

Science for Forests and People

CIFOR Annual Report 2003



CENTER FOR INTERNATIONAL FORESTRY RESEARCH



CIFOR's Heart and Soul

CIFOR's mission is to undertake high quality research that improves the well-being of forest-dependent people, reduces poverty and ensures the survival of the world's tropical forests.

CIFOR is committed to alleviating rural poverty by helping poor people retain access to forest resources, create new resources and earn more from those they have.

CIFOR's research encourages the sustainable use of forests and the protection of biodiversity.

CIFOR is committed to strengthening the capabilities of developing country scientists, governments, civil society organisations and local communities so they can develop and promote their own solutions to forest problems.

CIFOR is a learning organisation that constantly seeks to expand its own institutional frontiers by fostering new ideas and practices.

In short, CIFOR is a 'centre without walls' committed to collaborative research that makes a real difference to people's lives and the health of the forests.

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Annual Report 2003

CIFOR

Science for Forests and People



Forests are crucial for the well-being of hundreds of millions of the world's rural poor and are home to the vast majority of the world's land-based animals and plants. (Photo by Christian Cossalter)

Message from the Chair of the Board and the Director General

Four years ago, member states of the United Nations made a historic commitment to achieve eight 'Millennium Development Goals' by the year 2015. Forests must play a key role in meeting these goals. Hundreds of millions of people rely on forests for their income, food, health, water and other environmental services. These people must continue to have access to the products and services that forests provide, and forest resources must help many more families to escape poverty.

For over ten years now, the Center for International Forestry Research (CIFOR) has played a vital role in demonstrating how low-income rural families depend on forests, and identifying and promoting policies, institutional strategies and practices that benefit forest-dependent people. It has done this by working closely with national governments, other international organisations, non-governmental organisations, grassroots associations, private companies and the communities themselves.

2003 marked CIFOR's 10th anniversary. We took advantage of the occasion to hold various events and produce high-profile publications. These highlighted key lessons from a decade of research about what needs to be done to make forests work for the poor and sustain them over time. We worked particularly hard to get our messages out through the media, resulting in over 300 stories, many of them in prestigious magazines and newspapers - and to take

those messages to the policy-makers who can make things happen.

We also consolidated our research work into three main programmes: forests and livelihoods; environmental services and sustainable use of forests; and forests and governance. These three programmes speak to CIFOR's central vision of prosperous people, healthy forests and fair and well-functioning institutions. Among other things, these programmes did ground-breaking work during 2003 on the links between forests and health, the pros and cons of fast-growing plantations, conserving biodiversity to meet local needs, the devolution of control over forests to local communities, how oil exports and other large inflows of money affect deforestation, and the use of money-laundering laws to curb illegal logging. During the year we also paid special attention to strengthening our regional offices and to work which helps to strengthen national capacities for forestry research.

Looking forward, in 2005 CIFOR will undergo a thorough external evaluation of its programmes and management. That should set the stage for launching a new institutional strategy to replace our current strategy, published in 1996. With those tools in hand, CIFOR will be well placed to meet the challenges of the coming decade, and to ensure that it continues to do research that matters.



Angela Cropper
Chair, Board of Trustees

David Kaimowitz
Director General

CELEBRATING 10 YEARS OF FOREST RESEARCH



President Megawati of Indonesia is flanked by Muhammad Prakosa, the Forestry Minister, and David Kaimowitz, CIFOR's Director General, at CIFOR's 10th anniversary event, held in Bogor Palace. (Photo CIFOR)

CIFOR was established in 1993 in temporary offices in Bogor, Indonesia, with just a handful of staff. Now it employs over 150 scientists and support staff at its headquarters in Indonesia and its regional offices in Latin America and Africa, and it is considered one of the most influential research organisations working on forests and forestry issues. Although there was plenty to celebrate in 2003, the 10th anniversary events had a serious purpose. At a series of conferences, meetings and workshops, CIFOR staff and their partners took stock of their research achievements over the past decade and turned their minds to the challenges which lay ahead.

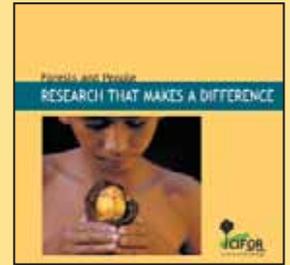
The key event, in research terms, was held in Bonn, Germany, and jointly organised by CIFOR, Capacity Building International (InWEnt), Germany's Federal Ministry of Economic Cooperation and Development (BMZ) and Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ). Over 300 people attended the first day of the conference on rural livelihoods, forests and biodiversity, and during the following four days some 50 papers and 30 posters were presented.

Henri Djombo, Forestry Minister of the Republic of Congo, addressing the Bonn conference. The minister has played a leading role in the Congo Basin Initiative, which aims to safeguard the region's forests while promoting their sustainable use. CIFOR is expanding its research activities in the Congo Basin. (Photo by Eric Lichtenscheidt)



Participants in the panel discussion at the International Conference on Rural Livelihoods, Forests and Biodiversity, organised by CIFOR, Capacity Building International (InWEnt), Germany's Federal Ministry of Economic Cooperation and Development (BMZ) and Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), and held in Bonn, Germany, May 2003. (From L) Claude Martin (WWF), Sunita Narain (CSE), Ranga Yogeshwar (moderator, from Germany's WDR Television), Achim Steiner (IUCN), El Hadji Sene (FAO) and Juan Mayr (Colombia). (Photo by Eric Lichtenscheidt)





The story of CIFOR's first decade is told in *Forests and People: Research that Makes a Difference*, published in English, French and Spanish, available from CIFOR's headquarters in Bogor.

Left 10th anniversary workshop in Belém, Brazil.

'When CIFOR was established, much of our research concentrated on deforestation and its underlying causes,' explains CIFOR sociologist William Sunderlin. 'But during the last few years we have begun to explore the links between forests and poverty, and the ways in which forests can benefit livelihoods. The conference reflected this.'

Research by CIFOR and its partners aims to do far more than help to identify the causes of forest loss and rural poverty. It contributes to the solutions to these problems, for example by improving decision-making processes and by showing how forest resources can be shared more equitably and used more sustainably.

CIFOR's 10th anniversary events attracted some of the leading people involved with forest issues. For example, in Bonn the speakers included Henri Djombo, the Republic of Congo's Forestry Minister, Erich Stather, the state secretary of BMZ, Ian Johnson, senior vice-president of the World Bank and chairman of the Consultative Group on International Agriculture Research (CGIAR), and Pekka Patosaari, head of the United Nations Forum on Forests. A panel discussion involved influential players from the world of development and conservation, including the Director Generals of WWF and the World Conservation Union (IUCN). In Indonesia, President Megawati Soekarnoputri was the key speaker at CIFOR's 10th anniversary event, held in the Presidential Palace in Bogor. In Brazil, Carlos Vicente of Brazil's Ministry of Environment was among the speakers at a workshop jointly held with the Brazilian Agricultural Research Corporation (EMBRAPA).

