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# arborvitæ

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# Communities in Flames



Each year fire burns between 6 and 14 million hectares of forest. The resulting forest loss and degradation is roughly equal to that caused by destructive logging and conversion to agriculture. In recent years the devastating impacts of forest fires on people and the environment have been graphically shown on television and in the print media. However, the messages conveyed to decision-makers and the public often present an over-simplified picture of what is actually a highly complex situation.

Local communities are often blamed for harmful forest fires, whether they have started them or not. This view tends to encourage fire and forest management authorities to look upon communities as a problem. WWF and IUCN believe that there is a need to shift from this culture of blame to a situation where communities are regarded as a possible part of the solution to destructive fires. We need to understand better the socio-economic reasons why people start fires or use fires and to recognise the technical and organisational capacities and limitations of communities in relation to fire use and management.

Indeed, local people are often in the best position to manage or prevent fires. The impact of fires on a particular forest can be positive or negative, depending on the fire regime that is suitable for the ecology of the forest type under management. The existence of local information, techniques and traditional knowledge is well documented for many aspects of community activities, such as medicinal plants and non-timber forest products. People who live in a locality in which fires burn will also often have expert knowledge of local conditions and many of the components of this fire regime.

It is clear however, that communities cannot provide the complete solution to dealing with harmful forest fires. Other stakeholders, including the government and the private sector, must also play a substantial role in forest fire management. Community Based Fire Management should not mean that communities have the sole responsibility to manage fire in the landscape; in most cases, communities will not be in a position to provide a complete fire management system. Rather, they should be considered as one key element in a comprehensive approach that involves all major actors including the government and the private sector, and they should act as one of the critical stakeholders in decision-making processes.

The international conference, *Communities in Flames*, held in July under the auspices of the joint IUCN/WWF project FireFight, collected together examples of Community Based Fire Management and raised awareness of the issue, some examples of which are in the four-page feature on Community Based Fire Management in this issue.

The next issue of *arborvitæ* will be produced in December 2001 (copy deadline November 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](mailto:equilibrium@compuserve.com)

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## Financing destruction



### Investigating Indonesia's Investors

**A review of three new reports investigating the role of forestry companies and financial institutions in logging Indonesia's rainforests.**

In December 2000, CIFOR and WWF's Macroeconomics Program Office released a report on the role of Indonesian pulp and paper companies in the logging, legal and illegal, of Indonesia's rainforests. The report concluded that of the estimated 100 million m<sup>3</sup> of wood to have been consumed by the pulp industry between 1988 and 1999, only 8 per cent was harvested from plantations, the remaining 92 per cent being sourced primarily by clear cutting rainforest.

Despite these environmental shortcomings the Indonesian pulp and paper sector has been one of the most popular investment targets in Asia for the international financial community over the last 10 years. More than US\$15 billion of international investment has resulted in Indonesian companies becoming major global producers. In the last year, however, there has been a sharp reversal in fortunes highlighted by the financial collapse of Asia Pulp & Paper (APP), Indonesia's biggest pulp and paper producer. With debts of US\$13.4 billion, APP announced a standstill on all debt repayments in March 2001 and the New York Stock Exchange suspend all trading in APP's shares in April.

The environmental and social impacts of APP, and the role of international financial institutions in fuelling APP's unsustainable operations has been documented in a new report from Friends of the Earth-EWNI (England, Wales and Northern Ireland). APP's assets total US\$17.5 billion – of this shareholders have financed 25 per cent, bondholders 38 per cent and banks 20 per cent. The report provides details of the more than 300 major financial institutions behind these investments.

The report concludes that to minimise risk and ensure sustainability, financial institutions should adopt and enforce more effective due diligence practices to assess the financial risks in the pulp and paper sector and to ensure that they are not providing funds for illegal or unsustainable practices. The authors suggest that financial institutions should agree a strategy for sourcing their raw material supplies from independently verified harvesting operations. To achieve this they need to ensure that processing capacity is reduced and/or that wood derived from clear-cutting natural forests is replaced with sustainably harvested pulpwood from independently certified sources. Institutions should also ensure that they do not invest in pulp and paper projects that are likely to generate social conflict.

The need for verification of such strategies has been highlighted by research in the Netherlands. In 2000, Greenpeace Netherlands and Milieudefensie asked Dutch banks to apply sustainability criteria when providing financial services to Indonesian oil palm operations. Although the banks were supportive of the criteria NGOs were concerned that the environmental and social impacts of these investments may not be fully realised.

A new report on the oil palm plantation-company PT Matrasawit in East Kalimantan, commissioned by Friends of the Earth Netherlands and funded by the Tropical Forest Programme of the Netherlands Committee of IUCN, backs up these concerns. PT Matrasawit is a subsidiary of PT SMART, an Indonesian holding company that has repeatedly benefited from financial services from Dutch banks. The report investigated whether sustainability criteria were being adopted, applied and monitored. The study concentrated on four main criteria, and aimed to determine if PT Matrasawit was:

- not establishing plantations in areas without forest;
- refraining from using fire to clear land;
- operating within the Indonesian law; and
- respecting the rights and wishes of local communities.

Overall, the study found violations of all these criteria. For example, in 1998, PT Matrasawit was found to be operating outside Indonesian law by possessing neither a permit for the conversion of forestland, nor any land clearing and use of timber permit, nor an operation permit. The report concludes that if Dutch banks are serious about applying the basic investment criteria for investments in plantations as laid down by NGOs, they should at the very least require companies to provide proof of compliance with national laws, and refrain from investing in companies like PT SMART/PT Matrasawit altogether.

**Sources:** *Profits on Paper: the Political-Economy of Fiber, Finance, and Debt in Indonesia's Pulp and Paper Industries* by Christopher Barr, CIFOR - The Centre for International Forestry Research ([www.cifor.cgiar.org](http://www.cifor.cgiar.org)) and WWF-International's Macroeconomics Program Office. *Paper Tiger, Hidden Dragons* by Ed Matthew, Friends of the Earth - England, Wales & Northern Ireland (Tel: +44-20-7490-1555, [www.foe.co.uk](http://www.foe.co.uk)), and Jan Willem van Gelder, Profundo. *PT Matrasawit: Relations between Rabobank, ING and ABN-Amro and forest destruction and poverty in East Kalimantan, Indonesia* by Eric Wakker, AIDEnvironment, the Netherlands (Email: [info@aidenvironment.org](mailto:info@aidenvironment.org)) Rudi Ranaq, Puti Jaji (Institute for Indigenous People Empowerment), Indonesia (Email: [benua@smd.mega.net.id](mailto:benua@smd.mega.net.id))



## Indonesia progress?

**Peter Moore, of the WWF/IUCN Project FireFight, on how the new regime in Indonesia has already showed some positive signs of support towards sustainable forest management.**

President Megawati Sukarnoputri, the new President of Indonesia, has asked the Ministry of Forestry to sharpen its focus on sustainable forest management. In August, Minister of Forestry Prakosa announced the five priority points highlighted by the President for the medium term, with goals to be realised within five to seven years. First is to stop the illegal logging that has spread to national parks and protected forests. "The President has emphasised law enforcement for handling these cases," he said. The second point is how to handle forest fires. "The President instructed the Minister to handle this problem more systematically," Prakosa said. One of the solutions is to form a Forest Fire Prevention Management Project in the regions most prone to fires.

The other three points were to speed up reforestation; managing the decentralisation process or regional autonomy so as to avoid a negative impact upon the forestry sector and finally, President Megawati emphasised the importance of the timber industry but noted that it was possible that the timber industry in Indonesia will have to adapt itself to different amounts of timber processing.

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### News in brief

**Salmon safe:** A US Court of Appeals ruling that the federal fisheries agency violated the law by not considering the detrimental effects of logging on salmon habitat will have an impact on all timber sales affecting salmon habitat under the Pacific Northwest Forest Plan

**Source:** Environment News Service, June 1, 2001

**Logging wars:** Dubbed 'the biggest ever logging operation in the tropical rainforests of the Democratic Republic of Congo (DRC)', the rights to about 36 million hectares of forests have been conceded by DRC's government to representatives of the Zimbabwean president Robert Mugabe in return for military aid against rebels in the east of the country. The logging operation is to be run by the Zimbabwean army and Forestry Commission.

**Source:** *The Observer* (UK), August 26, 2001

**Guyana road:** Guyana's government is planning to build a two-lane highway to link the coastal city of Georgetown with northern Brazil that will open up the vast areas of virgin forests in South America's southern Guianas.

