/forests/pdf/fra2000.pdf

Developing the Amazon

New research published in *Science* re-ignited the debate on the destruction of the Brazilian Amazon.

Research by the Brazilian Amazonian Research Institute with the Smithsonian Tropical Research Institute, has concluded that the Brazilian Amazon is likely to suffer even greater degradation in the future because of government plans to invest US\$40 billion from 2000 to 2007 in dozens of major new highways and infrastructure projects.

Two computer models integrating spatial data on deforestation, logging, mining, highways and roads, navigable rivers, vulnerability to wildfires, protected areas, and existing and planned infrastructure projects, were developed in an effort to predict the condition of Brazilian Amazonian forests by the year 2020. Both models suggested that current development schemes and land-use trends would drastically alter the region's forests over the next 20 years. The Brazilian government has responded by stating that they will assess the impact on the Amazon of their economic development plan.

Source: *Science* 291:5503, January 2001. Much of the resultant debate on the research and the Brazilian government's response can be found in the archives of the forests.org web site.

Fires in brief

More small forest fires in Europe: The UN Economic Commission for Europe assessed forest fires from 1988-1998. Although number of fires increased in Europe and Russia over the period, data for area burned is less constant and in Europe area of fires actually decreased. In North America the number of fires has decreased. The role of criminal activity in fires increased dramatically in Greece, Italy and Spain during the mid 1990s, illustrating the trend for organised crime and individual criminals to start fires for insurance fraud or 'liberating' development land.

Source: *Forest Fire Statistics 1996-1998*, UNECE and FAO

Project Firefight conference: A conference focussing on the involvement of communities in fire management, *Communities in Flames*, is being organised by the WWF/IUCN project FireFight on 25-28 July in East Kalimantan, Indonesia.

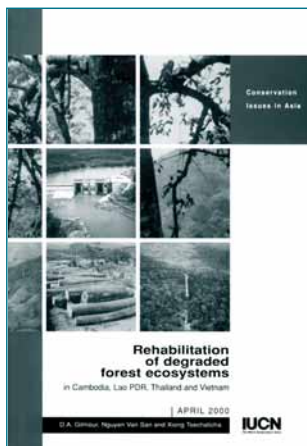
The conference will look at:

- alternative approaches to forest fire management, which promote the participation of local communities in planning and managing their own forest fires regimes;
- explore the elements necessary for promoting these alternatives including identifying fire research needs, forest policy reforms, legal and regulatory restructuring; and
- appropriate strategies for socialising Community Based Fire Management (CBFIM) and identify ways to collaborate and capture the opportunities, which these alternatives offer.

Contact: cbfim@cgjar.org. *Communities in Flames*, PO Box 6596, JKPWB, Jakarta, Indonesia Fax: +62-251-622-100

Back to the Woods

IUCN has co-ordinated a study of opportunities for restoration of degraded forests in the lower Mekong countries. Don Gilmour, Nguyen Van San and Xiong Tsechalicha report.



The four lower Mekong countries of Cambodia, Lao PDR, Thailand and Vietnam have suffered severe deforestation during the past forty years. The best estimates suggest that about 9 million ha of forest was lost between 1980 and 1990 and an additional large but unknown area degraded. Deforestation is continuing. There are currently over 23 million ha of bare land that was previously forested. Much of this would be suitable for restoration.

Forest policy in the four countries has shifted its focus from exploitation aimed at maximising financial returns to sustainable management and protection, although in Cambodia this shift has barely begun and the major challenge is to curtail illegal logging, and exercise effective control over concessionaires. A policy vision has emerged in Lao PDR and Vietnam of substantial increases in forest cover over the coming decades. Lao PDR is proposing to increase forest cover from the present 47 per cent of its land area to 70 per cent by 2020. Vietnam plans to establish 5 million ha of new forest, both plantations and naturally regenerated forest, within ten years. In Thailand, the government has signalled its intention of retaining most remaining forest (about 25 per cent of the land area) as conservation or protection areas, and of developing new partnerships with stakeholder groups to restore large areas of degraded forests. However, most experiences to date relate to plantations of fast growing species. There are major technical and institutional issues to be addressed if future initiatives are to be successful, for example: access and use-rights; practical participatory land-use planning and allocation systems; and integrating socio-economic and environmental needs into restoration. There is a need to promote and support the development of policy, procedures and capacity that can guide restoration programmes based on a sound understanding of forest restoration schemes compared to expectations; policies that describe principles and criteria for achieving ecologically and socio-economically sound restoration; and institutional capacity to extend and support the application of these policies.

Source: Rehabilitation of Degraded Forest Ecosystems in Cambodia, Lao PDR, Thailand and Vietnam, IUCN.

News in brief

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Canadian Fraud: Lost revenue is galvanising British Columbia's ministry of forests into action to ensure that commercial logging companies comply with provincial forestry laws. A study by the Sierra Legal Defence Fund, *Stumpage Sellout*, concludes that in two-and-a-half years the major coastal forest companies avoided paying Can\$224 million to the provincial government. The Ministry of Forests however states that the reported discrepancy is too large due to a misunderstanding of how stumpage revenue is collected.

Source: *The Vancouver Sun* and Sierra Legal Defence Fund (SLDF) PR January 29, 2001. Contact SLD at www.sierralegal.org/ or tel: +1-604-291-9611.

Global Warming in Australia: Scientists have warned that Australia's alpine ecosystems could disappear in 70 years because of global warming. A study found that sub-alpine trees in the Snowy Mountains have started growing at up to 40 meters higher altitude than they had in the past 25 years as a result of global warming. Only 100 metres separate the tree line from the top of some mountains. Yet there are more than 250 species of alpine plants growing in the shrinking habitat.

Source: PlanetArk News Story, April 24, 2001.
<http://www.planetark.org/dailynewsstory.cfm?newsid=10601>

Cambodian Community Forest: In December 2000, the protection and management of almost 5,000 hectares of semi-evergreen forest in Ratanakiri – officially within the 60,000 hectare Hero Taiwan timber concession – was formally handed over to the local indigenous Kreung highlander's, Ya Poey Community Forestry Association.

Source: *Phnom Penh Post*, January 5 - 18, 2001

Chile project halted: Boise Cascade has cancelled a US\$160 million Oriented Strand Board project that could have threatened native temperate rainforests forests on Chile's southern coast.

Source: Forests.org 02/23/01

Logging threatens reef: The Australian Institute of Marine Science reports that conversion of wetlands and rainforests to agriculture along the tropical Queensland coast is having a serious impact on the corals of the Great Barrier Reef due to run-off of fertiliser-soaked silt, according to research from 30 scientists from around the world.

Source: Forest.org

Good news for BC's Grizzlies: The government of British Columbia, Canada has set up a three-year moratorium on the sport hunting of grizzly bears in the province to assess if the hunt is sustainable. As many as 300 grizzly bears are killed each year in the hunt. Population estimates vary widely, from 4-6,000 estimated by independent scientists, to over 13,000 by the government of BC.

Source: www.wildcanada.net

China forest products: China is now the third-largest importer of forest products due to increasing demand and lack of resources – the latter increased by its recent natural forest protection programme. Although 5 million ha/year of forest are planted, forest cover is only 17 per cent. By 2010 China will import 50 per cent of its demand for forest products, almost 70 per cent from temperate and boreal sources. Since 1998, forest products have been the leading import category. Softwood sources have changed from North America to Russia and New Zealand, while hardwood is still imported from the USA, Russia and increasingly Europe and West Africa – some of the latter from allegedly poorly managed concessions. Although 120 companies have ISO14000 certification, understanding of certification remains low.