Widespread national and international media coverage of CIFOR's 10th anniversary events helped to raise the profile of forest issues in many parts of the world. Particular interest was shown in the research which explored the potential of forests to act as safety nets for the rural poor. Ten papers from the Bonn conference were chosen for a special edition of *World Development*, arguably the most important journal in its field.



CIFOR's 10th anniversary was widely covered by the media.



A CIFOR consultant discusses governance research issues with a villager near Makoku in Gabon. (Photo by Carol Colfer)



In countries like Bolivia, children help to gather the family firewood. (Photo by Kristen Evans)

FORESTS AND LIVELIHOODS

Making forests work for the poor

Around 240 million people live in or near tropical forests, and their livelihoods and well-being depend on them. The forests provide land on which to grow crops, building materials, protein-rich game, wild fruit and much else. The influence of the forests also extends far beyond their boundaries. Two billion people - a third of the world's population - rely on fuels like fuelwood and charcoal, most harvested in the forests. Two billion people rely on traditional medicines, many of which come from the forests. And of course forests provide timber, whose harvesting and processing generates significant revenues for the private sector and many governments. Overall, forest-based activities provide jobs for around 50 million people in developing countries.

However, forest-dependent people are among the poorest in the world. They also tend to be politically weak and economically marginalised. In principle, the forests represent an important resource which should help poor people build a better future. But a variety of factors - political, economic, environmental - often prevent the poor from raising their standard of living.

CIFOR has a range of research projects which aims to improve the policies and practices which relate to the use and management of forests, and thus help to enhance the livelihoods of impoverished forest-dependent people, regardless of whether they live inside or outside the forests.



CIFOR's Forests and Livelihoods Programme focuses on two broad themes: conservation and development strategies; and forests and human well-being. The first theme helps governments, as well as conservation and development agencies, to take advantage of the synergies between livelihood enhancement and forest conservation. The second works towards improving human well-being by enhancing forest-based practices, by improving partnerships between industry and local communities and by enhancing poverty-reduction policies and processes. CIFOR's livelihoods research touches on issues related to poverty, human health and the sustainable management of forest resources.

Women in a fishing and hunting camp on the Ivindo River, Gabon. (Photo by Carol Colfer)

Poor people and rich forests

Trees such as mahogany, teak and African ebony provide healthy profits for logging companies, and many tropical forests are rich in valuable minerals. But all too often the people who live in the forests suffer from a meagre diet, exposure to life-threatening diseases and poor access to education and health care. The forests may be rich, but the people are often poor.

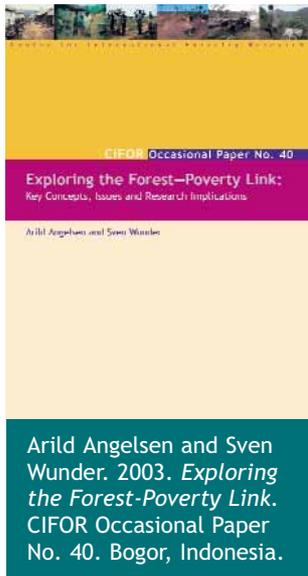
'It is widely claimed that forests can play a role in alleviating poverty,' says CIFOR economist Sven Wunder, 'but there has been a lot of confusion about what this means.' Together with economist Arild Angelsen and sociologist William Sunderlin, Wunder has been exploring the role which non-timber forest products (NTFPs), timber and environmental service payments could play in alleviating poverty.

A decade ago, the trade in NTFPs was touted as a magic bullet which could help improve the welfare of people living in forests. This belief, it now seems, was over-optimistic. NTFPs are undoubtedly important for subsistence reasons, providing food, fibre, animal fodder and medicines. Some NTFPs can provide extra income during stressful times - thus acting as a safety net for the poor - while some can be a significant source of prosperity. The latter tend to be intensively managed and produced under conditions of secure tenure and good market access.

However, many NTFPs have so far failed to provide a passport to a better life. Their harvesting generally requires little capital or skill, which suits the poor, but the very characteristics which make them important for the poor also limit their economic potential. 'You cannot expect a particular activity such as forestry to score high on the "safety net" account on the one hand, and on poverty reduction on the other,' suggests Angelsen.

It tends to be the rich, rather than the poor, who capture the benefits of valuable tropical timber. There are two obvious reasons for this. First, timber extraction and production often demand heavy capital investment and a skilled labour force. Second, land ownership laws frequently exclude the poor from forests of commercial value. This is not to say that the timber trade never benefits poor people. Some of the profits made by timber companies do trickle down to the poor. Indeed, the researchers suggest that significant poverty reduction is unlikely to occur where there is no economic growth, and in many countries the timber industry can make a contribution.

People who live in forests benefit directly from having a healthy ecosystem. But could they also benefit by receiving payments for safeguarding the environment, for example by conserving forests which store carbon, and



Forest products as a safety net - sometimes

Income from non-timber forest products such as game, fruit, nuts and resins can help the poor survive during times of hardship, for example when crops fail, or when there is a death in the family. It is often claimed that this reliance on the 'forest safety net' means that forest-dwellers have a vested interest in sustainably managing the forests, and this belief has helped to shape many conservation and development projects. However, research conducted in Honduras by Kendra McSweeney, a geographer from Ohio State University, suggests that the extent to which local people rely on forest products may vary greatly, even within the same community.

McSweeney's findings, presented in one of 10 papers on 'Forests as Safety Nets' delivered at CIFOR's Bonn Conference in April 2003, were based on a survey of 116 indigenous households in the Tawahka Asangni Biosphere Reserve. This is a poor, remote area near the Nicaraguan border, ill-served by social services but greatly valued by conservationists for its biodiversity.

McSweeney found that many households did not practise any form of commercial forest extraction, and that most households solicited loans from family and friends when they had a sudden need for cash, usually to treat illnesses, buy food or pay for a funeral. However, some households did rely on the sale of forest products when they experienced some form of



The harvesting and processing of Brazil nuts provides significant employment and income in the Bolivian Amazon. (Photo by Peter Cronkleton)

thus reduce global warming, or by protecting forests so that downstream drinking water supplies are guaranteed? This is an area with considerable potential, but the researchers warn that it is uncertain how large and widespread such payments could be. Experience with carbon markets suggests that the poor will often be at a disadvantage, either because they cannot afford the transaction costs involved in setting up such deals, or because they lack secure tenure and control over the land.

'One could argue about the extent to which forests can help reduce poverty,' says Sunderlin, 'but we have no doubt that their potential has yet to be fulfilled.' If forests are to work better for the poor, say the researchers, then governments and international donors need to adopt new strategies. The poor in forested areas need to have greater control over the use of their forests and trees. In particular, forest-product trade should be liberalised, and this should help local people enter into long-term

business arrangements to enhance their livelihoods. The researchers believe partnerships between local communities and commercial companies should be encouraged. Giving small-scale producers the same access to markets as large-scale producers could also have a real impact on rural poverty. Laws and regulations which have historically given élites privileged access to forest resources should be rescinded.