**Source:** Project of Forests.org, Inc. <http://forests.org/>, May 28, 2001

**US Forest Service losses:** A report by the US group Taxpayers for Common Sense reveals that the federal timber programme had its worst year ever in 1998, losing US\$407 million, 23 per cent more than the US\$330 million average losses that occurred between 1992 and 1997. The links between profitability, restoration and old-growth protection were highlighted. The Siuslaw National Forest in Oregon, which carries out the most restoration and cuts the fewest old-growth trees, was the most profitable national forest in 1998, making US\$11.5 million. On the other hand, the forest that proposed the most old-growth logging, Willamette National Forest also in Oregon, lost the most money – almost US\$30 million.

**Source:** Taxpayers for Common Sense, [www.taxpayer.net/forest](http://www.taxpayer.net/forest)

**Cameroon hits violators:** In early June, the government of Cameroon issued sanctions on 65 logging companies for violating forestry regulations. Thirty firms had their licences suspended and another 35 were fined.

**Source:** PlanetArk/Reuters, June 11, 2001

**Paper giants:** UPM-Kymmene of Finland is set to become the world's biggest producer of publication papers following the announcement of its planned E3.64bn (US\$3.1bn) purchase of Germany's largest paper maker Haindl.

**Source:** *Financial Times*, Wednesday May 30, 2001

**Road threat:** India's state minister of forests and environment, Jagdanand Singh, has expressed concern over the amount of trees to be felled if plans to build 14,252 km of roads linking the whole of India go ahead. In the eastern state of Bihar alone, this will mean the loss of 28,000 trees, according to a junior transport minister. The plan, supported by the Indian Prime Minister, depends on funding from the World Bank and Asian Development Bank.

**Source:** PlanetArk/Reuters, July 9, 2001

## Central Africa – new network

In April 2001, a workshop was held in Gabon under the auspices of the Conference on the Central African Moist Forest Ecosystem (CEFDHAC) with Parliamentarians of all 10 countries concerned with CEFDHAC (Burundi, Cameroon, Central African Republic, Gabon, The Republic of Congo, The Democratic Republic of Congo, Equatorial Guinea, Rwanda, Sao Tome and Principe and Chad). The workshop resulted in the establishment of 'The Network of Parliamentarians for the Sustainable Management of the Central African Forest Ecosystems'. The network will help share national experiences, discuss shared, common and transborder themes, mobilise and involve local communities in the elaboration of legal texts on the forest and the environment and sensitise States on International Conventions, encouraging their collective adherence. IUCN, which assures the CEFDHAC secretariat, was asked to devise funding mechanisms for the network, and will submit a minimum plan of activities for the network for the period 2001-2002 as well as a draft ten year Strategic Plan (2001-2010) to ensure the development of the network. Priority activities earmarked by Parliamentarians were training on the elaboration of laws; study trips to specialised institutions in Central Africa and the participation of experts and resource persons.

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Although it is important to conserve large areas of forest, many of the world's most threatened species are now confined to remaining fragments of forest – indeed that is why they are threatened – so conservation efforts must also focus on these degraded areas.



## Closed Forests

### Status of the World's Remaining

### Closed Forests

**WWF's Devendra Rana reviews a new report from UNEP, which assesses the extent and distribution of the world's remaining closed forests in relation to protection status and threats due to population pressure.**

The assessment of the world's remaining closed forests (WRCF) is based on the analysis of global forest cover utilising low resolution satellite data by the Early Warning and Assessment Division of the United Nations Environment Programme (UNEP). Closed forests are defined as those with canopy density of >40 per cent and low population density being classified as <25 people per km<sup>2</sup>. The report findings include:

- In 1995 the extent of WRCF was estimated at approximately 2.87 billion hectares (21.4 per cent of the land area of the world).
- About 80.6 per cent of WRCF are concentrated in 15 countries. Three of these countries – Russia, Canada and Brazil – contain about 49 per cent.
- About 9.4 per cent of WRCF have formal protection status.
- An estimated 83.6 per cent of WRCF have low population density.

The technical section of the report provides useful information to the forest conservation debate. However, the report is let down by rather simplistic and formulaic policy and programme prescriptions put forward to address complex, situation-specific problems.

The report concludes that the international community and national governments should focus forest conservation efforts on WRCF where there are large intact blocks with low population densities as these offer significant opportunities for conservation.

However, whilst it is clearly important to try to conserve large untouched/pristine blocks of forests with low-population densities, most conservationists would argue that to focus solely on these forests is insufficient. Unique remaining fragments of biodiverse forests that are threatened and/or vulnerable to loss and degradation must also be conserved, if significant species and ecosystem losses are to be avoided. Rather than focusing conservation efforts solely on areas where 'they can get the most bang for their bucks', as suggested by the UNEP report, WWF and IUCN contend that a more encompassing strategy is needed. In addition to safeguarding intact, sparsely populated forest landscapes, conservationists should target significant conservation action to save the most vulnerable/threatened forests, wherever they occur.

**Source:** The full report, *An Assessment of the Status of the World's Remaining Closed Forests*, can be downloaded from <ftp://www.na.unep.net/pub/closedforest/>

### News in brief

**Global health check:** UN Secretary-General Kofi Annan launched a four-year 'Millennium Ecosystem Assessment' on World Environment Day in June. The study, which will involve 1,500 scientists, aims to examine the states of the world's grasslands, forests, rivers and lakes, farmlands and oceans, looking at problems, remedies and management issues. Comments on the draft document *Millennium Ecosystem Assessment User Needs Outline*, can be made via the website.  
**Source:** PlanetArk/Reuters, June 7, 2001 and <http://www.millenniumassessment.org>

**Bird extinction:** BirdLife International's newly released '*Threatened Birds of Asia*' suggests that some 300 Asian birds face extinction because of habitat destruction such as deforestation and wetland conversion.

**Source:** PlanetArk/Reuters, June 12, 2001

**Amazon hydro:** The government of Brazil has announced it will undertake an environmental impact assessment of the proposed hydroelectric power plant (planned to be the second largest in the world) on the Xingu River in the Amazon state of Para.

**Source:** PlanetArk/Reuters, August 3, 2001

**Chile road extension:** An estimated one-third of the world's remaining temperate rainforest is found in southern Chile and Argentina. In mid-2001, the Chilean government decided to continue construction of the Southern Coastal Highway (Ruta Costera Sur), which threatens to destroy the country's last major area of primary coastal forest. WWF-US and Chilean partners have designated these forests as priority areas within the southern temperate forest ecoregion. If constructed, the highway will cause deforestation both by its construction and acceleration of timber extraction, conversion to plantations of exotic species and unplanned urbanisation of the coastal zone

**Source:** Valdivian Temperate Forest Ecoregion Program, WWF

**Chainsaw laws in Thailand eased:** In 1978 chainsaw imports to Thailand were banned to help protect forests resources. The Forestry Department introduced the Chainsaws Act, which imposed strict licensing laws to enable the department to differentiate between illegal and legal tools, and helped officials track down the financiers behind illegal logging operations. Every year, forestry inspectors seize about 100 chainsaws from illegal logging operations. However, permission has recently been given to rubber plantation operators to start importing chainsaws again, a move that could contribute to illegal logging.

**Source:** Bangkok Post, April 8, 2001

Produced in association with the IUCN Programme on Protected Areas and World Commission on Protected Areas (WCPA)

IUCN's new policy opposes any mineral activity in Category I-IV protected areas. Sundarbans Forest Reserve is a category Ia area, and a World Heritage site, protected both for its important tiger population and the mangrove forests that give vital flood protection, and provide breeding areas for fish species caught and eaten locally. The economic value of flood protection alone is estimated to be worth US\$460 million a year.

## Oil & Mangroves



5

Nigel Dudley

In July 2001 Shell Hydrocarbons Holdings B.V., Cairn Energy PLC, Bapex and Petrobangla signed Production Sharing Contracts for two areas located in southern Bangladesh, with Shell acting as operator. Part of the Sundarbans Forest Reserve lies in one of these, Block 5. Shell has committed not to explore within the protected area and to carry out extensive environmental and social studies, and stakeholder consultations, before exploring elsewhere in the Block. The company states: "Shell and its partners respect the Sundarbans Forest Reserve, recognise its unique biodiversity and are sensitive to its importance as natural habitat for wildlife".