Sources: *Forest Products Annual Review 1999-2000*, UNECE and *Trendlines 1* from Forest Trends



Exploring the UK's Forest Footprint

For every hectare of forest in the UK there are more than thirteen hundred hectares elsewhere – and many of those are impacted by the consumption patterns of British people. A new report from WWF UK analyses these impacts (the UK's forest footprint), both from a historical perspective and at the present.

The report includes a series of case studies showing that the UK is still having a net negative forest footprint on the world's forests. Each case study in the report includes recommendations aimed at the sector highlighted. Issues explored included the timber trade, agriculture, invasive species, mining, oil and gas, bioprospecting, climate change, air pollution, tourism, aid and UK policy. In addition, WWF has identified a range of specific issues where the UK government, business community and general public can help lighten the UK's forest footprint and support the development of more equitable and sustainable forest policies.

Source: *The UK's Forest Footprint*, can be downloaded at wwf-uk.org/publications/publications.htm

The UK's forest footprint is the total environmental and social cost of UK actions on the world's forest and forest peoples.

News in brief

Land allocation battle in Kenya: The planned conversion of 167,000 ha of forestland (10 per cent of Kenya's forest area) for settlement and farming has caused heated debate within Kenya. Many divergent groups have officially complained about the plan including NGO's, CBO's, the parliamentary group on Natural Resources/Environment, big business, commercial farmers, Donors, IUCN and the general public. Much of the opposition has been centred on the plans to convert 1,825ha of forest at the foot of Mount Kenya, an area already seriously affected by illegal logging – as shown in last year's aerial surveys of the area carried out by the Kenyan Wildlife Service (see: www.kws.org/surveyt.htm). Huge areas of the Mau are also in the proposal and there is concern on the effects that such large-scale conversion will have on water supplies.

Source: *Environmental News Service*, February 28, March 19, April 19, 2001

Fuelling conflict: A report by a UN Panel of Experts and research carried out by Global Witness has revealed links between logging revenues from Liberia's timber industry and support of the Revolutionary United Front rebels in Sierra Leone.

Source: Global Witness, www.oneworld.org/globalwitness/

Boreal Footprint: The Boreal Footprint Project is a new NGO based at the Earth Island Institute, San Francisco, which aims to reduce Americans' ecological 'footprint' (impact) on the boreal forests, especially in Canada and Alaska.

Contact: Chanda Meek, email: chanda_meek@yahoo.ca

Illegal logs seized in Amazon: Three rafts containing over 1,000 illegally felled samauma/Kapok-tree (*Ceiba pentandra*) and virola/ucuuba (*Virola surinamensis*) logs destined for a Chinese owned plywood factory were seized by IBAMA and the loggers fined US\$2000,000 after a tip off from Greenpeace.

Source: *Environmental News Service*, April 18, 2001

Referendum disappointment: The Russian Central Election Commission refused the NGO petition for a referendum (see *arborvitae* 16) on reinstalling the State Ecological Committee, claiming that only 1.8 million signatures out of 2.5 collected were authentic. The green movement now plans to challenge the decision in court.

Source: TRN, info@taigarescue.org

Swedish purchases: The Taiga Rescue Network and WWF Sweden have published a report on Swedish timber imports from Russia and the Baltic States. Imports increased dramatically during the 1990s and exceeded 11million m³ in 1999. The report shows that Swedish importers usually know the rough geographic origin of the wood, but knowledge on the impact of forest management on biodiversity and local communities is close to non-existent. Some guidelines for responsible timber trade in the Baltic, signed by major NGOs in the region, were published at the same time.

Source: *Towards Responsible Swedish Timber Trade? – A Survey of Actors and Origin of Timber from Russia and the Baltic States*, www.taigarescue.org

Protection under threat: The Asia Pacific Economic Co-operation forum, the free trade body of the Pacific Rim, has targeted various forest protection measures as alleged trade barriers in its recent *Study of Non-Tariff Measures (NTMs) in the Forest Sector*, arguing that these measures should be eliminated in pending forest liberalisation discussions. Examples of such NTMs include logging bans, forest certification, raw log export bans and protection against invasive species in such countries as Indonesia, Malaysia, Papua New Guinea, Chile, Australia, New Zealand and the USA.

Source: Pacific Environment, tel: +1-510-251-8800, www.pacificenvironment.org



Protection of Europe's Forests

Europe has already lost more than half of its original forest cover. Harri Karjalainen details new research that highlights the problems and provides data on the most serious gaps in forest protection.

WWF's new overview of the state of Europe's forests, *Insight into Europe's Forest Protection*, shows that despite inadequate protection Europe still has many biodiversity rich remnants of natural, old-growth forests. The bad news is only 1 in 15 of the remaining forested areas - and only 1 in 2 of the most natural and biologically rich forests - are adequately protected. Europe's protected forests suffer from being too small (9 out of 10 protected forests are less than 10 km²) and from inadequate safeguards, and do not represent the wealth of forest types in Europe.

The report identifies the most urgent tasks to safeguard the remaining unprotected old-growth forests and other forests with high nature conservation values. In those parts of Europe where forests are most degraded ecological restoration measures are necessary. Equally important is to raise the standard of forest protected area management to clearly follow principles of biodiversity protection. All this is necessary to properly implement the Habitats Directive within the EU and accession countries.

Even though legal protection remains the major tool for establishing protected areas, new complementary measures should be introduced. One of the most potent tools, FSC (Forest Stewardship Council) certification, ensures protection and promotes the restoration of key forest biotypes in forests managed primarily for wood production. Moreover, FSC-certification decreases the pressure for commercial logging in Europe's remaining unprotected old-growth forests, since it is the only certification system that has a mechanism to ensure protection of high conservation value forests

The report draws on data from a gap analysis carried out by UNEP-WCMC for WWF on the distribution and protection status of different forest types in Europe. The analysis overlaid digital pan-European forest cover maps of potential and current forest cover with a digital map of Europe's protected areas. Digital overlays of these data were undertaken and statistics produced indicating the current state of protection of different forest types. The major findings of the study were:

- 56 per cent of Europe's forest has already been lost and only 6.3 per cent of the current forest lie within protected areas (belong to IUCN management categories I-IV).
- At a national level forest protection (as a proportion of current forest cover) ranges from 11.7 per cent in Belarus to only 0.6 per cent in the United Kingdom.
- A small number (329) of relatively large (>10,000 ha) areas account for 67 per cent of protected forests. 39 of the 50 largest forest protected areas are in Russia.

The analysis of Russian forest protected areas has been furthered by a report from the WWF Russian Programme Office, produced in collaboration with the IUCN CIS office and the Russian Nature Research Institute. The report presents the findings of a study to assess percentages of forests protected on a regional basis, calculate a rating for the regions contribution to forest protection through protected areas and provide recommendations to optimise the protected area system.

Contact: harri.karjalainen@wwf.fi or tel: +358-9-7740-1055 for a copy of *Insight into Europe's Forest Protection* and for a CD-ROM version of the *European Forests and Protected Areas: gap analysis* - this can also be viewed at: www.unep-wcmc.org/forest/eu_gap/. Contact the WWF Russian Programme at russia@wwf.ru or tel: +7-095-727-09-39 for a copy of *Forest Conservation in Russia: An Overview*.

Protected Areas news in brief

Congo initiative: Cameroon, the Republic of Congo and the Central African Republic (CAR) have agreed to share management of 28,000 km² of forest – with a core protected area of 7,750 km² – (including the protected zones of Lobéké in Cameroon, Dzanga-Sangha in CAR, Nouabale-Ndoki in the Republic of Congo and associated production forests and hunting zones) to create the Trinational Sangha Park. The countries will also co-ordinate actions against poaching and illegal logging in the Congo Basin.