CIFOR's research on the links between forests and poverty is helping to shape the thinking of major international players. For example, the chapter on forests and poverty alleviation in the *FAO State of the World's Forests 2003* was written by CIFOR researchers. 'When FAO started working on this topic, we had little background information,' explains Hosny el-Lakhany, head of FAO's Forestry Division. 'We asked CIFOR what our role should be, and they provided the research we needed. It has helped us to determine where we should channel our energies and resources.'

misfortune. These households fell into two broad categories. The first was young households which were undercapitalised, and therefore unable to liquidate household assets such as tools or livestock. The second was those which were experiencing some form of calamity - for example, a child's illness - which did not compromise their ability to spend time gathering forest products.

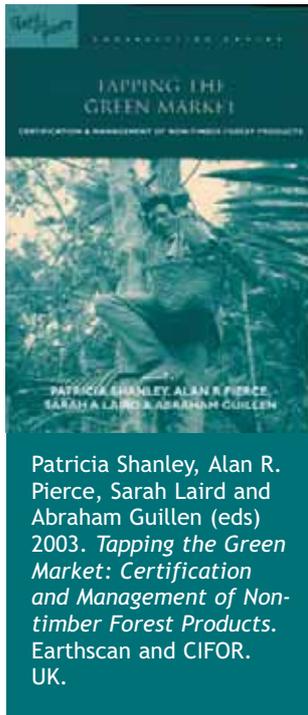
McSweeney's research suggests that attitudes to conservation and development programmes are likely to vary considerably within communities. Young households may be less receptive to long-term initiatives such as reforestation programmes, favouring instead short-term income-generation schemes that provide quick returns. The study questions policies that assume that the sale of forest products will reduce the likelihood of forest being converted to farmland. In reality, the sale of forest products will often help to finance agricultural activity.

Source: *Tropical Forests as Safety Nets? The Relative Importance of Forest Product Sale as Smallholder Insurance, Eastern Honduras*, by Kendra McSweeney, 2003. Also published in *Society and Natural Resources*, 17(1):39-56.



Tawahka man collecting wild honey, Rio Wampu, Tawahka Asangni Biosphere Reserve, Honduras. (Photo by Kendra McSweeney)

Forest loss threatens traditional medicines



Most of the 1.7 million people who live in the Amazonian town of Belém use traditional medicinal remedies to treat a wide range of ailments. Many come from trees and plants in the Amazon. 'Because of intensive logging, some medicinal products are much harder to get now,' says medicine seller João Alexandre da Silva, pictured here. (Photo by Charlie Pye-Smith)

If you live in rural Amazonia, you don't reach for the nearest packet of penicillin when you have a septic wound. Like your parents and grandparents, you put your trust in *copaiba*, a tree oil which you will have either harvested yourself, or bought in the local market. And if you live in Africa's Congo Basin and go down with malaria, you'll probably use a traditional remedy made from the plant *Astonia congensis*, rather than costlier conventional medicines.

Approximately a third of the world's population relies on traditional medicines, many of which come from tropical forests. The trade in medicinal plants often provides significant income for large numbers of people, and can be especially important for rural households. Unfortunately, forest loss as a result of logging and zealous harvesting practices means that many medicinal plants are becoming rarer. This may pose a very real threat to the health - and sometimes the livelihoods - of the poor.

In 1993, CIFOR ethnobotanist Patricia Shanley and ecologists Leda Luz and Margaret

Cymerys began investigating the impact of logging on non-timber forest products (NTFPs) in the Brazilian Amazon. Between then and 1999 the forests along the Capim River, in the state of Pará, were subjected to three logging episodes and a major fire. The scientists measured the volumes of fruit, fibre and game used by 30 households of forest-dwellers at regular intervals during this period.

The research, published in 2003, showed that logging had had a dramatic impact on the availability of NTFPs, including medicinal trees.¹ 'Villagers who used to consume large quantities of forest fruit in the early 1990s were hardly eating any at all by the end of the decade,' explains Shanley, 'and logging companies were not only felling important fruit species, but trees which yield medicinal oils like *copaiba* and *andiroba*.' The scientists suggest that important game-attracting, fruit and medicinal-oil trees need to be actively conserved. Even in areas subject to logging, this should not be an insurmountable problem, as only two or three trees would be

¹ This project is one of many described in *Tapping the Green Market: Certification and Management of Non-timber Forest Products*, edited by Patricia Shanley, Alan R. Pierce, Sarah Laird and Abraham Guillen (Earthscan, 2003).

singled out for conservation in each hectare.

On the other side of the Atlantic, in Cameroon, traditional medicines have always been important, especially in rural areas. They are invariably cheaper than conventional medicines and generally readily available. However, research by Ousseynou Ndoye and his colleagues suggests that the picture is rapidly changing - for the worse. Macro-economic forces are partly to blame.

Since the devaluation of the currency in 1994, conventional medicines have become too expensive for the urban poor, who have turned to cheaper traditional remedies. This, and forest degradation caused by logging, threatens the survival of some medicinal plants. 'We have found that there has been a considerable increase in the rates of extraction of many species,' explains Ndoye, CIFOR's regional coordinator for Central and West Africa. For example, between 1983-5 and 1998 the average intensity of monthly harvest of *Prunus africana*, used as a cure for benign prostate cancer, rose fivefold in and around the Mbalmayo Forest Reserve; that for

Astonia congensis, used as a cure for malaria, rose sixfold.

Over-harvesting has led to several species becoming scarcer than they were in the past. Scarcity, according to Ndoye, can increase the cost of treatment and mean that poorer people no longer get access to the medicinal plants they need. In some rural areas certain medicinal plants may no longer be available.

Ndoye suggests that this has important implications for both researchers and policy-makers. Researchers need to accelerate their work on the domestication of species which could be incorporated into farmers' fields, thus improving livelihoods and reducing pressure on forests. And policy-makers need to play a much more proactive role in safeguarding medicinal plants in the Congo Basin. 'At present,' says Ndoye, 'medicinal plants are not even included in official statistics, which implies that their contribution to gross domestic product is being overlooked.' It shouldn't be. *Prunus africana* alone earns Cameroon an estimated US\$700,000 a year.



Over-harvesting could threaten Cameroon's stocks of *Prunus africana*, whose bark is used as a cure for benign prostate cancer. (Photo by Ousseynou Ndoye)

Diet and disease among Borneo's forest-dwellers

We know surprisingly little about the relationship between tropical forests and human health. Tropical forests are rich in wild foods. They also harbour many diseases and parasites. But what does this mean for the people who live in the forests? To investigate this complex issue, CIFOR began a major study in 2003 comparing the health and diet of Punan communities living in the remote Upper Tubu Valley in East Kalimantan with Punan communities living downstream, in an area well-served by medical facilities, schools and food markets. Existing evidence suggested that remote communities suffered much higher child mortality and had a lower life expectancy than downstream communities.