**New guidelines on mineral exploration and protected areas, agreed at the World Conservation Congress in 2000, will be tested by Shell's decision to explore in southern Bangladesh, close to the Sundarbans Forest Reserve.**

NGOs welcome Shell's decision to avoid the protected area but remain concerned about the potential impacts of oil development: oil spills anywhere in the area would almost certainly affect the protected area and could be catastrophic. As yet it is uncertain exactly where exploration will take place and how near activity will be to the Sundarbans Forest Reserve.

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### Protected Areas news in brief

**New International Network for PA managers:** The Protected Areas Learning Network (PALN), is a joint project between IUCN, WRI, CI and UNESCO to help the world's protected areas managers anticipate and cope with global changes brought about by climate change, poverty and population growth.

Source: *EcoLogic News*, [www.ecologic.org](http://www.ecologic.org), March 2001

**Congo Park extended:** A German-owned logging company, Congolaise Industrielle des Bois, or C.I.B., has given up its lease on a tract of rainforest in the Congo Republic. The 100 square-mile Goualogo Triangle will be added to the adjacent Nouabal-Ndoki National Park. The company retains leases on more than 5,000 square-miles of forest land in Northern Congo, but in 1999 reached agreement with the government and the Wildlife Conservation Society to limit hunting by its cutting crews and to plan its harvest in ways that would limit environmental damage. The decision to set aside the Goualogo tract came after a four-month survey last year of the area by scientists and experts from the conservation group, the company and the Congo Forestry Ministry.

Source: *New York Times*, July 7, 2001

**New Russian protection:** A Russian government directive issued in May, 2001 states that 9 nature reserves and 12 national parks will be established over the next 10 years.

Source: *Forest Update*, N 70, June 2001

**Benefit sharing:** The US National Park Service is soliciting comments on benefit sharing agreements, which would allow the return of benefits to parks when the results of research lead to a commercially valuable discovery.

Source: Stas Burgiel, [bionet2@igc.org](mailto:bionet2@igc.org). For more information on the benefits sharing agreements see: <http://www.nature.nps.gov/benefitssharing>

**Forest protection in Belize:** The US government, assisted by The Nature Conservancy, has concluded a debt for nature swap with Belize, in exchange for the protection of over 9,000 ha of vulnerable forest in the Maya Mountain marine corridor.

Source: Environmental News Service

**World Heritage sites:** Ten new Natural Sites were placed on the UNESCO Heritage List at the December 2000. They include 1.03 million ha of mostly forested landscape at the Greater Blue Mountains Area, near Sydney, Australia; the Noel Kempff Mercado National Park in Bolivia (1,523,000 ha) and the Jaú National Park in Brazil (2,272,000 ha), the Kinabalu Park in the State of Sabah, Malaysia and the Central Suriname Nature Reserve.

Source: [www.unesco.org/opi/eng/unescopress/2000/00-131be.shtml](http://www.unesco.org/opi/eng/unescopress/2000/00-131be.shtml)

**Gifts to the Earth:** An important old-growth forest in the Mediterranean has been safeguarded as a Gift to the Earth thanks to the extension of special protection to a 200,000 ha area of Velebit National Park in the Republic of Croatia. The area, identified by the WWF Forest Hot Spots campaign as one of the 10 most important forests in the Mediterranean region, has populations of wolves, brown bear and lynx and over 2,700 plant species.

Source: WWF, [www.panda.org](http://www.panda.org)

**Community assessment:** Research carried out in the Gamba Protected Area Complex in south-western Gabon into the continued involvement of government employees and local communities trained in ecological survey techniques and participatory rural appraisal (socio-economic studies) revealed that 76.2 per cent of the local community members, as opposed to 7.7 percent of government employees, were still actively carrying out ecological surveys two years after the training. None of the government employees were undertaking participatory rural appraisal after the two-year period, as opposed to 60 per cent of the local community members.

Source: *Conservation Biology* 15 (3) 591-595

**Tiger reserve:** The Chinese government is creating a new Hunchun Tiger-Leopard Reserve in Jilin Province, on the Russian border, to provide habitat for Siberian tigers and the critically endangered Amur leopard. Currently, China's tiger population only survives due to migration from Russia. It is hoped to create another tiger reserve, the proposed Wandashan Reserve in the mountains of Heilongjiang, within a year.

Source: Environment News Service

# Putting **Forests** Centre Stage

**Forests will occupy a prominent place on the international agenda in the coming year. Carole Saint-Laurent reviews the agendas of the UN Forum on Forests and the Convention on Biological Diversity, both of which will feed into the World Summit on Sustainable Development. These events could help give forest action much needed momentum and high-level political attention.**

The second session of the UN Forum on Forests (UNFF-2) will be held in Costa Rica, on March 4-15, 2002. It will deal with progress in implementation on:

- Combating deforestation and forest degradation
- Forest conservation and protection of unique types of forests and fragile ecosystems
- Rehabilitation and conservation strategies for countries with low forest cover
- Rehabilitation and restoration of degraded lands
- Promotion of natural and planted forests
- Concepts, terminology and definitions.

UNFF-2 will also deal with a number of common items for each session, notably:

- Trade
- National forest programmes
- Multistakeholder dialogue
- Emerging issues relevant to country implementation.

UNFF-2 will provide a platform for ministers to make specific commitments beyond what has or could be agreed by the international community, and these will feed into the Rio+10 process. Ministers are also expected to endorse an implementation Plan of Action and declare their commitment to *country goals and strategies* for implementing the IPF/IFF proposals for action.

While this is encouraging, it should be set against the context of the fractious negotiations of UNFF-1. North/South debates were revived and tensions were evident between developing countries with low forest cover and those with high forest cover. There was no common understanding of the purpose of the UNFF, despite an ECOSOC resolution having been agreed last year. Nevertheless, the substantive agenda for UNFF-2 includes several critical forest issues and ministers will have the opportunity to demonstrate leadership on the way to the World Summit on Sustainable Development (WSSD – Rio+10).

Following UNFF-2, the 6th Conference of the Parties (COP6) of the Convention on Biological Diversity (CBD) will meet in The Hague, on April 8 – 19, 2002. Among other things, it will deal with forest biological diversity. More specifically, COP6 is expected to adopt a new more action-oriented programme of work on forest biological diversity, as called for by COP5. An Ad Hoc Technical Expert Group (AHTEG) on Forest Biological Diversity (FBD) was established by COP5 to, inter alia, identify options and suggest priority actions, timeframes and relevant actors regarding:

- Improving the conservation of FBD in and outside existing protected areas
- Mitigating the direct and underlying causes of FBD loss and degradation
- Restoration of degraded forests.

The report of the AHTEG is expected to form the basis for the development of the new draft work programme, which will be considered by the 7th session of the Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA), in Montreal on November 12-16, 2001, as a stepping stone to COP6.

At the moment there are concerns that the draft work programme, which will be put before SBSTTA7 and COP6 for consideration, will not be ambitious enough and will not adequately reflect the decision of COP5 or the outputs of the AHTEG. It will be up to governments to ensure that this opportunity is not wasted.

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## Research in brief

**Conservation in disturbed landscapes.** A series of research projects offer tentative evidence that conservation is not always incompatible with human use of forests at a landscape scale and that controlled use may be better than ineffective attempts at protection that result in illegal exploitation. Reduction in mammal populations (especially peccaries) in hunted forest in Bolivia resulted in more complex mosaics of forest patches, due to reduced trampling and seed predation (*Conservation Biology* **15**, 617-623, 2001). Many endemic species in Bolivia were commonest in lightly disturbed forest, suggesting that they were at a competitive disadvantage and can thus profit from a certain level of human disturbance and could thus be maintained in forest areas subject to sustainable forest use (*Conservation Biology* **15**, 634-641, 2001). A study in the Olympic Peninsula of the USA found that species richness of mammals in old-growth fragments was not significantly correlated with isolation or fragment area as such but was significantly and positively affected by the amount of old-growth fragments and old-second growth in surrounding forests (*Global Ecology and Biogeography* **10**, 113-132, 2001). Conversely, a study of shifting cultivation in India found that primary forest remained key habitat for intrinsically rare species and migrants (*Conservation Biology* **15**, 685-698, 2001). In addition, re-colonisation by plants often takes longer than animals, and studies in North America found lower diversity amongst herbal species in woodland that had re-grown on former agricultural land than in older woods (*Journal of Ecology* **89**, 325-338 2001). More generally, studies of 50 years of land-use in Michigan found that while habitat changes at a landscape scale did not lead to changes in overall diversity, the types of species changes considerably, leading to changes in community composition (*Global Ecology and Biogeography* **10**, 303-313, 2001). Meanwhile, Tropenbos researchers claim that making bushmeat-hunting illegal in Côte d'Ivoire reduces survival of game animals and that legislation and game management offer the best hope of regulating poaching in protected areas. Currently, over 20,000 hunters take 1500-3000 tonnes of bushmeat from the Tai national park each year (Casapary *et al*, 2001, Tropenbos Institute).