Source: Environment News Service, ens.lycos.com/, December 8, 2000

BC Deal: The logging industry and conservation groups in British Columbia, Canada have reached an agreement that will protect almost 20 river valleys in the Great Bear Rainforest covering over 600,000 ha. There is some concern however that the areas are isolated and thus lacking the contiguous protection that is needed for large, far ranging carnivores such as grizzly bears and wolves. The agreement also includes a framework for managing change, including economic development and diversification initiatives for First Nations and local communities and comprehensive mitigation packages for workers and contractors.

Source: Raincoast Conservation Society and the Taiga Rescue Network

Gifts to the Earth: In February, Turkey declared National Park status for the Kure Mountains (34,000 hectares) and launched a process that will lead to the legal protection of eight other forest hotspots in the country by 2005. It is estimated that the full implementation of this 'Gift to the Earth' will increase the size of protected areas (IUCN I-IV) from 4 to 6 per cent. At the same time, the Republic of Georgia pledged to protect 15 per cent of its forests within strict protected area categories (IUCN I-IV) by 2010 and to ensure that all major forest habitats are represented and the areas are effectively managed.

Source: WWF International, www.panda.org

A new direction for international policy on forests

Carole Saint-Laurent, Senior Forest Policy Adviser for WWF International and IUCN, reports on the UN Forum on Forests.



Edward Parker WWF UK

The UN Forum on Forests (UNFF) along with the Collaborative Partnership on Forests (CPF) form a new International Arrangement on Forests. This new arrangement is intended to: promote implementation of agreed actions, provide a coherent, transparent and participatory global framework for policy implementation, co-ordination and development, and to carry out a number of functions. In broad terms, the UNFF is expected to focus on promoting implementation, monitoring progress, and strengthening political commitment, while the CPF will focus on enhancing co-operation as well as policy, programme and donor co-ordination.

The UNFF met for the first time on February 12-16, 2001 to hold informal consultations on the content of the UNFF Multi-Year Programme of Work (2001-2005). The first substantive session will be held on June 11-22, 2001 in New York. It will adopt the Programme of Work and will decide on the process for developing a Plan of Action for implementing the IPF/IFF proposals for action, including targets and timetables.

Summary of progress

- Broad support has been secured for implementation action on forest conservation. It is currently being proposed that UNFF-2, in early 2002, focus on Forest Conservation, Protected Areas and Environmental Services.
- Initial but strong interest has been generated on forest landscape restoration. There are especially interesting prospects for developing this work in collaboration with 'low forest cover' countries from the G77.
- There is support for including forest fires as a priority for action, but additional efforts will be needed to promote this further as an issue ripe for implementation (based on commitments made at the Rio Earth Summit in 1992), rather than one requiring further policy dialogue.
- Illegal logging is now being proposed as a key issue, rather than merely illegal trade, and this is being connected more firmly with governance issues. This improves the

chances of the UNFF and other for dealing adequately with the full range of illegal and/or perverse activities that are of concern to us.

- There are concerns that the UNFF and CPF will endeavour to develop common concepts, terms, definitions and criteria, which could undermine existing standards and criteria and take attention away from more urgent areas for action.
- National forest plans (nfp) are being promoted as 'the fundamental instrument for implementation of SFM and for international co-operation', although practical examples of effective donor co-ordination and large-scale implementation of forest conservation and management generated by nfp have not yet been documented. Furthermore, there has been little meaningful stakeholder involvement in some of the nfp's that have been developed, with people being involved in consultations at the beginning of the process but then excluded from the actual drafting.

The second substantive session of the UNFF will be held in early 2002. In order to be credible and relevant, the UNFF will need to, at the very least, identify a set of global priorities for action drawing on existing commitments and reach agreement on the necessary means of implementation in time for endorsement at the 'Rio+10' World Summit on Sustainable Development in September 2002.

Contact: Carole Saint-Laurent, email: CarSaintL@cs.com

Research in brief

Some recent research on forest ecology: Despite four cyclones between 1967 and 1970, research on the long-term recovery of tropical rainforest on the Solomon Islands found no change in the relative abundance of 12 common species, indicating that changes in forest structure were linked to human impacts rather than climatic events (*Journal of Ecology*, **88**, 1063-1078). Studies of the endangered Lauraceae species *Beilschmiedia miersii* in La Campana National Park in Chile attribute lack of regeneration to seed and seedling predation by livestock, highlighting the need for better livestock management in the park (*Biological Conservation*, **98**, 69-76). The results to date of the first large-scale ecological restoration in an area of forest affected by the construction of a hydro-electric dam in New Zealand are examined in *Restoration Ecology* (**9**:1, 28-37). Research in Canada ranked under-storey native plant species according to their relative occurrence in regenerating deciduous forests and control sites to determine species that need active reintroduction, whilst research in the USA demonstrated the effects of forest edge structures on the dispersal of exotic species into forest interiors (*Conservation Biology*, **15**:1, 98-110 and 91-97). A series of papers in *Conservation Biology* (**15**:1) looked at the effects of forest management on bird species. In managed south-eastern USA pine forests, even-aged stands provided low-quality nesting habitat for several bird species, whilst nesting success improved in mid-rotation and single-tree selection stands (196-207). In Poland, research has confirmed that woodpecker species are useful indicators of avian diversity at a landscape scale (208-217). Research in New Brunswick, Canada highlighted the effect of cutting intensity and frequency on two Neotropical migrant bird species (184-195). Studies of ovenbirds (*Seiurus aurocapillus*) in Wisconsin, USA determined that increased clutch size probably offset higher predation rates for birds nesting on forest edges (173-183).

Learning Across

Boundaries



– Broad-Scale Conservation

Some of the world's largest conservation organisations met in the Adirondacks in New York State at the end of 2000 to discuss the philosophical and practical implications of moving up from site approaches to broader-scale conservation planning and implementation. Sarah Christiansen, of WWF-US reports.

The workshop initiated a fruitful exchange amongst conservation partners that are exploring conservation at broad scales. Whether this is the ecosystem approach (Convention on Biological Diversity), ecosystem-based management (IUCN), ecosystem conservation (Conservation International), bio-regional planning (World Resources Institute and IUCN) or eco-region based conservation (WWF and The Nature Conservancy), the overall guiding principles are the same in each case and the need for collaboration is now well recognised.

Through a mix of presentations and discussions, approaches were shared on threat analysis and response strategies, monitoring and evaluation, tools for stakeholder collaboration, GIS, etc. A few of the key recommendations are summarised below:

- *Increase direct exchanges between organisations.* This includes expanding organisation training (e.g. threat analyses, monitoring, site and large-scale planning, etc.) to other partners as well as actively promoting interchange between sites globally. Concrete examples of this identified at workshop were:
 - Link the Wildlife Conservation Society (WCS) landscape species approach with the WWF/IUCN landscape approach.
 - Implement a monitoring system for the Atlantic Forest of South America that draws on tools from workshop.
 - Link up similar aggregate monitoring/index work (e.g. WWF's Living Planet Index with WCS).
- *Annual workshop.* Create more opportunities to exchange ideas on a regular (at least annual) basis. The Nature Conservancy has already expressed a commitment to host a similar workshop next year to pick up on recommendations from this workshop as well as explore new or familiar issues more in-depth. Lessons learned from the Adirondacks workshop can help inform potential themes to follow up on.