'By comparing the diet and health of the same ethnic group of hunter-gatherers in two very different environments,' explains Edmond Dounias, an ethno-ecologist seconded to CIFOR by the Institut de Recherche pour le Développement (IRD), 'we hope to assess the contribution which non-timber forest products make to diet and health in different situations.' The project will also enable the scientists to examine how social change affects the Punan's well-being, and whether the differences in child mortality are a reflection of the 'risks' faced by remote communities or the better health care available downstream.

During 2003, Dounias and his colleagues analysed over 1000 individual dishes in the Upper Tubu, and measured the weight, stature and fat condition of over 800 people. Some 430 people voluntarily gave blood so that its nutritional profile could be analysed and the presence of infectious diseases detected. Similar studies were conducted among Punan living downstream. A doctor from the local government public health service conducted clinical examinations of all those studied.

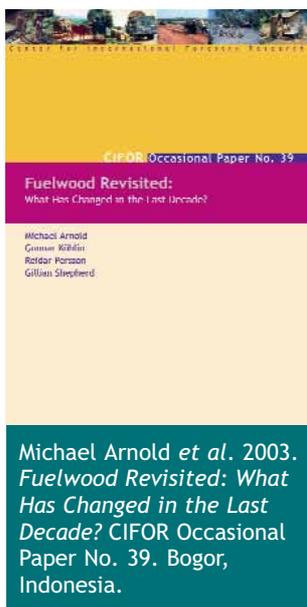
By the end of 2003 the research was already yielding interesting data. Somewhat surprisingly, the Body Mass Index (BMI) - a tool for indicating the weight status of adults - was significantly higher for Punans living in remote areas than for those downstream. This suggests that they are better nourished. However, Dounias points out that male Punans upstream experienced a serious decline in their BMI during September. This is the time of year when men are extremely active, but food is scarce. 'It is too early to draw any definitive conclusions,' says Dounias, 'but this significant drop in male BMI could make them more susceptible to disease.'



Research into the diet and health of the Punans has involved close cooperation between local health services and CIFOR. Here Dr Dwipa Anakangunggede carries out a health check-up in the Upper Tubu Valley, East Kalimantan. (Photo by Edmond Dounias)



Fuelwood and the poor



In the 1970s there was much talk about an impending fuelwood crisis. It was thought that rising numbers of poor people, dependent entirely on wood for cooking and heating, would devastate forests and in turn find that they had to go further afield to furnish their needs. Donor agencies and governments sought to avert the crisis by establishing fuelwood plantations in many developing countries. These often failed, not least because farmers showed little interest in planting low-value wood crops.

Later it became clear that the organisations predicting disaster had got their figures wrong. National fuelwood crises never materialised and less and less research was done on fuelwood use and supplies. This is why a small team of researchers, led by forest economist and CIFOR research associate Mike Arnold, decided to revisit the subject. They wanted to establish precisely what had happened over the past thirty years.

Approximately 2.4 billion people currently use wood and other forms of biomass for cooking and heating. However, global consumption of fuelwood apparently peaked in the mid-1990s and is now beginning to decline. The demand for fuelwood is leading to forest loss in a limited number of peri-urban areas that concentrate on producing fuelwood and charcoal, particularly in Africa, but in most places it has not led to significant deforestation. Indeed, most of the fuelwood used today comes not from forests, but from scrub, bush fallow and the pruning of farmland trees. And much of the fuelwood which does come from forests is coming from forests being cleared for agriculture.

In urban areas, wood tends to be the fuel of necessity rather than choice. As people

become wealthier they shift to fossil fuels such as kerosene and electricity, although in many African cities charcoal has become the main substitute for wood. Where this is happening, demand for charcoal has been growing vigorously. One of the reasons why many of the 1970s predictions were wrong is because researchers failed to anticipate how rapidly fuelwood would be replaced by other fuels. For example, in Indonesia kerosene has largely replaced wood as a fuel for city dwellers.

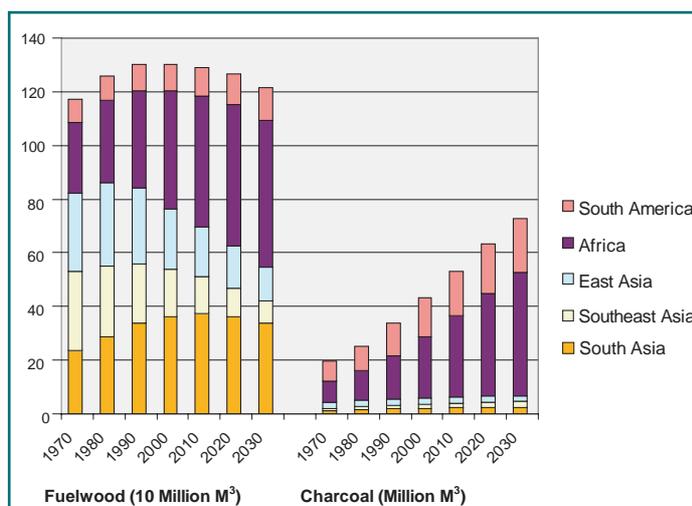
Does this mean that fuelwood can take care of itself, and that policy-makers and researchers can ignore fuelwood issues? No, says Arnold. 'Fuelwood issues deserve more attention than they are getting today,' he says, 'especially in rural areas of developing countries where wood remains the most important source of fuel, and where wood fuels provide an important source of income for the poor.'

The consumption of fuelwood is declining over much of Asia, and almost static in Latin America, but in Africa it continues to rise. The pressure comes not so much from rural dwellers as from rapid population growth in the cities, compounded by poverty. In 2000, an estimated 583 million people in Africa relied on fuelwood, charcoal and other biomass for cooking and heating. By 2030, the number will have risen to some 820 million people. Meeting the demand without wrecking Africa's resource base will be a major challenge.

Once the spectre of the 'fuelwood crisis' had been banished, decision-makers seldom considered fuelwood issues at all. The researchers suggest it is time they did. For example, says Arnold, agroforesters should be helping small farmers to adopt practices which enable them to generate more



fuelwood from their woody biomass. So far, they have failed to do so. It is also clear that community forestry has paid far too little attention to fuelwood as a resource, and to its importance for the rural poor. 'Precisely because the people who depend most on fuelwood tend to be poor, and among the least articulate, their needs are often ignored in community forestry initiatives,' says Arnold. Governments could also play a role by removing unnecessary and poorly designed restrictions and subsidies which make it difficult for people to engage in the production and trading of wood fuels.



FAO projections suggest that consumption of both fuelwood and charcoal is likely to rise dramatically in Africa over the next few decades. In most Asian countries it will steadily decline.

A fuelwood cooperative in Tientiergou, southern Niger. In order to maintain prices, the sales from everybody in the village are managed by one person so that neighbours won't compete against each other. (Photo by Daniel Tiveau)

Charcoal - Africa's Burning Issue

In cities like Lusaka, the capital of Zambia, 9 out of every 10 households cook with charcoal. As a fuel, it has much to recommend it. It is easier to handle and cleaner than firewood. Unfortunately, the way it is produced means there are considerable energy losses during production. Most earth kilns in Zambia have an energy conversion efficiency of around 25 per cent, and large quantities of wood are transformed into relatively small quantities of charcoal.