**Over the past century the frequency and intensity of forest fires has increased dramatically as a result of human action, making them an issue of global concern. Fires have degraded many of the world's forests, with serious adverse social, economic and ecological consequences. Bill Jackson and Robert Fisher discuss the underlying causes of fires and the role that communities can play in bringing fire under control.**

## Forest Fires in Rural Communities

The immediate impact of forest fire can be devastating to human communities and forest ecosystem alike. In the longer term, fires can adversely affect the supply of ecosystem services necessary for the well-being of human communities, threaten biological diversity, simplify the structure and composition of forests and provide conditions suitable for the entry of invasive species.

In many countries forest and fire management authorities are unable to cope effectively with increasing problems created by forest fires. There is often an over-emphasis by governments on fire suppression and as a result inadequate attention is given to addressing the underlying causes of harmful fires. IUCN and WWF believe that a more balanced response to forest fires is needed; a response that differentiates between those fires that have positive ecological and social and economic impacts with those that are harmful. The underlying causes of forest fires include:

- Perverse economic and social incentives that encourage the inappropriate use of fire
- Greed and corruption
- Land and resource conflicts
- Weak or ineffective bureaucracies and governments
- Economic necessity
- Political motives

Addressing the underlying causes of forest fires requires an understanding of the changing roles of key actors. Throughout the world we have witnessed a decline in the size of public service, including forest and fire management authorities. These changes have resulted from economic necessity, structural adjustment of economies, political ideology and globalisation. Forest management authorities in many parts of the world are shifting from directly managing forests and having an active role in the forest industry to a focus on policy that devolves forest management roles to local government and communities, and privatises forest management functions to concessionaires.

Local communities are thus emerging as key players in forest management and conservation in many parts of the world. Community involvement in forest management is

being promoted in many countries and many governments now expect communities to participate in managing both forests and fires.

We believe that it is important to involve communities in forest and fire management for four key reasons:

- Social justice. In many cases the use and management of fires affects the livelihoods of communities. It is reasonable that those communities have some control over the decisions about forest and fire management in order that negative consequences are minimised and benefits optimised for the community.
- Community involvement in fire management is appropriate to decentralisation and devolution of government functions.
- Government capacity is often lacking at local level.
- Local communities are often best placed to understand the issues and management of local forests and fires. The behaviour of forest fire is greatly affected by local climatic, topographic and forest conditions and people who live in a locality are often best placed to know these conditions.

In general, participation in forest and fire management is most likely to occur when some form of incentive is in place, and/or when participation involves a meaningful role in decision-making. It is only rarely, however, that there is serious devolution of control of local forests or fire management in terms of allowing local communities a meaningful role in decision-making. It is thus often difficult to judge the success of community involvement in fire management due to the limitations in how participation has been applied and reported on.

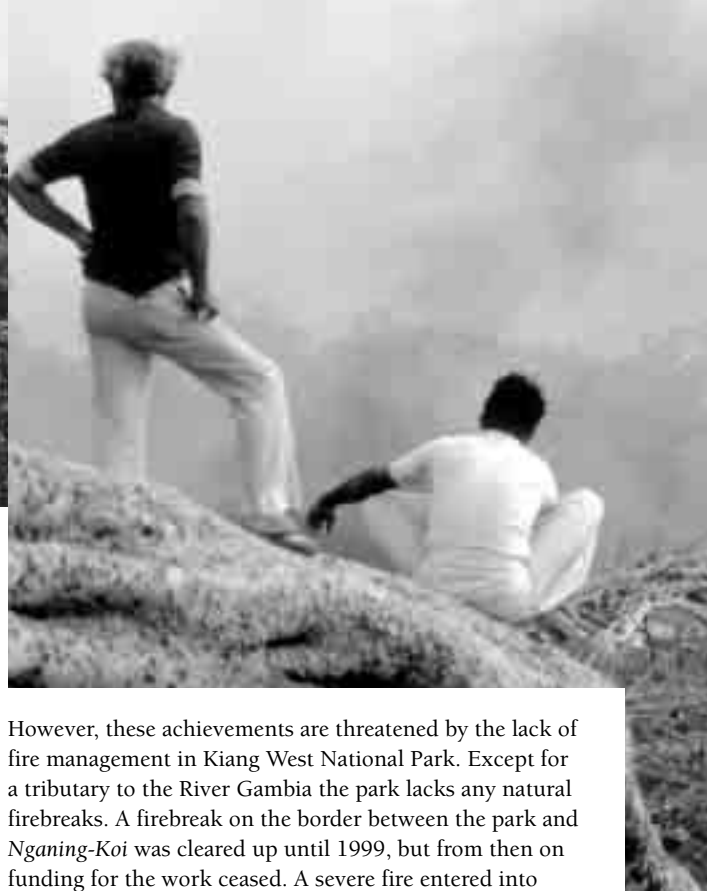
The *Communities in Flames* conference provided a sound base for improved understanding of communities and their fire management concerns and practices. The significant diversity represented in these community-based approaches is explored in the next two pages of this feature. In order for Community Based Fire Management to progress, it must embrace this diversity and draw out similarities from the different community contexts.

## Community-initiated Stakeholder Co-ordination in Rural Gambia

**Few forests exist in isolation. Even if community management is successful, fire control also relies on good management on adjacent land. When this is not the case, the efforts of local communities can be undermined.**

Batelling is situated on the border of Kiang West National Park and Brikama Forest Park. It is a village of 366 inhabitants, most ethnic Mandinka. The predominant livelihood is farming. When communities in the area were introduced to community forestry principles in August 1994, Batelling was the first village to participate. The villages wanted to obtain ownership of the local forest, as they perceived that the two neighbouring protected forest areas had been taken from them. Following community forestry guidelines, a Forest Committee of 20 village representatives was formed to co-ordinate the establishment and management of the forest. The community selected a 500 ha site adjacent to farmland and extending to the national park boundary. Ownership of the forest area, known as was *Nganing-Koi I*, was granted in 1999. A further 300 ha was added later. The area is now the second largest Community Forest in The Gambia and the biggest managed by a single village.

Community forestry has given the local community the opportunity and responsibility of protecting the forest from fires. According to the villagers, 'to stand against fires is the primary objective' of their management, with 'live' firebreaks and belts created by preventive burning being the most important management measures. Timing, preparation, location and individual responsibilities are determined in the management plan. After 5-years, *Nganing-Koi* had been entirely protected against incoming fires on its eastern boundary, where previously most fires had intruded.



However, these achievements are threatened by the lack of fire management in Kiang West National Park. Except for a tributary to the River Gambia the park lacks any natural firebreaks. A firebreak on the border between the park and *Nganing-Koi* was cleared up until 1999, but from then on funding for the work ceased. A severe fire entered into *Nganing-Koi* in April 2001 through this unweeded firebreak almost completely destroying *Nganing-Koi*, despite the fire fighting efforts of the community members. The villagers now feel that the labour invested in forest protection has been futile due to factors beyond their control. Theoretically, there are mechanisms, such as the 'Technical Advisory Committee' (TAC) set up in 1992, to integrate the satellite villages into park management. The main purpose of the Committee is 'to discuss the issues they see as critical to life in a rural community'. However, the influence of this committee seems to be limited.

To address this lack of co-ordination, the Forest Committee of Batelling called a meeting of concerned stakeholders to discuss the issue of joint approaches to fire management in June 2001. Participants included 33 members of five satellite villages and staff of the concerned Departments. Many speakers from the villages noted that the park has the capacity to play a bigger role in fire management. The park manager however explained the administration difficulties caused by the phasing out of funding for paid labour and community involvement. The TAC members stressed the need for 'people to be aware that they have to carry on even without projects'. The meeting concluded with participants identifying a plan of action to further fire fighting in the area.

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## Traditional Fire Management among Shifting Cultivators in

# Northeast India

The tribes of northeast India that practice shifting cultivation or *jhumming* have developed unique and varied Community Based Fire Management (CBFiM) traditions. One tribe, the Mizos of Mizoram, has evolved effective and well-organised CBFiM practices based around a system of village community governance. Although traditional fire management tools and techniques are simple, strategies rely on timely community responses and active participation, categorised into four measures: regulatory, activity-oriented, preventive and punitive. Communities regulate the period of *jhum* burning, define roles for each of its members, prescribe preparation of fire lines in the *jhum* fields and award penalties for deliberate causing of forest fire.