- *Sharing information.* Identify innovative ways for cross-institutional sharing
- *Avoiding duplication.* Look for ways to build synergy and refine approaches within each institution before creating new ones. Related to this, work collaboratively to identify and tackle root causes of threats at the landscape and eco-regional level (be strategic about what niches different institutions fill in addressing threats to build on strengths).
- *Overlay map.* Building on initial overlays of prioritisation, there was a recommendation to produce a map that visualises global priorities and identifies where partners are working to promote better collaboration. This may eventually include a 'demonstration site' where partners can collectively contribute their respective expertise.
- *Communications:* Link into existing frameworks for information exchange (e.g. listservers, internet discussion groups) and clarify terminology – not necessarily aiming at standardising but at least understanding what different terms mean within different organisations

Calendar of events

RECOFTC

Certificate Course in Community Forestry

9 July-31 August 2001, Bangkok, Thailand

Contact: Dr S Sukwong, Regional Community Forestry Training Center, Kasasart University, PO Box 1111, Bangkok 10903, Thailand
Tel: +662-940-5700, fax: +662-561-4880,
email: ftcsss@nontri.ku.ac.th, www.recoftc.org

International Network of Bamboo and Rattan

Sixth International Bamboo Congress

12-17 November 2001, Dehradun, India

Contact: T.P. Subramony, INBAR South Asia Office, c/o IDRC, 208 Jor Bagh, New Delhi 110003, India.
Tel: +91-11-4619411/2/3, fax: +91-11-4622707,
email: inbar@idrc.org.in www.bamboo.org.au/iba/

RECOFTC

International Conference on Advancing Community Forestry

23-28 September 2001, Chiang Mai, Thailand

Contact: Dr S Sukwong, Regional Community Forestry Training Center, Kasasart University, PO Box 1111, Bangkok 10903, Thailand
Tel: +662-940-5700, fax: +662-561-4880, email: ftcsss@nontri.ku.ac.th,
www.recoftc.org

Earth Summit (Rio +10)

September 2002, Johannesburg South Africa

Contact: www.earthsummit2002.org

Vth World Parks Congress

8-17 September 2003, Durban, South Africa

Contact: www.wcpa.iucn.org

XII World Forestry Congress

21-28 September 2003, Quebec City, Canada.

Contact: www.wfc2003.org



Forest Innovat

When it began, the Forest Innovations project was the largest collaborative policy project between IUCN and WWF. Nigel Dudley and Sue Stolton report on progress over three years.

How do conservation organisations co-ordinate research? How do we manage the tricky relationship between conservation and development? How do we ensure that lessons from the field make their way into policy? In 1998, the German government department BMZ made the bold decision to fund IUCN and WWF for three years to look at these questions. The Forest Innovations project also aimed to help the two conservation organisations work more closely together and to build links with the German technical development agency GTZ.

Developing conservation tools

At the project's core was the development of conservation tools, aimed at implementing broad-scale approaches to conservation. The project worked with several partners,

including the World Commission on Protected Areas (WCPA), the École Polytechnique Fédérale de Lausanne (EPFL) and the World Bank, and with local IUCN, GTZ and WWF offices in Central America, the Congo Basin and the Mekong countries.

Forest Innovations looked at challenges facing the world's protected areas – recorded in the book *Partnerships for Protection*. Two side projects looked at the status of protected areas. One, funded by the WWF-World Bank Alliance, assessed forest protected areas in ten forest-rich countries and created a new Alliance target for management effectiveness. The second, funded by WWF Netherlands, resulted in the book *Squandering Paradise* that provides the most detailed assessment available of threats to protected areas globally. With WCPA, the project developed methodologies and a framework for assessing management of protected areas, which was launched at the World Conservation Congress last year (see *arborvitae* 16). It is being implemented initially through a four-year project assessing World Heritage sites with UNESCO and by using a methodology developed for Africa. Forest Innovations worked closely with WCPA in the promotion of assessment, running workshops and lobbying governments. Assessment identifies strengths, weaknesses and suggests interventions to improve management.

The need to integrate environmental and social functions of forests at a landscape scale formed the impetus for research with EPFL. Meeting conservation goals also necessitates addressing human needs and balancing the trade-offs involved is usually only possible at a landscape scale. The project developed methods for assessing landscape-level forest quality and tested these in three continents (see *arborvitae* 16), before working with IUCN and WWF to develop a

landscape approach to forest conservation. The approach aims to both collect the information needed to make decisions about conservation at a landscape or ecoregional scale and facilitate the negotiations needed to ensure that conservation gains an adequate share of the landscape. We prepared booklets, manuals and extension materials in English, French and Spanish.

Addressing the challenges posed by timber and fibre plantations led to development of a third 'toolkit'. Currently timber plantations are criticised for their environmental and social impacts, opposed by some NGOs and loved by the industry. Forest Innovations drew up and tested social and environmental guidelines for timber plantations, but decided that a fundamental shift in approach was required. Instead, some principles for the conditions in which plantations might be a suitable land-use were drawn up. The project also helped develop a new joint WWF/IUCN project, Forests Reborn, which addresses the wider question of forest restoration. Follow up work is also taking place with the

Convention on Biological Diversity and Commission on Sustainable Development. At the IFF, we influenced policy through development of position papers, drafting inputs for formal interventions and through a side meeting on protected area effectiveness, attended by 12 governments.

The fact that the world's two largest conservation organisations spoke with one voice, sometimes with partners like the World Bank, created and maintained an important profile and impact. We influenced the development of the UN Forum on Forests with respect to stakeholder participation and inclusion of IUCN/WWF priorities in its work programme, including through the 8-country response coordinated by GTZ. More generally, the project revised the IUCN/WWF *Forests for Life* strategy through workshops in Costa Rica, Madagascar, France and Switzerland and the agreed policy was published as a three-language brief – *Forests for Life: Reaffirming the Vision* – at the World Conservation Congress. This was developed on a regional basis with WWF to produce a set of Africa-wide policy priorities. Through the project, we have become the 'advisor of choice' for many governments, NGOs and other partners in the international arena.

Extension of the ideas developed by the project was of key importance. A lot of material was produced, including five books (one in two languages), seven pamphlets, nine newsletters and six newsletter 'specials', over 50 papers and reports (varying from published papers to working documents), a dozen PowerPoint presentations and a website.

Was the overall experiment a success? We certainly ended up with some new tools and new partnerships. All the elements started under Forest Innovations are continuing and some have grown far larger than the small seeds sowed a few years ago. We also certainly made some mistakes: partnerships that didn't work out as well as hoped, field tests that were not completed successfully and policy initiatives that failed to materialise. The project was too short: the two conservation organisations felt that they were just starting to get to know how GTZ worked when the project came to an end and we're now looking for ways to keep a relationship going that all three partners have

found valuable. It was also probably too ambitious, dissipating effort across many fields and issues. But the central simple messages, that co-operation on forest policy gains extra results and that it is possible for

conservation organisations to work across disciplines and geographical boundaries to find solutions to complex problems, have been amply demonstrated.

Contact: See the Forest Innovations web site at www.iucn.org/themes/forests/

ions



Center for International Forestry Research, including proposals for a task force to look at the political economy of plantations.

Getting the message across

The project helped the partners to refine and implement effective forest policy in line with the *Forests*

for Life strategy through reports, books, a newsletter (the one you are reading), a website, seminars and workshops. Perhaps most significantly, we funded development and promotion of joint positions at global and regional forest policy initiatives, such as the Intergovernmental Forum on Forests (and the follow-up UN Forum on Forests),





Vulnerable forests

much more needs to be done

In February 2001 WWF acknowledged that for the first time ever over 10 per cent of the world's forests were protected, but called on governments to do much more. Devendra Rana of WWF reports.

WWF's report *The World's Top Ten Most Vulnerable Forest Ecoregions* highlights the most vulnerable forests across the globe and the threats that they face. The vulnerable forests were calculated on the basis of the proportion that remains from the forest's original area, and amount of the current forest area legally protected.

The analysis shows that many of the world's most biologically significant forests – rich in rare species, habitats and ecological processes – remain vulnerable as they still lack effective protection or management. They are at risk in the future to deforestation and degradation by logging, population pressures, pollution and other forms of human activity.