A World Bank study of six west African countries found that in areas where charcoal production is concentrated it can represent the main source of tree loss. The rising demand for charcoal - FAO estimates that it will double over the next 30 years - will put further pressure on Africa's forests.

The charcoal trade is big business. In the 1990s, 125,000 people were found to be involved in charcoal trading in Dar es Salaam, Tanzania; 78,000 in Lusaka; and 40,000 in Maputo, Mozambique. In rural areas, cutting wood for charcoal, manufacturing charcoal and transporting charcoal are often the main source of income for many people. 'In a country like Zambia, tens of thousands of people get an income from charcoal, and it has become even more important since the deterioration of the agriculture sector,' says Mike Arnold.

This creates a real dilemma for policy-makers who wish to reduce the effect of the charcoal industry on the environment. 'Unless and until you can introduce alternative sources of support, we may need to accept that maintaining the income of people involved in the charcoal trade is more important than maintaining the resource,' suggests Arnold.

Hope for Africa's drylands

If you believe most of what you read about Africa, then you're unlikely to be optimistic about its future. The economic indicators are certainly depressing. Africa holds 10 per cent of the world's population, yet its gross domestic product amounts to just over one per cent of the global economy. Some 60 per cent of all Africans survive on US\$1 a day or less, and large numbers suffer from malnutrition. The crisis of desertification affects tens of millions who live in or around the fringes of the Sahara, and HIV/AIDS is having a serious impact on many countries, both socially and economically.

However, this gloomy picture masks an encouraging reality. Research from dryland Africa, which occupies some 40 per cent of the continent outside deserts, reveals that rural people are incredibly resourceful, often in the face of extreme hardship. This was one of the findings to come out of a workshop hosted by CIFOR at the International Rangeland Congress, held in Durban, South Africa, in July 2003 and attended by leading

thinkers on drylands, government officials, international donors and NGOs.

'Research shows that even the poorest people can be regarded as autonomous, responsible, experimental and opportunistic,' explains Michael Mortimer, one of the participants at the workshop and chairman of the Programme Steering Committee of the UK Department for International Development's Natural Resources Systems Programme. 'They don't need to be lectured, pressured or motivated. What they need to be offered are choices of, and access to, technologies, practices and information in an environment that makes their efforts worthwhile.'

Research by the Institute of Environmental Studies and CIFOR in southern Zimbabwe has shown that since the early 1990s new trading opportunities have led to a tenfold expansion in wood-craft markets. Scientists from Sokoine University, Tanzania, have documented the success of community-based forest management in villages in

Expanding CIFOR's dryland research

Most people, when they think of forests in Africa, probably think of the lush tropical vegetation of the Congo Basin, rather than the dry forests which occupy a considerably greater area of the continent. Dry forests have proved more useful to humans, and are disappearing at a faster rate than Africa's wet tropical forests. Despite their importance to the 270 million people who live in Africa's drylands, these forests are often poorly understood.

A three-year project, funded by the Swedish International Development Cooperation Agency (Sida) and covering three countries, is stimulating policy dialogue about how best to alleviate poverty among forest-dependent people, while at the same time ensuring the sustainability of the forests. It also aims to improve our knowledge about dryland forests and the role they can play in improving human welfare.

The dry forests research in Zambia and Tanzania is being coordinated by CIFOR's Harare office, whose scientists have long experience of working in the Miombo woodlands of eastern and southern Africa. Burkina Faso, the other country chosen for the programme, is new territory for CIFOR. The research here is being led by Swedish forester Daniel Tiveau from a new project office, established in 2003 in the capital, Ouagadougou, and hosted by the Centre National pour la Recherche Scientifique et Technique (CNRST).

The woodlands of Burkina - they are too sparse to be called forests - are vitally important for rural communities. 'They provide fuelwood for domestic users,' explains Tiveau. 'They also protect the water and soil for agriculture, and yet they are seen as far less important than farmland because they don't produce timber of any great monetary value.' The woodlands also provide construction material and medicinal plants, as well as most of the dry-season fodder on which Burkina's fast-growing livestock population depends.

Population growth, overgrazing and clearance for farmland are leading to the loss of woodland. 'Our challenge is to find ways of both conserving the resource, and using it better,'

northern Tanzania. In Kenya, the Akamba people of Machakos and Makueni districts increased the average value of farm production by a factor of 10, and its value per capita by a factor of three, while the population grew sixfold between 1932 and 1987. In Burkina Faso, the Mossi people living on the Central Plateau significantly increased their crop yields, the number of on-farm trees and the number of livestock. In all these cases, rural people were both improving their livelihoods and enhancing the environment.

These success stories cannot be attributed solely to outside help. Improvements in infrastructure and the policy environment enabled local communities to fulfil their true potential. 'One of the conclusions of the workshop was that past policies on drylands have failed primarily because they have focused on the environment, rather than on the creativity and dynamism of the people living in the drylands,' says Bruce Campbell, Director of CIFOR's Forests and Livelihoods Programme. Policy-makers should concentrate on the people and their talents, and think of the environment as the stage and scenery. This



was a central message of the workshop policy briefing, *Chance, Change and Choice in Africa's Dryland*, which was presented to a meeting of the United Nations Convention to Combat Desertification (UNCCD) in Cuba in August 2003.