The traditional CBFiM system of the Mizo community is, however, weakening and there is a perceptible increase in incidence and intensity of fire. The society is in transition and today in a typical village, only about half the families are fully dependent on shifting cultivation and CBFiM can no longer attract every adult member of the village. Fire management has also weakened due to an increasing dependency of communities on government-initiated fire management. This focus on government action is perhaps indicative of the eroding social ethics and community spirit, particularly in important areas like fire management – which is voluntary yet participatory by everyone for the common good.

Another constraint to effective CBFiM is the current system of unregulated selection of areas for *jhumming*. Traditionally, *jhum* plots were selected in blocks, so communities could easily control fire. Today, due to reduction in available land, plots are selected and prepared anywhere, thus increasing vulnerability to fire. Moreover, most shifting cultivation plots are now in bamboo forests and the period of burning from February-March, the driest months, increases the possibility of fire spreading to adjoining bamboo forests.

There is an urgent need to continue to practice the traditional CBFiM of the Mizo. The government programmes should therefore aim primarily at enhancing the effectiveness of CBFiM and not substitute traditional systems.

## Community Based Fire Management

The *Communities in Flames and International Conference on the Involvement of Communities in Fire Management*, held in Indonesia in July 2001, welcomed 120 people from 20 countries. Respect for communities' capacities and their involvement in management was identified as a crucial factor in establishing a balanced approach to forest fires. Although communities potentially have a key role in prevention activities, it was not reasonable to expect them to be responsible for fighting large fires. Many communities already have expertise in fire control. Sharing this knowledge could play an important role in reducing forest fires.

The articles given here summarise two case studies presented at the conference. Each shows both the opportunities and constraints of community fire management. The communities described both have successful fire management policies, but face problems due to a variety of causes outside their control, including unsympathetic government regulations, actions taken in adjacent land and changing social conditions. While Community Based Fire Management can work, it is never a simple panacea and needs to be set in a wider political and landscape context if it is to succeed in the long term.

Conference proceedings will be available shortly. **Contact:** Peter Moore, Co-ordinator Project FireFight South East Asia; Email: pmoore@cgiar.org. Tel: +62-812-1100-960; Fax: +62-251-622-100

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# Project FireFight



Patricio Baeza AGB/CIDA

IUCN/WWF's Project FireFight is working with CIFOR and other partners to identify policies and practical measures that help prevent uncontrolled forest fires. For example, the project will support governments through analysis of the economics of fire use, such as in oil palm plantations where fire has been used as a means of large-scale forest conversions and land acquisitions in the recent past. The project seeks to address the underlying causes of forest fires such as economic incentives, the drive to generate export income, and the lack of effective regulatory structures. This initiative will also aim to lobby governments and aid agencies to implement appropriate policies and together with local communities, identify appropriate forest management techniques. FireFight Southeast Asia is providing the model for new regional initiatives in the Mediterranean, Russia, Central America and Sub-Saharan Africa.

Further details are available from <http://www.iucn.org/themes/fcp> (IUCN) and <http://www.panda.org/forests4life> (WWF).

## Fire Update

**Fighting fire with dollars:** Up to August this year the US Forest Service had spent an average of US\$2,216 per acre burned – as opposed to US\$976 in 1999 and an average of only US\$492 in the 1980s – raising fears of a massive bill for fire suppression in the US this year. The 1995 Federal Wildland Fire Policy mandated the setting up of Fire Management Plans which would allow more wildfires to burn within predetermined limits and help restore fire-dependent forests – whilst reducing the costs of fighting fires. However, to date only 43 per cent of the necessary plans have been completed.

**Source:** Taxpayers for Common Sense, [www.taxpayer.net/forest](http://www.taxpayer.net/forest)

**Fire around the world this summer:** An abandoned campfire started a blaze in Brazil's oldest national park, Itatiaia, in July. Three hundred fire fighters were involved in dampening the flames. A government minister described the forest fire that burnt more than 600 ha in the Troodos mountains of Cyprus in July as an 'ecological disaster'. A bolt of lightning is the likely cause of a blaze that destroyed 4,000 ha of woodland and pine forest in the foothills of the Spanish Pyrenees in August. Thirty people died in a fire that engulfed forest and grassland in the Pretoriuskop area of the Kruger National Park, South Africa. Most of the victims were from local communities and had been contracted to take part in normal grassland management although three South African National Parks rangers also died.

**Source:** PlanetArk/Reuters, July 20 and August 6, 2001 and *Guardian newspaper*, September 2001

**Forecasting fire:** The Scripps Institution of Oceanography at the University of California, San Diego, has constructed the first computer model able to forecast wildfires in the western US. Using methods developed by climate forecasting researchers, the wildfire forecast for 2001 predicts a milder wildfire season than 2000 (one of the worst seasons for 50 years with over 90,000 wildfires and almost 300 million ha burned). The model bases its predictions on understanding the influence of climate on fuel production and fuel moisture content during the fire season.

**Source:** Environment News Service, July 16, 2001

**Fires in North America:** According to the US National Interagency Fire Center, the wildfire activity in the US remains moderate and the numbers of fires and hectares burnt are just

below the 10-year average. Between January and September 3 there were 58,545 fires, compared to the 10-year average of 62,797, which have burnt 2,945,049 acres, compared with the average of 3,256,479. These figures remain well below those recorded for 2000, where by early September fire had already consumed 6,524,274 acres. Despite this there have been some large fires, such as those affecting the Glacier National Park, Grand Canyon National Park and Yellowstone National Park, where 800 fire fighters fought a blaze in old-growth forest near the eastern entrance of the park. Fire also swept through over 10,000 ha of Florida's Big Cypress National Preserve (one of the many fires in the state which is suffering its worst dry spell for over 100 years).

**Sources:** US National Interagency Fire Centre Wildland Fire Update, [www.nifc.gov/fireinfo/nfn.html](http://www.nifc.gov/fireinfo/nfn.html), Environment News Service, June 18 and July 16, 2001; PlanetArk/Reuters, May 22, May 30, June 28 and August 5, 2001

**Indonesia:** In early July, fires flared up in Sumatra and in West and Central Kalimantan. For example, in Riau province in central Sumatra, satellite pictures detected 412 'hot spots' over a two-week period. The Indonesian cities of Medan and Pekanbaru were affected by smog and the 'haze' spread to Singapore, Peninsular Malaysia and southern Thailand. Satellite data revealed the role of logging and plantation companies rather than local farmers in the fires. Of the 2,982 hot spots detected in June and July, 63 per cent were in logging concessions, timber estates, plantations and transmigration sites. Indonesian media reports named 5 companies in West Kalimantan and 24 companies in Riau province whose land was on fire in July. Despite this the Indonesian forestry association (APHI) still 'categorically reject(s) any accusations that concessionaires are responsible (for the fires) or are engaged in burning the forest'.

**Source:** Down to Earth - The International Campaign for Ecological Justice in Indonesia, Email: [rdte@gn.apc.org](mailto:rdte@gn.apc.org), [www.gn.apc.org/dte](http://www.gn.apc.org/dte), Tel/fax: +44-207-732-7984.

**Fire and climate change:** The severity of forest fires in North America could increase by between 10 and 50 per cent due to the impacts of climate change by 2060 according to researchers in Canada. Such a fire regime would have the potential to overshadow the direct effects of climate change on species distribution and migration.

**Source:** *The Science of the Total Environment*, **262** (2000) 221-229

# Rights Trees and Tenure



Sue Spotton

**Secure rights to, and responsibilities for, land and natural resources underpin resource management. Edmund Barrow, of IUCN's East Africa Regional Office (EARO), explores tenure and community management of forests across Eastern and Southern Africa.**

The early history of forestry in eastern and southern Africa was influenced by colonial land and forest policies, which resulted either in inhabitants being forced to move or in people's rights being severely curtailed. Today, there are three broad land tenure categories – communal, private and state property – with cross-cutting natural resource management laws. Within tenure systems there is a complex mix of overlapping property rights and resource use regulations resulting in a dynamic interplay between stakeholders. In general, local communities have been disadvantaged by the informal nature of their land rights, as national legislation gives the State ownership of valuable timber, even if this occurs in peoples' home gardens. Outside commercial interests, often supported by the State, continue to plunder forest resources from community land.