The Top 10 include; the Southern Pacific Islands (currently with 0.2 per cent protection), the Naga Manapuri Chin Hills in Southeast Asia (0.8 per cent), the Cameroon Highlands in West Africa (1 per cent), the Philippines moist forests (1.8 per cent) and Southern Mexican dry forests (2.1 per cent). Though the report only focussed on the Top 10, the analysis showed that many of the most biologically significant forests in all parts of the world require urgent attention – governments must increase protection status of these forests to at least 10 per cent, in line with initiatives taken elsewhere in the world.

Many of the forests highlighted are in some of the poorest nations on earth. These nations are economically the least able to take care of their own natural resources and most in

need of the resources that the forests provide. These countries will only be able to protect their forests if conservation organisations, donor agencies and others support them to put in place a well planned, managed and funded system of protected areas. The system should not only be responsive to global conservation needs, but also to the needs of the local and vulnerable, forest-dependent communities.

Countries that have protected more than 10 per cent of their forests cannot afford to be complacent, as much still needs to be done to create viable, representative networks of forest protected areas. The vast majority of national protected area networks are currently biased towards uneconomic lands that omit or under-represent many important forest types. Due to design shortcomings many of these networks are also not viable over the long term. Governments must work in partnership with different stakeholders to create networks of representative forest types.

In addition to poor representation, it has increasingly become clear that protected areas are not as effective as they should be. The gap between the goals of protected areas and the reality on-the-ground is often embarrassingly wide. If the significant investment in land, money, skills, political reputation and knowledge made in protected areas is not to be lost, a determined effort must be made to improve management. Without it, the future of protected areas is in jeopardy. WWF, with WCPA, is currently developing best practice models for assessing and improving protected areas. Utilisation of this new methodology will lead to enhanced nature protection on the ground.

Note: The protected areas data is compiled by United Nations Environment Programme (UNEP)-World Conservation Monitoring Centre (WCMC) based on data from a variety of national and international sources. The data are the most recent available. For more detailed information visit the UNEP-WCMC website at www.unep-wcmc.org/forest/world.htm

WWF news in brief

Forest Advisory Group: In January 2001, WWF held its first full Forest Advisory Group meeting in four years, gathering over a hundred forest officers together in Denpasar, Indonesia. They discussed the new WWF forest campaign targets, took part in many workshops and side meetings, and exchanged experiences and ideas from over fifty different countries. A full report on the new forest targets will appear in *arborvitae* 18.

Living Documents: The DGIS-WWF Tropical Forests Portfolio is publishing a series of eight Living Documents on lessons learned from the first five years of the project. Emphasising accessibility and the importance of stressing what went wrong as well as what went right, the documents are brief, well-illustrated and aimed at both professional and interested laypeople. Most of the documents relate to specific field-projects run by the portfolio. Those with a particular forest theme include *Conserving Gabon's Empty Quarter: The Minkébé Conservation Project*; *Plant Mangroves Get Prawns: Conservation of Pakistan's coastal forests*; *Finding Defenders for a Tropical Fortress: People and conservation in Ecuador's Sangay National Park* and the general title *Promoting a Learning Culture*.

Contact: Astrid Bjorvik, email abjorvik@wwfint.org

Coltan mining threatens the Congo

11

IUCN is appealing to the international community to stop buying the mineral coltan, which is being illegally mined in forested protected areas in the Democratic Republic of Congo.

The mineral coltan, short for columbite-tantalite, is the principal source of tantalum. The electronics industry is the biggest consumer of tantalum but severe shortages of the ore have been experienced as demand has grown. The eastern part of the Democratic Republic of Congo (DRC) is said to hold some 15 per cent of the world's supply of the ore. In 2000, the United Nations Security Council established an expert panel on the illegal exploitation of the natural resources of the DRC. In April 2001, following numerous interviews with governments, rebel groups, UN agencies, representatives of States and international organisations, the Panel presented its report to the Security Council. The Panel noted that *'illegal exploitation of the mineral and forest resources of the DRC is taking place at an alarming rate'*.

IUCN is particularly concerned about the damaging impacts of the mining on the natural values of two World Heritage sites: Kahuzi-Biega National Park and Okapi Wildlife Reserve located in the eastern part of the DRC. Adding to the extreme pressure on these sites from war and poaching, in the past year it is estimated that over 10,000 people moved into Kahuzi-Biega National Park and 4000 into Okapi Wildlife Reserve in order to mine for coltan. Park officials from both sites report a heavy toll on the flora and fauna and streams and forests are also being severely degraded. The miners have been relying on bushmeat for food, including elephants and the endangered eastern lowland gorilla (*Gorilla beringei graueri*). Park officials at both sites, as well as Mbuti Tribe Leaders in Okapi, report that native fauna has been wiped out in areas near the mines.

The UN Panel, following its study, concluded that tough measures must be taken to bring an end to the cycle of exploitation and recommended *'a temporary embargo on the import or export of coltan (and other resources) ... from or to Burundi, Rwanda and Uganda until those countries' involvement in the exploitation of the natural resources of the [DRC] is made clear'*.

IUCN supports the UN Panel's recommendation for an embargo, as well as sanctions to be taken against Governments whose soldiers were involved in killing endangered species. Furthermore, IUCN is making three appeals:

- It calls on buyers of coltan to ensure that the product they purchase does not come from these World Heritage sites in the DRC.
- While supporting the current efforts to remove miners from the Okapi Wildlife Reserve, it calls on the DRC authorities, and the neighbouring States of Rwanda and Uganda, to help enforce an immediate removal of miners from within the boundaries of both the affected World Heritage sites.

- In addition, IUCN calls on the buyers of coltan and the governmental authorities in DRC, Rwanda and Uganda to do everything in their power to find acceptable alternative livelihoods for all miners removed from the two World Heritage sites.

Contact: David Sheppard, email: das@iucn.org. (The full report can be viewed at www.un.org/Depts/dhl/docs/s2001357.pdf).

IUCN news in brief

New DG: Achim Steiner has been appointed the new Director General of IUCN. Mr Steiner has worked for IUCN's Global Policy Unit in Washington and IUCN's Southern African Regional Office. For the last three years he acted as Secretary General for the World Commission on Dams whose report, launched last September, was received with widespread acclaim.

Environment Prize: IUCN President Yolanda Kakabadse has been awarded the Zayed Prize for her role in the preparation, at the Rio Conference of 1992, of the chapter on NGOs in *Agenda 21*.

Alien invasions – from our own planet: IUCN celebrated World Biodiversity Day on May 22nd by drawing attention to invasive alien species – those that occur outside their natural range and threaten the existence of native plants and animals. *'After habitat loss, this biological invasion constitutes the greatest threat to biodiversity, and it has already had devastating consequences for the planet'*, says Jeffrey A. McNeely, the Union's Chief Scientist. On islands, invasive species are now thought to be the primary cause of species loss.

The issue of invasive species affects forestry practice in many ways. Gone are the days when any old exotic species could be freely introduced for plantation purposes. Responsible foresters should now go through a careful screening process before attempting even the smallest trial – or face potentially disastrous consequences. Cluster pine (*Pinus pinaster*) for example, a tree from the Mediterranean Basin, was planted extensively in temperate regions outside its natural range, where it has invaded natural grass and shrublands as well as forests, leading some native species to the brink of extinction.

Another species that has made it to the *'100 of the worst'* list is Siam weed (*Chromolaena odorata*), a perennial shrub growing in dense thickets in areas it has invaded in Asia and Africa. In the latter continent, farmers struggling to rid their fields of the weed have named it after unpopular dictators (Acheampong in Ghana, Sékou Touré in Côte d'Ivoire). But Siam weed also invades the forest along roads and colonises large canopy openings caused by destructive logging practices. In the dry season, thickets die off massively and become dry as tinder – with disastrous consequences for some of the last remaining tropical dry semi-deciduous forests in West Africa.

The Invasive Species Specialist Group of IUCN's Species Survival Commission has created a user-friendly database that can be searched by species name, country or location invaded, habitat invaded and ecological category of the invader.