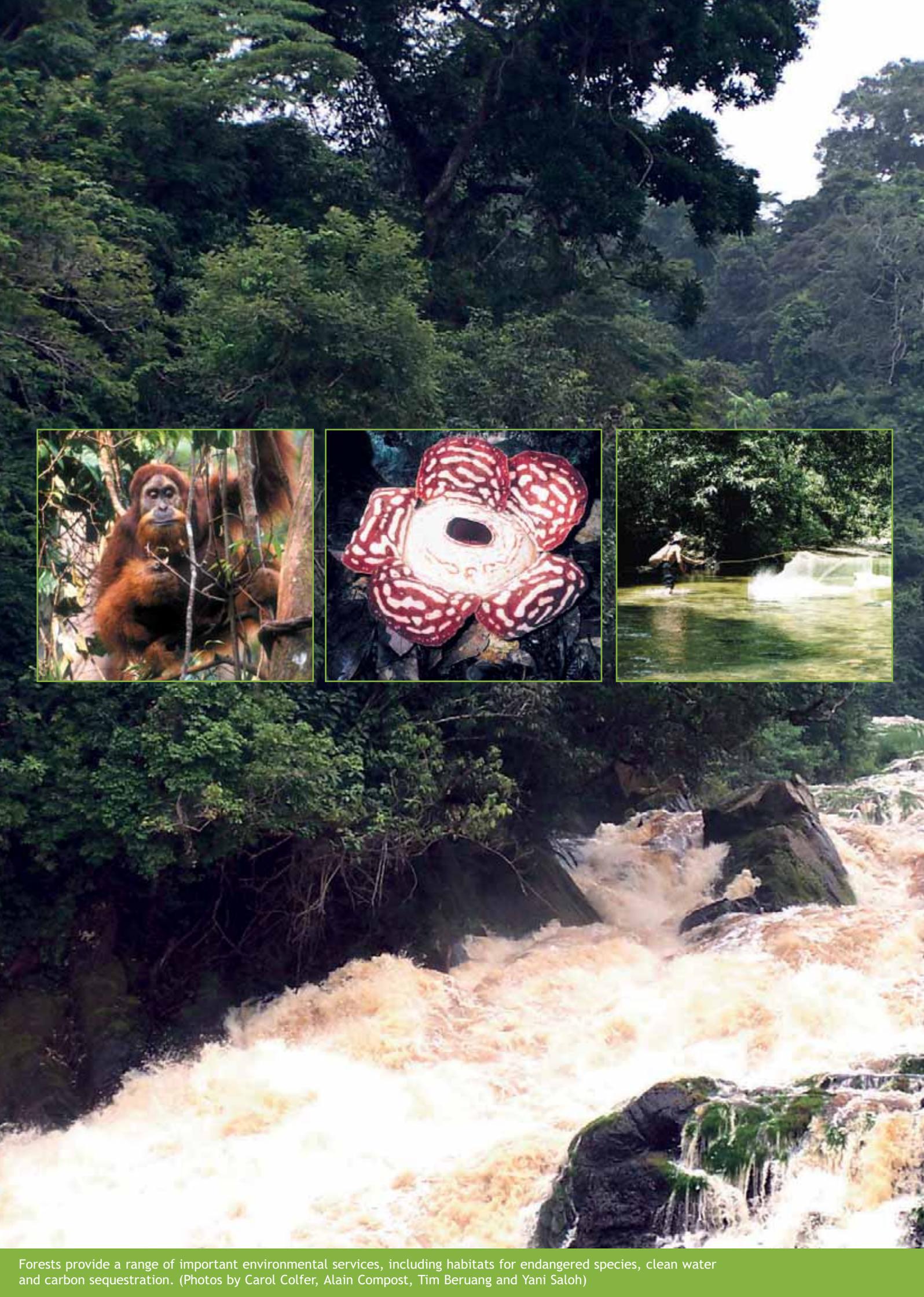
Self-help: a women's group in a poor suburb of Ouagadougou, Burkina Faso, has successfully established a multi-purpose garden to grow vegetables, fruit and trees. (Photo by Daniel Tiveau)



says Tiveau. He and his colleagues are well aware of the fact that past 'solutions' to the problems of drought and desertification often did little good. For example, in the 1970s and 1980s many donors funded huge fuelwood-planting projects, failing to realise that the land was simply too dry for them to succeed. 'Most of the ideas of the past were technical

fixes that simply didn't work,' says Tiveau. 'Together with local people and local researchers, we are looking for scientific solutions to environmental problems, based on the interests of local people. We are very aware that we need dynamic, locally adapted solutions to enable people to improve their living conditions in a harsh environment.'

Africa's dryland forests matter for a host of reasons. Forest products provide a safety net in times of hardship and are particularly important for the poor. Forests provide an income for rural households, as well as fuelwood and construction material. They also play an important role in protecting the soil and conserving water. (Photo by Carol Colfer)



Forests provide a range of important environmental services, including habitats for endangered species, clean water and carbon sequestration. (Photos by Carol Colfer, Alain Compost, Tim Beruang and Yani Saloh)

ENVIRONMENTAL SERVICES

Research that improves the way forests are used

Over half the world's forests are found in developing countries. They provide goods such as timber, food, fuel and fibre. They provide a range of environmental services: for example, they help to regulate the water cycle, soak up greenhouse gases, recycle nutrients and stabilise soils. And tropical forests support over half of all plant and animal species. Lose the forests, and we lose far more than just the trees. Yet annual forest loss runs at around 12 million hectares a year, an area the size of Greece, and most of these losses are in the developing world.

We need to use forests in such a way that they supply products such as timber and game, and services such as clean water and stable soils, in a sustainable manner. We need to work out how to integrate protected areas into the broader landscape of farmland and human settlement, especially in places where the forests have been seriously fragmented. And scientists need to establish precisely what impact global climate change will have on forests, and on their ability to supply essential goods and services.

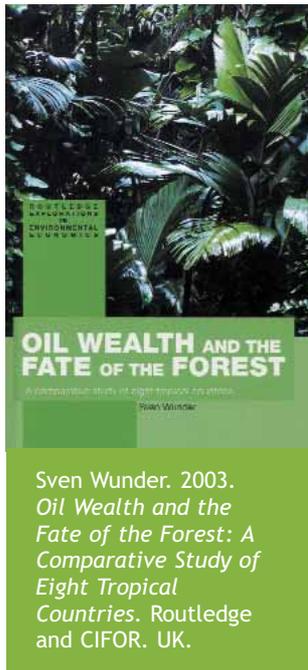
Degraded forests and previously forested lands cover more than 800 million hectares in the tropics. We need to ensure that rehabilitation programmes, now underway in many developing countries, are about much more than clothing the land with trees. One of the main problems at present is that governments spend considerable sums planting trees, but they and others often fail to maintain them later. The restored forests should provide a range of



A tree nursery in Honduras.
(Photo by Christian Cossalter)

goods and services which will improve rural livelihoods and benefit the wider human community beyond the forests.

The beneficiaries of the research conducted under CIFOR's Environmental Services and Sustainable Use of Forests Programme range from governments to development agencies; from corporations involved in industrial timber production to small farmers growing a hectare or two of eucalypts to sell to the local pulp mill. Ultimately, the research projects under this programme aim to improve the way we use forests, both natural and planted, and provide the knowledge needed to ensure the forests deliver a range of goods and services.



The oil industry - *bête noire* or friend of the forest?

Appearances matter. The first thing we tend to notice about any new development, whether it is an oil well or a mine or a dam, is its immediate impact. Often it will be negative: the oil development might lead to forest loss; the mine might displace local communities; the dam might lead to the flooding of farmland. However, we also need to look beyond the direct impact of such developments at their wider macro-economic implications, both for people and the environment. This is precisely what CIFOR economist Sven Wunder has done in his research into the relationship between the oil industry and tropical forests.