## Communal Lands

The majority of the region's rural people live on customary, communal or trust lands. In most cases, this is owned by the State, with *de facto* ownership by the occupying group (clan, village or family). Current use rights result from customary tenure systems and overarching national laws. Weak land rights have led to local communities being unable to protect their interests in forests against State and/or commercial interests. For many areas, only isolation has assisted conservation of natural resources.

New policies and legislation aimed at upgrading the status of land rights in communal areas are emerging, and there have been efforts to reflect customary practices in legal instruments. In South Africa a new form of land tenure enables communities to hold land in common. In Tanzania, land ownership is vested in the independent Village Governments.

Communal rights are often seen as an interim step in converting customary lands to individual ownership. Tanzania has tried to integrate ecological and land use

concerns when titling village lands, by allowing both individual cultivated plots and communal grazing lands and forests. On the other hand, large tracts of forests on private and communal lands in Uganda are not reserved, and receive little support for forest management resulting in degradation and land conversion as district authorities exploit forests to meet financial needs.

## Private Lands

A new trend is emerging to create alternative forms of tenure, which give legal recognition and support to customary tenure systems. Private property confers stronger rights over forest resources than under customary tenure, but with mixed results. South Africa, with its strong private sector focus, has perhaps gone furthest in terms of forestry on privately owned lands. In Zimbabwe, Namibia, and Kenya it has apparently led to better management. But Uganda has demonstrated some of the problems of inadequate incentives for private sector involvement on private lands. Security of tenure, in these instances, is not enough, but needs to be supported by incentive measures and realistic market based pricing structures. Here, land-use rights on private lands remain unclear and there has been rapid degradation and deforestation.

## State Lands

Collaborative management agreements are evolving throughout the region in and around reserved natural forests. Despite widespread adoption of policies, legislation and rhetoric many examples are recent or experimental. Tanzania has gone furthest, in policy and practice, to integrate collaborative and community-based forest management, due to strong, decentralised village government combined with visionary forestry policy and statute. In South Africa, restoration of land rights to those dispossessed during colonisation and apartheid is allowing local communities to negotiate customary rights to land and resources. This experience may be relevant to many countries where customary rights were expropriated without adequate compensation. Experience shows that restoration, allocation or upgrading of land rights usually creates more significant changes to power-relations between communities and management authorities than co-management agreements.

## Conclusions

Tenure and clarity over rights of use and access are thus central to responsible community forest management. This implies not only the existence of boundaries, but also clear membership criteria and rights to include and exclude. Only in a few countries has forest management been linked to tenure policies and laws, yet this is crucial. Throughout the region land reform has been the biggest and most effective driver of change regarding community involvement in woodland and forest management.

**Contact:** [egb@iucnearo.org](mailto:egb@iucnearo.org). This article is based on two reviews available from IUCN-EARO: Alden Wily L. and S. Mbaya (2001): *Land, People and Forests in Eastern and Southern Africa at the beginning of the 21st century. The impact of land relations on the role of communities in forest future* and Barrow, E., Clarke J., Grundy I., Kamugisha Jones R., and Tessema Y. (2001 in press): *Whose Power? Whose Responsibilities? An Analysis of Stakeholders in Community Involvement in Forest Management in Eastern and Southern Africa*. IUCN-EARO, Nairobi, Kenya.





**WWF** World Wide Fund For Nature  
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## focus

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**The WWF Forests for Life campaign has set ambitious new targets for the next five years, focusing on a strategy of “protect, manage and restore”. Chris Elliott and Stewart Maginnis summarise what is in store.**

# Protect, Manage and Restore



From 1995 to 2000, the Forest for Life campaign focused on two targets, relating to protected areas and sustainable forest management. In January 2001, a hundred members of the Global Forest Advisory group assembled in Bali to develop new targets for stage two of the campaign, lasting until the end of 2005. Draft proposals had emerged by the end of the meeting and have been refined over the following months.

### WWF/IUCN Forest Vision

The following ‘vision’ was agreed: *‘The world will have more extensive, more diverse and higher quality forest landscapes. These will meet human needs and aspirations fairly, while conserving biological diversity and fulfilling the ecosystem functions necessary for all life on earth.’*

The proposed forest targets are intended to realise the power of the WWF network and our partners in support of WWF’s biodiversity conservation mission. The targets are quantitative in nature, but we will not seek to promote quantity (e.g. hectares of certified forests) at the expense of quality of management or diversity of forest types, regions and land tenure regimes. The basic principles underpinning the IUCN/WWF forest strategy: ecological integrity, human well-being and the landscape approach, will guide our work on the targets. The concept of High Conservation Value Forests will be a key tool for prioritising target-related activities.

The new targets draw on and amplify those already achieved under the first phase of the Forests for Life campaign. They aim for greater integration than in the past, both in terms of the targets themselves and with WWF’s other main conservation delivery mechanism of ecoregion conservation.

In recognition of the growing need for forest restoration, and of the new WWF/IUCN *Forests Reborn* campaign, a third target was added on forest restoration. The new targets are summarised below.

**Target 1:** the establishment and maintenance of viable representative networks of protected areas in the world’s threatened and most biologically significant forest regions by 2010.

**Target 2:** 100 Million ha of certified forests by 2005, distributed in a balanced manner among regions, forest types and land tenure regimes.

**Target 3:** by 2005, at least 20 forest landscape restoration initiatives underway in the world’s threatened, deforested or degraded forest regions to enhance ecological integrity and human well-being.

The three targets together provide a succinct overview of the emerging philosophy of *protect, manage and restore* as a combined landscape-scale approach to conservation, rooted within priority ecoregions around the world. Implementation of the targets will begin immediately and will be reported regularly in future issues of *arborvitae*.

The targets describe the outcomes we see as necessary to achieve our goal and vision. WWF cannot achieve the targets alone, we need to mobilise and inspire multiple partners, using a diversity of tools. While our aim remains constant, our approach will vary from region to region to respond to local realities. WWF’s contribution will involve a particular effort on forests in focal Global 200 forest ecoregions. The targets can also be interpreted in the context of reducing the ecological footprint of developed countries on the rest of the world. Certification of tropical timber imports to improve forest management (target 2) and a reduction of conversion of forests to agricultural uses for export markets (target 3) are examples of this. Finally, particular attention will be paid to issues that cut across the targets and also affect other TDPs, whether they be threats (forest fires, illegal logging, climate change), policy issues (subsidies, trade barriers, investment flows) or opportunities (community forest management).

### WWF news in brief

**Staff changes:** **Jack Hurd** (jhurd@wwfint.org) is the new Co-ordinator for the WWF/ World Bank Forest Alliance, based in Gland, having previously worked for WWF in Cambodia. He replaces **Rod Taylor**, who has taken a new position as forest co-ordinator for the Asia and Pacific region, based in Bali (rodtaylor@walacea.wwf.id), who is joined in the office by **Ketut Deddy** (kdeddy@yahoo.com).

**Malaysia petition:** WWF Malaysia has launched a petition to highlight the urgency in rethinking highland development strategies. Over the years, the condition of the fragile forested highlands ecosystem has deteriorated due to uncontrolled development, like housing, agriculture and tourism, with a consequent loss of water quality. The petition will eventually be handed over to Dr. Mahathir Mohamed, the Prime Minister.

# Managing Mt. Elgon

IUCN has been supporting the management of Mt. Elgon in Uganda since 1988 through the Mt. Elgon Conservation and Development Project (funded by NORAD), working closely with the Uganda Wildlife Authority and other partners. The project has evolved from an initial emphasis on forest protection to an integrated conservation and development approach encompassing a diverse range of stakeholders. This has been driven by experience and adaptation on the ground, and is an example of the need to develop approaches to resource management that achieve both nature conservation and human livelihood goals.

Mt. Elgon is an extinct volcano straddling the Uganda-Kenya border. The upper area has montane heath/moorland vegetation rich in shrub and herb species endemic to the higher East African mountains, or even to Mt. Elgon itself. Tropical afro-montane forest covers the middle and lower slopes, surrounded by highly populated farming areas. The mountain is culturally important and an important water source. It also provides local communities with a variety of forest products. The forest and heath/moorland zones are mostly within National Parks or Forest Reserves on both sides of the border. Heavy encroachment for agriculture during the civil strife in Uganda in the 1970-80's led to IUCN's involvement in restoring and conserving the Mt. Elgon ecosystem on the Ugandan side.