Contact: www.issg.org/. Report by Wendy Strahm and Simon Rietbergen

The world's worst nuclear accident to date took place fifteen years ago at Chernobyl in the Ukraine, adding to existing fallout from weapons testing. Lyudmila Zhirina, Director of the Russian NGO 'Viola' based in Bryansk, discusses the implications of radioactivity in forests.

Radioactivity and forests

Testing nuclear weapons in the 1950s and the Chernobyl accident in 1986 resulted in the radioactive contamination of large areas of Russia. The most contaminated areas are in Europe, particularly around Bryansk, northeast of Chernobyl. Some 415,400 ha, about 35 per cent of the region's forests, were contaminated, mainly by cesium-137 and strontium-90.

The human health impacts of radiation include increased thyroid cancer, leukaemia and other illnesses. Children are especially vulnerable because their growing bones and organs are more likely to accumulate radionuclides. Women too may be disproportionately affected. In Bryansk, as elsewhere in Russia, the economic crisis has resulted in local communities becoming increasingly dependent on natural resources for subsistence needs. It generally falls to women to gather non-timber forest products, fuelwood and water in contaminated forests. This will result in enhanced radiation exposure that will affect both women and their unborn or nursing children. According to local NGOs, the rate of babies born with birth defects or brain damage in Bryansk may be one in three, or even higher. The other group at high risk consists of forest industry workers, a traditionally male-dominated occupation.

The mortality of trees and other plants is also increasing. In some areas, up to 40 per cent of the forest has died. Pines, spruce and oaks are particularly vulnerable. Pollutants such as acid rain, and poor forest management, have enhanced the effects of radiation: plants are weaker and susceptible to

decline. Malformed births among domestic and wild animals have also been reported extensively following the Chernobyl accident. There was a rise in deformities in these newborns from 0.07 percent of total births in 1987 to 9.9 percent in 1989.

Russia faces an added danger from forest fires. Some 3 million ha of forests are contaminated with long-lived radionuclides, mainly in southwestern Europe (from Chernobyl), the Urals (from the defence industry) and Altai (from nuclear testing). Negative impacts of fires are greater in contaminated forests, especially for fire fighters. Radionuclides are re-emitted into the atmosphere and can travel long distances, contaminating neighbouring countries.

Initially, government authorities misinformed the public about the Chernobyl accident by under-estimating health and ecosystem impacts. This was followed by a period where the contamination of food supplies was publicly over-estimated, causing severe social stresses.

At a NATO Workshop on contaminated forests, scientists examined possible countermeasures to rehabilitate contaminated forests. The final recommendations highlighted the need to:

- Evaluate lessons learned from past projects to educate forest residents regarding the risks associated with the use of certain forest products
- Propose new schemes such as alternative food supplies
- Gather more information on the costs and efficiencies, as well as practicality of countermeasures, based on applied case studies
- Consider alternative forest values such as biodiversity and preservation of natural landscapes as a contribution to pan-European ecological goals

Source: Brian Amiro, Alexander Greben'kov and Hildegard Vandenove (1999); Countermeasures and Risks Associated with Contaminated Forests: Report of the Working Group, in Igor Linkov and William R. Schell, eds. *Contaminated Forest: Recent Developments in Risk Identification and Future Perspectives*, Kluwer Publishers, Dordrecht

Bing Lucas - an appreciation

For many years, P.H.C. (Bing) Lucas, who died last December at the age of 75, was a central figure in New Zealand and international conservation.

As Director-General of New Zealand's Department of Lands and Survey in the 1970s and 1980s, he held overall responsibility for the national system of protected areas. He was immensely effective in expanding the network, basing its management on sound science and sound administration, and building up a cadre of professions that is second to none.

Retiring from government employment in 1986, Bing was able to devote more time to his second and even more important area of influence, international conservation. He was active in IUCN for some 30 years. He was elected as one of its regional councillors, during which time New Zealand hosted the 1981 IUCN General Assembly. Even more important to him was his association with IUCN's protected areas commission (now the World Commission on Protected Areas, WCPA), culminating in his appointment as its chair from 1992-1994. Since then, until a few days before his death, he was IUCN's Senior Advisor on World Heritage.

For 15 or more years, Bing was at the centre of practically every IUCN initiative in the protected areas field - its World Parks Congresses, its

management guidelines, its input to the World Heritage Convention, its missions to contentious protected area sites, and so on. In this work, he came across hundreds of experts, field staff, and ordinary people concerned about protected areas around the world. There will be many readers of *arborvitae* among them.

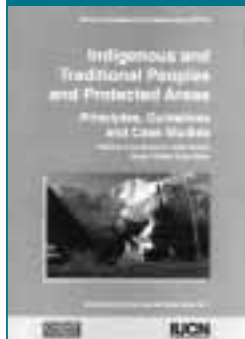
All those who had the good fortune to meet Bing will know that no cold account of his career can do remote justice to the man. He was a truly extraordinary individual who brought a fund of human warmth, great enthusiasm, boundless energy and a depth of professionalism to everything he did - and thus affected all those whom he met. He was truly loved by those of us in WCPA who had the privilege to work with him.

Bing's death was widely mourned, but it was mercifully quick, with his close-knit family around, in his beloved New Zealand and upon one of the walkways that he himself had helped to create. If it had to be, it could not have been more merciful. He leaves a wealth of fond memories in the minds of all those who knew him - as one of them put it '*he was a lovely sparkling man, who thought only well of others*'.

Adrian Phillips

Note: WCPA has plans to launch a memorial appeal in Bing's memory later this year. An announcement about it will appear in *arborvitae* in due course.

Indigenous/Traditional Peoples and Protected Areas



IUCN/WCPA and WWF have published principles and guidelines on indigenous and traditional peoples and protected areas. Javier Beltrán of UNEP-WCMC introduces the principles and guidelines and summaries one of the case studies that has been used to highlight the issues raised when building relationships between people and protected areas.

The five principles and guidelines aim to provide a basis upon which to develop partnerships between indigenous and other traditional peoples and protected area planners and managers. These should also help to facilitate the establishment and management of protected areas that overlap with ancestral indigenous and other traditional peoples' areas, and/or include indigenous and local communities that traditionally use the area's resources. The principles and guidelines are proposed as a framework for protected

area planning and management, not as a blueprint. They should therefore be adapted to the particular situation, legislation, and policies of each country, and used together with other complementary approaches and tools, to ensure effective management of protected areas in partnership with indigenous and other traditional peoples living within or around their borders.

The principles and guidelines have been published in WCPA's best practice protected area guidelines series along with 11 case studies (see box), which have been prepared to demonstrate experience around the world in natural resource management within protected areas which overlap with indigenous and other traditional peoples' lands, territories or areas.

Source: Beltrán, J. (Ed.) (2000). *Indigenous and Traditional Peoples and Protected Areas: Principles, Guidelines and Case Studies*. IUCN, Gland, Switzerland and Cambridge, UK and WWF International, Gland, Switzerland, can be downloaded from the WCPA website (www.wcpa.iucn.org) or purchased from the IUCN Publications Unit, tel; +44-1223-277-894, email: info@books.iucn.org. A Spanish version of the document is also about to be published.

Sarstoon-Temash National Park, Belize

The Sarstoon-Temash National Park (STNP) is located in Belize's southernmost Toledo District. With a land area of 168km², the park is the second largest protected area in the country. STNP protects a wetland complex and encompasses the country's most highly developed riverine mangrove, with red mangrove (*Rhizophora mangle*) as the dominant species.

In recent years, Toledo's pristine resources have captured the attention of international and national developers, and the District's previous isolation is being steadily eroded. There are already 17 forestry concessions, and strong indications that others, adjacent to the park itself, might be granted in coming years. A new paved highway from Belize City to Toledo is currently being completed, which the Government of Belize hopes to extend eventually across the border into Guatemala.