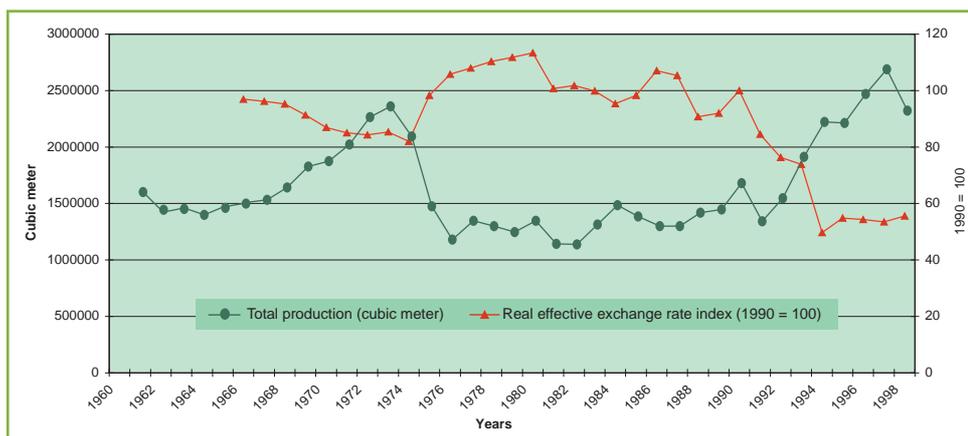
There is no denying that in some places oil installations have led to the pollution of waterways and the loss of wildlife. Indigenous people have seen oil developments encroach on their ancestral lands, and access roads have opened up forests to other forms of exploitation. But Wunder's research suggests that oil revenues can, in certain circumstances, prove beneficial for the forests. 'In some places the oil industry has undoubtedly done harm,' says Wunder, 'but in countries like Gabon and Venezuela, oil revenues have actually saved primary forest and increased the area under forest.'

The mechanism responsible for this seemingly strange state of affairs is known as 'Dutch disease'. During the 1960s and 1970s the rapid expansion of the natural gas industry in the Netherlands led to an increase in exchange rates, public spending, labour

costs and inflation. This led to a boom for private and government services and the construction industry, especially in urban areas, but made trade-exposed, commodity-producing sectors less competitive on the international market, and these went into decline.

Similar trends have been observed in some oil-producing developing countries, with oil booms having a negative impact on agriculture and the forestry sector. The oil boom in Gabon coincided with a significant regrowth of forests in the interior, as people in the countryside abandoned their fields and moved to the city, attracted by the promise of jobs and a better living. In five of the eight countries studied by Wunder - in Cameroon, Papua New Guinea, Mexico, Nigeria and Indonesia - oil wealth has not entirely stopped deforestation, but it has helped to slow it down during periods of high oil prices. When oil prices have fallen, in contrast, people have drifted back to the countryside and converted more forest to farmland. Ecuador was the only country studied where oil wealth accelerated deforestation. This was because Ecuador's government used its oil revenues to fund specific policies which promoted land colonisation and forest conversion.

This research has implications that go far beyond the oil industry and could apply to any development which involves a large transfer of foreign exchange. Foreign aid, workers' remittances, copper mining - anything that brings in large amounts of revenue - could



Timber production declines when oil prices and exchange rates are high in Gabon. Low oil prices can mean more forest degradation, not less.



have precisely the same effect on forests as oil revenues. Wunder's analysis shows that large inflows of foreign exchange can help to protect forests.

The oil booms are in many ways the reverse of what happens under structural adjustment. 'This research should alert the World Bank and national policy-makers to the fact that certain macro-economic policies can have serious implications for tropical forests,' says Wunder. For example, one popular instrument of structural adjustment programmes, promoted by the Bank, has been a sharp currency devaluation to boost price competitiveness. With plunging oil prices, many oil-producing countries devalued their currency, thus making agriculture and timber extraction more profitable. This helped improve their trade balance, but also led to substantially greater forest loss and degradation.

Wunder's study came in for strong criticism from two non-governmental organisations, Oilwatch Network and the World Rainforest Movement. They were particularly worried that oil companies might use the results to justify their activities. CIFOR acknowledged that this was a legitimate concern, and that oil developments can cause significant site-specific damage to forests. However, CIFOR emphasised that the research used oil revenues as a means of exploring how macro-economic trends can affect deforestation. There was a spirited debate, with CIFOR giving space on its website to the views of its critics, and the latter doing likewise for CIFOR. 'We greatly appreciate this open attitude,' said the authors of the NGO critique.

Wunder gave presentations about the research at 19 different venues in Europe and North America, hosted by organisations as varied as the World Bank, the World Resources Institute, the UK Department for International Development, the Overseas Development Institute, WWF and Yale University. The book attracted widespread attention in the international media, including the BBC, *New Scientist*, the Voice of America and Agence France Presse.

High oil prices have helped to take the pressure off Gabon's tropical forests. (Photo by Markku Kanninen)

How oil revenues helped to save Gabon's forests

Thanks to oil - production rose from 1.4 million tonnes in 1966 to 18 million tonnes by 1998 - the small central African state of Gabon now has the second highest per capita income in Africa, and it has experienced a rapid growth in public employment, wages, urban infrastructure and transport.

Gabon's oil boom triggered a rural exodus to urban areas, especially of young people of working age. As one village elder put it: 'Nobody lives here anymore. The young are leaving, and the elephants and gorillas run freely through our gardens, destroying what little we grow to eat.' This is a familiar lament in rural Gabon. But agriculture's loss of long-term competitiveness has been a blessing for the forests. Over 80 per cent of the country is still clothed in tropical forest, and deforestation here - in contrast to many other Congo Basin countries - is negligible.

The full story of how Gabon's oil wealth has helped to save its forests, and what policies could help to retain the forests now that oil revenues are declining, is told in *When the Dutch Disease Met the French Connection: Oil, Macroeconomics and Forests in Gabon*, by Sven Wunder (CIFOR 2003).

Fires, peat and pollution

If Indonesia prosecuted everybody who broke the laws governing the use of fire, the legal system would grind to a halt. Representatives of oil palm and plantation companies would clog up the courtrooms, alongside hundred of thousands of small farmers.

According to CIFOR economist Luca Tacconi, Indonesia's current laws, which ban the use of fire to clear land, are not only unenforceable, they don't make sense. 'Fires don't necessarily have negative impacts,' he suggests, 'and the law should recognise that fire can be used as a land management tool without causing adverse problems.' He argues that instead of having a blanket ban on fires, Indonesia should introduce laws to ban fires which cause significant smoke haze, and fires which are deliberately used to clear natural forest which has not been allocated for other land uses.

Over the last 20 years there have been 40 separate fire projects and missions in Indonesia, costing well over US\$30 million, yet there is still much confusion about the cause of fires, and how they should be tackled when there is a problem. CIFOR's fire research, funded by the European Commission, has been shedding new light on this complex issue.

The annual fires are particularly

destructive in years when there is a strong El Niño Southern Oscillation. In 1997-8, 25 million hectares of land burned round the world; almost half of this was in Indonesia. Forest destruction as a result of the fires caused economic losses in Indonesia of US\$1.6-2.7 billion, and the cost of the smoke pollution may have amounted to as much as US\$800 million. However, this was not just Indonesia's problem: the fires contributed significantly to global warming, and the haze caused serious problems for neighbouring Singapore, Malaysia, Brunei and Thailand.

Visit the great peatlands of Borneo or Sumatra during the fire season, when companies are clearing forest and scrub to establish oil palm or pulpwood plantations, and peasant farmers are using fire to clear land for rice and other crops, and you may never see the sun. Visibility is often reduced to a few metres. In many years there is a significant rise in the numbers suffering from respiratory problems, and schools frequently have to close.