Initial interventions focused on re-establishing protected area boundaries and establishing ranger patrols to stop further encroachment and over-exploitation of resources. Although partially successful, this led to conflict with surrounding communities dependent on the forest for basic needs such as firewood, food and medicinal plants. In response, the project introduced a sustainable development extension programme outside the park. This focused on developing alternative resource use and increasing on-farm income through improved animal and crop production techniques, soil conservation, agroforestry etc. A more friendly face of conservation was also introduced through a range of education and awareness programmes.

People were happier with these approaches, but conservation benefits were unclear. Furthermore it was impossible to fully substitute for the forests resources lost or, indeed, for the considerable cultural and traditional attachments. Local people were still reliant on the forest for their livelihoods and there remained heavy resource use from the park.

A collaborative management approach was introduced to try to both meet the needs of local people and achieve improved conservation. Initial studies in 1995 indicated that many products could be harvested at sustainable rates. Trials in several villages and parishes showed the potential of collaborative management as each resulted in reduced encroachment into the park. However problems remained, including the negotiation of agreements (there was continued dissatisfaction and conflict over some issues), an inability

**In the first of a new series on how IUCN uses field experience to develop and test new approaches to forest conservation, Sean White and David Hinchley review developments in Uganda.**



IUCN Eastern Africa Regional Office

to develop approaches to the remaining areas (over 60 parishes and 500 villages) due to lack of resources and a lack of co-ordination with law enforcement activities.

At the same time, District Authorities were being assisted in incorporating environmental issues into planning and implementation, through work with local government structures from district to village levels. As this was carried out in parallel with the development of collaborative management, the benefits of bringing the processes together became evident. Recent efforts have thus dealt simultaneously with conservation issues (inside and outside the park) and people's livelihood needs.

The recognition of, and increasing attention to, cross-border issues with Kenya confirmed that sustainable resource management and conservation cannot be achieved using a 'compartmentalised' approach. Control of smuggling, poaching, fire management and ecosystem monitoring can only be effectively dealt with by co-ordinated action by the two countries. Opportunities for cross-border tourism, benefiting protected areas on both sides of the border, are also being realised.

Plans for a future project supporting the management of Mt. Elgon ecosystem will use an integrated ecosystem approach in partnership with protected area management authorities, local councils and communities on both sides of the border. The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

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## IUCN news in brief

**Grants for Nature:** The Netherlands Committee for IUCN has developed a 'Small Grants for the Purchase of Nature' (SPN) scheme, with support of the Netherlands Postcode Lottery. The objective of SPN is to 'support local NGOs in the purchase of vulnerable nature, with the aim to conserve biodiversity for the long term'. SPN will support projects in tropical countries and in Eastern Europe and CIS-countries. Local NGOs from tropical countries can send proposals to the SPN secretariat (spn@nciucn.nl). Project proposals should meet the criteria and formats. NGOs from Eastern Europe and CIS countries should contact the secretariat of the EECONET Action Fund (eaf@eucc.nl).



## Restoring Riverine Forest in Borneo

**WWF is working to maintain a viable strip of forest along a river in Sabah, Borneo, where all around oil palm plantations have changed the ecology. Nigel Dudley and John Morrison report.**

A boat trip up the Kinabatangan River in the Malaysian state of Sabah feels like taking a voyage into the heart of northern Borneo's wilderness. In the morning mist, crocodiles slip through the water; orang utans gaze down from trees overhanging the river and groups of proboscis monkeys call from the rainforest. Eight of Malaysia's threatened birds are found in the area, including Storm's stork and several hornbills.

But appearances are deceptive. Along much of the river, the trees only survive as a thin strip along the waters' edge, and oil palm plantations have replaced forest all around. In places, plantations push down to the water itself and wildlife is under severe stress. A population of around a hundred forest elephants survives in the remaining forest, but they literally have to take to the water to swim around areas where the forest has disappeared, and may be shot at if they stray into the oil palm. A couple of Sumatran rhinoceros survive in the mangrove area nearby.

In this highly modified landscape, WWF is working with partners to protect and retain a fragile corridor in a sea of oil palm. The Kinabatangan floodplain project is focused on the conservation and restoration of the meandering lowland section of the 560 km river. The catchment of the river represents approximately one-quarter of the land area of the state of Sabah. The lower Kinabatangan is one of eight focal priorities of the Asian Rhino and Elephant Action Strategy as well as being one of three 'Partners for Wetlands' projects funded by WWF-Netherlands.

Several social conflicts exist. Few local people find employment in the plantations, soil and/or chemicals are said to run off into the river, and local forest users suffer when forests are converted into plantations. The oil palm

industry poses severe threats to wildlife, both because of habitat loss and through conflict when elephants damage plantations, eating palm shoots and destroying fences. There are also conflicts between wildlife and local people, particularly when elephants attempt to continue their natural movements along a sometimes-converted river corridor, trampling crops and causing mayhem.

Much of the remaining forest is now protected in fragments of forest, 27,000 ha of which make up the Kinabatangan Wildlife Sanctuary. There are however several gaps in the riparian buffer that will be a real challenge to connect, including a village and a highway crossing the river. It is critical to close these gaps if the river is to remain an intact corridor for wildlife. Invasive vegetation is a problem in some rivers and lakes and freshwater otters have disappeared from some areas as a result.

During the past three years conservationists have been working to persuade the oil palm industry to comply voluntarily with, and if possible surpass, the legal requirement for a riparian buffer. The industry was initially hesitant to work with WWF but recent flooding events and elephant conflicts have convinced them that oil palm may not always be viable directly adjacent to the river. In their enthusiasm to expand, some plantation companies planted on the floodplain. Paradoxically, the opportunity to work with the oil-palm industry is being increased by flood damage, itself exacerbated by upstream logging. Severe flooding occurred in 1996, and in early 2000 water rose to 14.3 m above mean sea level. Damage to young oil palms on one plantation was estimated at US\$1.06 million over 4,000 ha. Oil palm trees need to reach five years before they can withstand flooding. The floods also drive elephants to higher ground and result in conflicts with the local population. Plantation owners are therefore increasingly open to participating in conservation efforts, including tree planting with commercially viable and flood-resistant tree species.

The economic value of the natural forest and freshwater is being increased by the development of ecotourism. Several lodges have been built, employing mainly local people and using locally grown crops and fish caught from the river. WWF has three Community Liaison Officers who are building on ten years' worth of effort that has gradually convinced local communities that tourism and conservation are of potential benefit, rather than posing a threat to traditional lifestyles.



Real challenges still lie ahead, particularly in linking the work in the corridor with the wider conservation work in Sabah and in Kalimantan. However, with effort, some compromises and good

negotiations, the Kinabatangan River corridor could be a highly important wildlife sanctuary – and a tourist magnet – for the state of Sabah.

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## Certification Benefits? – a comment

WWF supports certification through a conviction that only by improving forest management outside protected areas, in partnership with commercial companies, can we protect many of the world's forest species. We believe that some wider criticisms miss the mark. Certification is not a perfect instrument – such things don't exist – and it has been explicitly recognised that local communities and environmental and social NGOs have a key role in identifying possible gaps and shortcomings. Recent withdrawals of some certificates bear witness to the success of this strategy.

Certifiers will – if certification is to be successful – be dealing with companies that have received harsh criticisms from NGOs, including WWF. That's the whole point. If certification is confined to a minority of 'green' companies then we have been wasting our time. Indeed, the FSC 'family' is not only engaged in certification, but also constantly working with operations to help them improve management to a point where it might be certified.

Certified forests will often only really contribute to conservation and sustainable livelihoods if they are part of a wider landscape approach and ultimately an ecoregional strategy. WWF's new Forests for Life slogan of 'protect, manage and restore' (see page 12) stresses the importance of integrating protection and management.

In some cases, certified forests provide buffers for and links between protected areas that maintain populations of species requiring specific characteristics unlikely to be retained in managed forests. Elsewhere, certified forests themselves can provide habitats that will simply disappear under other land-use scenarios. Research, reported in this issue's 'research in brief', adds to increasing evidence that

**There have been rumblings of discontent about certification with respect to individual certification and its benefits to biodiversity and people, and claims that it is being used as a political tool to legitimate concessions with dubious histories. Chris Elliot offers some responses.**

Carefully managed forests can provide important wildlife habitats. Sometimes, certification may simply be minimising environmental costs of land dedicated to timber production so that it does not adversely impact on surrounding forests.