STNP was created in 1994. At first, the five indigenous communities living adjacent to STNP were largely unaware of its existence. The government had never thought to consult the communities before creating the park; it neither established a permanent governmental presence in the area nor demarcated the park boundaries. So there was no reason for local people to suspect that they had been living on the border of a national park. By 1997, community members had begun to hear about the park and decided to call a meeting to discuss the matter. Initially, there was strong opposition to the park. However, through discussions facilitated by a number of invited organisations, the community stakeholders were encouraged to explore the possibility of turning a negative situation to their advantage and pursuing a co-management resolution to their problem instead. This eventually led to the formation of the Sarstoon-Temash Institute of Indigenous Management (SATIIM) as a non-governmental organisation in 1999.

Critical evaluation of lessons learnt

Although SATIIM's institutional progress has been steady, it has not always been smooth. While the five communities committed themselves in 1997 to seek co-management of Sarstoon-Temash, some pockets of local resistance to the project persisted for a while. Objections were based upon: (1) fear that a national park might force villagers to relinquish traditional rights to land within the park; (2) confusion about how the park would affect their subsistence resource use; and (3) doubts whether a co-management agreement could actually solve their livelihood crisis.

In order to address these concerns, SATIIM conducted a sensitive but determined educational campaign through regular workshops held in each of the five communities. SATIIM's efforts to link conservation with increased livelihood security in local indigenous perspectives have already met with success. Although access to the park is still not being monitored, the communities have independently begun to assume co-management responsibilities, imposing regulations of their own on their agricultural activities and use of resources in the park area. Community members frequently solicit SATIIM's help in locating the park's boundaries and seek advice on how to modify their extractive activities in order to respect those boundaries.

SATIIM's Board of Directors is concerned that if funding for small income-generating activities is not soon secured, the community commitment to the project may falter. Nevertheless, the strong support network that SATIIM has developed since 1997 gives good reason for optimism that financial support will be forthcoming. When it does, the financial requirements of the organisation itself and of the indigenous communities will both need to be met.

The Uganda Wildlife Authority (UWA) is protecting biodiversity in a country facing severe poverty and the aftermath of war. Bwindi gained unwelcome attention when tourists were attacked some years ago. Chief warden [John Makombo](#) reports on how staff are fighting back against these problems to ensure the long-term survival of the area's wildlife.

Bwindi Impenetrable National Park



Bwindi Impenetrable National Park (BINP) is located in South-West Uganda. Sectors of the forest have been protected since the 1930s and BINP, which covers 331 km², was gazetted as a national park in 1991 and inscribed as a World Heritage Site in 1994. The park's rare afro-montane vegetation provides one of the richest habitats in East Africa for birds (346 species), butterflies (202), trees (200) and mammals (120), the latter includes *chimpanzees* (*Pan troglodytes*) and more than half of the world's remaining mountain gorillas (*Gorilla beringei beringei*) – over 300 individuals – assessed as Critically Endangered on the IUCN Red List.

Local communities have traditionally used resources such as firewood, food, medicine and other forest products from the Park area and continue to rely on these for their socio-economic well-being. In recent years eco-tourism activities have been developed, taking advantage of the Park's wildlife to attract visitors.

BINP's primary objective, outlined in its management plan, is: *'to safeguard the biodiversity and integrity of the physical and ecological processes of BINP in perpetuity for health, welfare,*

Although BINP is in the middle of the most densely populated part of the continent, with densities up to 300 people per km², there has been virtually no encroachment over the last 25 years. In addition, huge steps have been made over the last twelve years to diffuse conflict in the area. But while considerable progress has been made so far, several areas of management have been identified where more work is needed. These include the resolution of conflicts over land use. The ever-increasing human population around the park presents a threat to the park's resources, as people look for space and cultivable land and access to resources from the Park. For example, solutions to crop raiding are urgently needed. The Wildlife Statute of 1996 does not provide compensation for destroyed crops, so local people have little incentive to protect the animals that make their families go hungry. Continued work on revenue sharing and resource-use arrangements is also needed. To date, 21 parishes bordering the park have benefited from access to specified park resources on a sustainable basis. In addition, 20 per cent of the Park's entrance fees are used to meet the basic social and economic needs of local people.

So far, the programme has completed 19 projects in 19 parishes around the park, including construction of roads, schools and health centres.

BINP staff face a number of urgent needs as well. Increased management effectiveness can not be achieved without significant improvements in the ability of the staff to perform their duties. The development of infrastructure and procurement of equipment, including the construction of adequate housing facilities for staff and Park administration and a visitor centre are high on the list of priorities. Some rangers living outside the park have to walk for up to 10km a day to and from the park. Training is also urgently needed, for example in treatment of gorillas and in the field of ecological monitoring and visitor care. The park also needs a radio network – in remote areas communication is an important element of personnel and visitor security. Hopefully, the restoration of security will lead to increased staff confidence in the field and the return of tourists whose financial contributions can help to maintain the biodiversity of BINP while progressively improving local communities' livelihoods.

Source: John Makombo, Uganda Wildlife Authority, P.O Box 3530, Kampala, Uganda Tel: +256-041-346287/8, email: uwa@uwa.or.ug

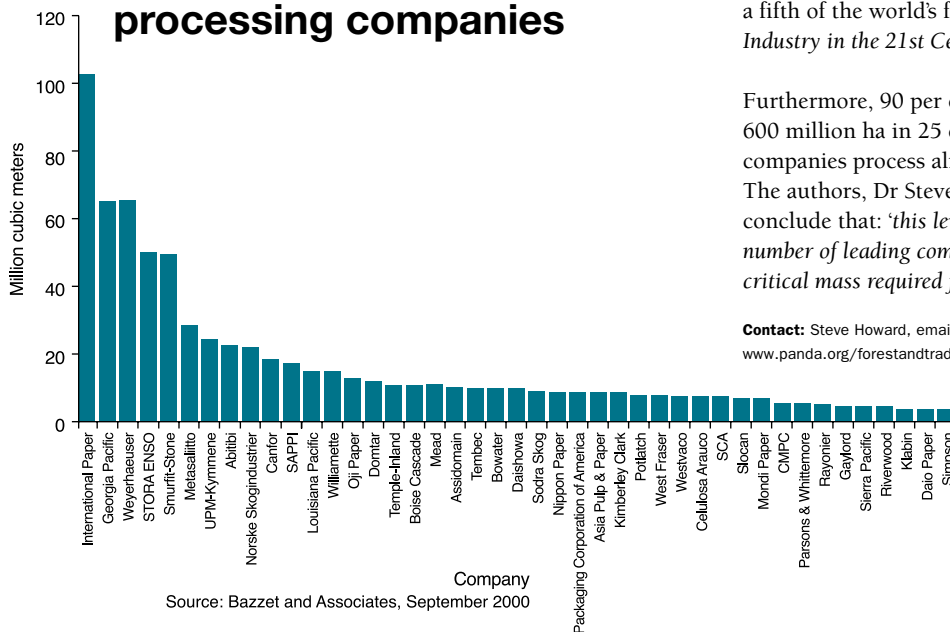
Promoting collaborative management

Uganda's protected areas will only survive in the long term if local communities support them. Efforts need to be stepped up to develop collaborative arrangements with communities around the parks to improve the park/community relationship and provide greater incentives for conservation. Such packages of incentives for local communities to engage in co-management need to be further refined and combined with improved law enforcement to maintain the biological and related economic values of the park in the longer term.