Such multiple approaches recognise that successful conservation strategies will necessitate trade-offs, including management in areas that we'd probably in our hearts rather see as pristine protected areas. They also recognise that management, however good, will lead to some biodiversity loss at a site level, but believe that this can be balanced by the creation of reserves elsewhere in the landscape. We argue that such trade-offs are better than the frequent alternative of unplanned, badly managed and often illegal exploitation and conversion resulting in far larger losses.

As more forests are certified, the role of NGOs arguably becomes even more important. Certification will need to be monitored for effectiveness, and adapted as we learn more. We urgently need researchers to monitor long-term impacts at both site and landscape level. We need to know more about certification's implications on the well-being of communities, through systematic, participatory studies by specialists. These and other challenges will be taken up in the next stage of WWF's Forests for Life process.

### Certification News in Brief

**New Investment Fund supports FSC:** The Xylem Rainforest Fund, L.P. (XRF), which has a target fund size of US\$500 million, is a new investment vehicle targeting forest management companies throughout the tropics and subtropics. To ensure that its investments meet the highest international standards for responsible business practice, the Fund has stated its commitment to only invest in certified forest management companies recognised by the Forest Stewardship Council.  
**Source:** WWF, [www.panda.org](http://www.panda.org)

**A gap between producers and users:** A detailed study of attitudes towards forest certification in Europe, carried out for the Ministerial Conference on the Protection of Forests in Europe, found that while 60 per cent of consumers and 65 per cent of the industry using forest products supported certification, the majority of forest owners were still opposed.  
**Source:** *Sustainable Forest Management Certification*, Ewald Rametsteiner, Ministerial Conference on the Protection of Forests in Europe, Vienna, 2000

**Grant for FSC:** The Ford Foundation is to give a US\$10 million grant to the Forest Stewardship Council over five years. Half of this money is for core support; the other half is for projects.  
**Source:** WWF International, [www.panda.org](http://www.panda.org)

**Changes at the Forest Stewardship Council:** Following staff changes in the FSC, Heiko Liedeker, formerly of WWF Germany and chair of the European Forest Team, is acting as interim director of the Forest Stewardship Council, based in Oaxaca, Mexico.  
**Contact:** [liedeker@fsc.org](mailto:liedeker@fsc.org)

**Label check:** A new report by Fern, *Behind the logo: An environmental and social assessment of forest certification schemes*, compares the four biggest forest certification schemes – the Forest Stewardship Council (FSC), the Pan-European Forest Certification, the Canadian Standards Association's Sustainable Forest Management Standard and the Sustainable Forestry Initiative. It concludes that the FSC is currently the only independent and credible certification scheme in the market.  
**Source:** Fern, [www.fern.org](http://www.fern.org)

**FSC in Eastern Europe:** A new publication from WWF, *Counting on the Forest*, provides a snapshot of FSC certification in several Eastern European countries and Asian Russia.  
**Source:** WWF International Danube-Carpathian Programme Office, Austria. Tel: +43-1-488-17-254, fax: +43-1-488-17-276, email: [elisabeth.samec@wwf.at](mailto:elisabeth.samec@wwf.at), [www.wwf.at](http://www.wwf.at)

## arborvitae more than a newsletter

**arborvitae has evolved considerably over the years, as WWF and IUCN have tried to respond to the changing needs of an increasing and diverse readership. Simon Rietbergen and Chris Elliott explain what is in store for 2002.**

To start with a minor change, we intend to abolish paid subscriptions, as we think it is more important to get our messages out to our target audience than it is to get them to pay for it! So from the first issue of 2002 onwards everyone on our mailing list will receive arborvitae free of charge.

More importantly, we want to improve the reach of arborvitae. If you know of individuals or organisations (NGOs, scientists, forestry agencies, forest products companies, aid donors and charitable foundations) whom you think should be receiving arborvitae, please send us their names, postal address, telephone, fax and email, preferably by email to [forests@iucn.org](mailto:forests@iucn.org), mentioning in the subject line 'Arborvitae new subscriber(s)'. Given the costs of worldwide mailings we cannot promise to send arborvitae to everyone, but we will certainly review suggestions.

From this issue of arborvitae onwards, we would like to highlight one theme per issue, as in this issue, which focuses on Community Based Fire Management. Themes we have tentatively identified for future issues include poverty and forests, and forest landscape restoration. arborvitae will still have the same amount of short, informative news items, but some of the feature articles will be focusing on one topical subject – allowing us to treat a key issue in some more detail without devoting a full arborvitae special to it. We would also like to include more 'op ed' opinion pieces, some of them invited from people outside WWF/IUCN.

We are also considering sending arborvitae subscribers a news update two or three times a year by electronic mail – given the many news items for which we do not have space in the printed version of arborvitae. If you would like to receive these updates, please send an Email from the address where you would like to receive them to [forests@iucn.org](mailto:forests@iucn.org), with 'Arborvitae Email news update' in the subject line. We will maintain the paper version of arborvitae for those of you who do not have access to reliable electronic communications, but see Email as a cost-effective way to send out additional information to those of you that do have access to it.

Of course we would be delighted to hear your opinions – supportive or critical – on these proposed changes, and any other suggestions you might have to improve arborvitae. Please send comments to [forests@iucn.org](mailto:forests@iucn.org), mentioning "Arborvitae feedback" in the subject line.

### Reviews in brief

#### Community Involvement

Available from: The Tropenbos Foundation, Wageningen, the Netherlands. Tel: +31-317-495501, email: [tropenbos@tropenbos.agro.nl](mailto:tropenbos@tropenbos.agro.nl)

The results of six years of social science research in south-western Cameroon are reported in a new paper from the Tropenbos-Cameroon Series: *The social dimension of rainforest management in Cameroon: Issues for co-management*. The study helps understand peoples' perspectives of the forest, customary and formal tenure arrangements, and potential structures for negotiation and conflict resolution. It includes recommendations on how to organise the participation of local populations in co-management regimes.

#### ITTO on-line

Contact: [www.itto.or.jp](http://www.itto.or.jp)

ITTO's free journal, *Tropical Forest Update*, which is published every three months, is now available on line.

#### Finding out what's there

Available from: Island Press, 1718 Connecticut Avenue NW, Suite 300, Washington DC 20009, USA

Good forest conservation needs a basic understanding of biodiversity status; unfortunately this is often absent. The Nature Conservancy has pioneered techniques for rapidly surveying sites to help conservation planning, and in *Nature in Focus: Rapid Ecological Assessment*, Roger Sayre and his co-authors summarised a decade's efforts, in the lab, through mapping and in the field: an important practitioner's source.

#### Celebrating fruit

Available from: Ecological Books, UK. Tel: +44-117-942-0165, [www.commonground.org.uk](http://www.commonground.org.uk)

*The Common Ground book of Orchards* explores how orchards continue to shape local culture and invites us all to value orchards for their ecology and local distinctiveness.

#### Moving out

Available from: Forest Peoples Programme, UK. Tel: +44-1608-652-893, fax: +44-1608-652-878, email: [info@fppwrn.gn.apc.org](mailto:info@fppwrn.gn.apc.org)

*Heading Towards Extinction: The case of the Twa of the Kahuzi-Biega National Park, Democratic Republic Congo* tells the story of the Twa who were allegedly expelled from their forest homeland in the name of nature conservation and some of the resultant problems they face.

#### Ecuador problems

Available from: Palgrave Publishers Ltd, UK. Tel: +44-1256-329242, fax: +44-1256-479476. [www.palgrave.com](http://www.palgrave.com)

This study of *The Economics of Deforestation* by Sven Wunder concludes that a root cause of deforestation is that current technologies, market prices and disparate stakeholder interests mean that natural forest uses in Ecuador tend to yield less income than alternative land uses.

#### Forests and poverty

Available from: Center for International Forestry Research, [cifor@cgiar.org](mailto:cifor@cgiar.org)

*Forestry, Poverty and Aid* by J E Michael Arnold addresses ways in which forestry aid might become more effectively poverty orientated. This includes mitigation of the impacts of globalisation, looking at trees outside forests, focusing on the roles that forests play in the survival of the poorest members of society and encouraging governments to empower local user populations.

#### Studying Russian Biodiversity

Available from: North Ostrobothnia Regional Environment Centre, Tel: +358-8-315-8300, fax: +358-8-315-8305

*Biodiversity of old-growth forests and its conservation in northwestern Russia* includes five articles on the biodiversity of Karelian Republic along the Finnish boundary. The results show that current nature reserves and conservation plans do not adequately guarantee the preservation of biodiversity in the region.