The impact of lessons learned from experience in BINP has reached well beyond the area itself. For example, joint workshops with the staff from protected areas around Uganda (including Mt Elgon and Kibale National Parks which are supported by IUCN projects), have been held to help develop the UWA's policies and approaches towards community conservation. *David Hinchley, IUCN*

A focus on the top

Annual wood consumption of largest global processing companies



Source: Bazzet and Associates, September 2000

With responsible forest management and continued improvements in conversion efficiency it will be possible to supply the timber industry's requirements from around a fifth of the world's forest area according to *The Forest Industry in the 21st Century* a new report from WWF

Furthermore, 90 per cent of production now comes from 600 million ha in 25 countries and the top 50 products companies process almost half the annual wood harvest. The authors, Dr Steve Howard and Dr Justin Stead, conclude that: 'this level of concentration means that a small number of leading companies are in a position to create the critical mass required for certification to take off'.

Contact: Steve Howard, email showard@wwf-forests.org, www.panda.org/forestandtrade

Certification News in Brief

Certification increases around the world: Tembec Inc of Canada is applying for FSC certification on 13 million ha of land. The Brazilian Federal Attorney's Office plans to make FSC certification a requisite for all logging companies in the Amazon, partly to control illegal activities. Russia intends to certify two million ha of state forest in 2001. Austria, Estonia, Hungary and British Columbia all carried out their first FSC certifications in 2000 and the Latvian State forest has announced that 50 per cent of its holdings will be FSC certified by 2002. Major new forest areas were certified during 2000 in, amongst other places, Germany, Switzerland, Sweden, Brazil, Russia and the USA. Shell has obtained FSC certification for its operations in Uruguay (with UPM-Kymmene), Argentina, Chile and Paraguay. FSC group certification schemes are established in France, Latvia and Japan. FSC working groups have been set up in Finland and Surinam and a call for FSC certification emerged from a conference in Luxembourg. The FSC has also recognised national Working Groups in Mexico and Peru to set standards and has approved Peru's standard for Brazil nuts – the first ever for a major non-timber forest product.

Sources: WWF and *Newsletter on Forestry and Wood Certification* numbers 1-3, WWF UK

Certification Wars: Around 95 per cent of Finnish forests have been certified by the Pan-European Forest Certification scheme and the first labelled products were sold in 2000. *Anything Goes*, from Greenpeace and the Finnish Nature League presents a critique of the PEFC, with photographs, showing that 'PEFC certification has not stopped the logging of forests of high conservation value'.

Contact: Greenpeace, Kaisaniemenkatu 1 G 173 FIN-00100, Helsinki, Finland or on www.pefcwatch.org

Group Certification: Group FSC certification aims to provide affordable certification for small forest owners. A study of 11 schemes in Sweden and the UK, *The Effectiveness of FSC Group Certification*, assessed whether they were effective and makes recommendations about how they could be improved. The authors, Karin Lindahl and Michael Garforth, concluded that no major changes are needed but that perceptions of group FSC schemes need to be changed amongst owners.

Contact: Flo Danthine, WWF, 36 Avenue de Tervuren – B12, 1040 Brussels or www.panda.org/epo

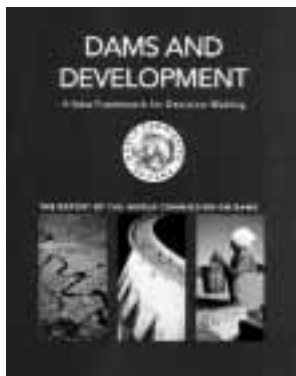
Certification gathering: Atlanta is the venue for the WWF and the Certified Forests Products Council International Conference and Showcase, to be held September 26-28th.

Contact: Tel: +1-503-799-1839, email: conferencequestions@certifiedwood.org, www.cfpconference2001.org

Leaders for Responsible Forestry Now On-line: The Global Forest and Trade Network consists of companies and organisations committed to producing and purchasing forest products from well-managed forests and to supporting independent certification. There are now 14 Forest and Trade Networks worldwide with over 700 members. WWF co-ordinates this global network and works to secure new members, profile existing members, and promote forest certification as a tool which is beneficial for the industry as well as the environment. A new mini-web site highlights the business imperative for why companies should join this growing network and work with WWF and contains information on the 700 members, profiles on key companies and new research.

Contact: Tori Lyall, email: tlyall@wwf-forests.org, www.panda.org/forestandtrade

New publications from IUCN



A new policy framework for dams

Commissioned by the World Bank and IUCN *Dams and development: A New Framework for Decision-Making*, is a groundbreaking review by the 12 members of the World Commission on Dams (WCD) of the world's experience with large dams. The report, which proposes a new framework for decision making in water and

energy resources management, concludes two years of worldwide research and consultation.

More than 45,000 large dams have been built to date which include some of the biggest infrastructure investments ever undertaken in a country. The report catalogues the problems dams have caused, including the displacement of between 40 and 80 million people worldwide due to dam construction. It notes that 60 per cent of the world's rivers have been affected by dams and diversions, but that large dams produce 19 per cent of the world's electricity and between 30 and 40 per cent of the world's 268 million irrigated hectares rely on dams for water.

Through case studies, peer reviews, outreach and independent analysis, the Commission has assessed the technical, financial,

environmental and social performance of dams. Its work programme involved thousands of people and hundreds of dams across the world, to learn the lessons of the past and develop guidelines for future decision-making. Instead of looking largely at the economic benefits, the WCD urges governments, funding agencies and the private sector to pay more attention to integrating social, environmental and economic dimensions of development projects.

Contact: The full report is available free online from the WCD (www.dams.org), or can be purchased from Earthscan Publications, fax: +44-20-7278-1142, www.earthscan.co.uk

Managing Ecosystems

Although ecosystem management is enshrined in the Convention on Biological Diversity, its precise meaning has sometimes seemed uncertain. *Ecosystem Management: Questions for Science and Society* summarises a conference that put flesh onto the bones of the concept through a series of case studies and conceptual papers. An important sourcebook.

Available from: IUCN Bookstore, email: info@books.iucn.org

Savannah storehouse

A new field guide, *Arbres, arbustes et lianes des zones sèches d'Afrique de l'Ouest*, by Michel Arbonnier, published by CIRAD (Centre de coopération internationale en recherche agronomique pour le développement), MNHN (Muséum National d'Histoire Naturelle) and IUCN, describes trees, shrubs and vines from the West African savannah, and their role in supporting human livelihoods: as food, fodder, fibre, fuel or medicine. With botanical keys and 1,300 colour photos allowing the interested lay person as well as the specialist to identify a total of 360 species.

Contact: IUCN Bookstore, email: info@books.iucn.org

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Reviews in brief

Livelihoods Connect

Contact: www.livelihoods.org, email: livelihoods-connect@ids.ac.uk

The UK Department for International Development has a new internet service supporting the implementation of sustainable livelihoods approaches. The website includes key documents, distance learning materials, networking information, discussion boards and FAQs on livelihoods approaches and aims to encourage lesson learning and exchange of experience. *Livelihoods Connect* offers a free Email Update service and is produced by the Institute of Development Studies, Sussex.

Gold Wars

Available from: Forest Peoples Programme, 1C Fosseyway Business Centre, Stratford Road, Moreton-in-the-Marsh, GL56 9NQ, email info@fppwrm.gn.apc.org

For 40 years, gold hunters, ranging from individual miners to Canadian and South African companies, have invaded the territories of Guyana's Amerindians. *Indigenous Peoples, Land Rights and Mining in the Upper Mazurani* has been written at the request of the Akawaio and Arecuna communities and is a comprehensive account of mining in Guyana and particular problems in the watershed.

Flying to nowhere

Available from: Lynx Edicions, Passeig de Gràcia 12, E-08007 Barcelona, Spain, email: lynx@hbw.com

Some 1186 bird species are threatened by extinction and for the first time *Threatened Birds of the World* contains information and maps for them all. The book, produced by BirdLife International, has been written and reviewed by a thousand leading experts and includes notes on threats, status and conservation measures.