Tacconi believes that tackling these peatland fires should be a priority. During 1997-8, 90 per cent of the haze which shrouded South-East Asia was generated by peat fires. 'Controlling these, and making sure the bans are implemented, would make a real difference,' says Tacconi. In view of the significance of peat swamps as a source of carbon emissions, he believes there is a case for including commitments to protect them under the Kyoto Protocol, an international agreement which aims to reduce emissions of greenhouse gases.



The lack of clarity over precisely who sets fires and why, and the resulting uncertainty about how to deal with them, is explored in Luca Tacconi. 2003. *Fires in Indonesia - Causes, Costs and Policy Implications*. CIFOR Occasional Paper No. 38. Bogor, Indonesia.



Preventing peatland fires should be a priority for Indonesia. Here, firefighters struggle to control a blaze in Central Kalimantan. (Photo by Charlie Pye-Smith)

Fighting fire through partnership

When it comes to tackling fires, the Indonesian government cannot go it alone. Everyone now realises it is time to move beyond the blame game and create serious partnerships between government ministries, industry, non-governmental organisations and research bodies like CIFOR. This is increasingly happening.

During 2003, CIFOR co-organised two fire workshops. 'Peatland fires are a major problem in Sumatra, which has 40 per cent of all Indonesia's peatlands,' explains CIFOR scientist Unna Chokkalingam, 'and that's why we held the first of the workshops in Palembang.' Participants from four affected provinces in Sumatra explored the impact of fires in four different wetland settings: fires used to clear land for rice cultivation in long drought periods; fires associated with plantation development; fires which affect the remaining natural forest land; and fires on land developed for transmigration settlements.

The workshop came up with some significant recommendations for future research. 'It was agreed that we need to look at lessons learned from past plantation

development on peatlands,' says Chokkalingam. There was also widespread agreement that the land-use allocation policies in the peatlands of Indonesia need to be carefully reviewed.

The workshop attracted representatives of local communities, pulp and paper companies and the government, as well as scientists and members of non-government organisations. Many of those who attended had not met before. 'I feel that people are talking to each other much more than in the past about fire and peatland issues,' says Chokkalingam. 'Some of them have independently been getting in touch as a result of meeting at the workshop.'

This new-found spirit of cooperation is clearly appreciated in government circles. Following the Jakarta workshop in December 2003, Tri Wibowo, Director of Forest Fire Control, wrote: 'We perceive close co-operation between CIFOR and the Directorate of Forest Fire Control to be of great importance.'

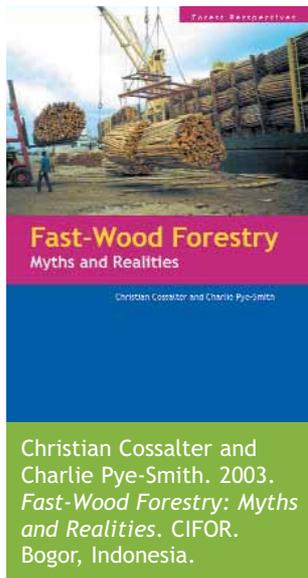


CIFOR's media coverage helped to increase public awareness of Indonesia's peatland fire problem.



Fires on peatlands are a major source of the smoke haze that blankets Indonesia and neighbouring countries almost every year. (Photo by Rizki Pandu Permana)

Fast wood: myths and realities



In 1970 over a third of the world's adult population were illiterate; now less than a fifth of adults are illiterate. In 1970 just over 2 billion people could read and write. Now almost 5 billion can. That's the good news. The bad news is that the rapid increase in literacy is one of the factors that has led to a spectacular increase in the demand for paper. By 2010, paper consumption will have risen by 80 per cent since 1990.

This is one reason why the area of land planted to fast-growing eucalypts, acacia, poplar and pine has been increasing by over a million hectares a year, and will continue to do so for the foreseeable future. Much of this expansion is taking place in the tropics, and it has sparked off bitter arguments between environmentalists and the plantation industry.

Fast-Wood Forestry: Myths and Realities provides an authoritative analysis of the controversy. 'Our aim was to separate fact from fiction,' explains CIFOR forester Christian Cossalter. 'Environmentalists have often overstated the problems caused by fast-wood plantations, but the industry has frequently underestimated the damage it has caused.'

Supporters of the fast-wood industry claim that plantations not only offer a sustainable source of wood to meet the rising

global demand for paper and other products, they provide significant employment, help to protect watersheds and take pressure off natural forests. Not true, say opponents: fast-wood plantations deplete water supplies, degrade soil, provide relatively few jobs, displace rural communities and lead to the destruction of species-rich natural forests.

Fast-Wood Forestry suggests that both sides are right in some respects, but wrong in others. It is true that some plantations have led to the destruction of natural forests and loss of biodiversity. But this is not always the case: on degraded land plantations can actually improve biodiversity. In certain circumstances fast-wood plantations may take pressure off natural forests - this seems to have happened in New Zealand - but this is the exception, rather than the rule. Plantations undoubtedly use more water than low vegetation such as grassland, but this is only a problem in very dry areas. And as far as soil degradation is concerned, commercial agricultural crops may do far more damage than plantations.

Claims by the plantation sector that it provides significant employment seldom bear examination - in developing countries, labour-intensive agriculture provides far more jobs - and the establishment of fast-wood plantations has often led to conflicts between companies and communities. On the other hand, there are situations in which plantations provide much-needed employment and investment.

'Fast-wood plantations are neither inherently good nor inherently bad,' says Cossalter. 'When they are well planned and executed they can deliver large quantities of wood, as well as a range of environmental and social benefits. But when they are badly planned they can do serious damage both to the environment and local communities.' The message is clear: fast-wood plantations are here to stay, but they need to be carefully planned, with local communities getting involved at an early stage. The authors also suggest that there should be a presumption against any planting which would lead to the loss of primary forest or other important ecosystems.



Nursery of *Acacia mangium*, Riau province, Sumatra, Indonesia. (Photo by Christian Cossalter)

Encouraging good practice

For all its virtues, there is a dark side to free trade. By forcing producers to keep their prices as low as possible, free trade often encourages the abuse of renewable resources. Take, for example, the story of Indonesian teak.

European householders have a passion for teak furniture. Teak is beautiful and durable. It is also expensive - or at least it should be - and to keep their costs down, many retailers source their furniture from workshops in the Far East which depend to a significant degree on illegal supplies of Javanese teak. 'It is not uncommon to find brokers buying garden chairs for US\$10 which would cost three times that much if the teak had been legally harvested,' explains forester Philippe Guizol.

In 2003, Guizol and Jean Marc Roda, a colleague from the Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), helped the French retailer Carrefour design a system to ensure that its teak would in future come from sustainably managed, legally harvested plantations.

Carrefour was reacting to a campaign launched in 2002 by Paris-based Robin des Bois. The pressure group accused European companies of 'vandalising' Java's teak forests, and Carrefour was cited as one of offenders. Consumers were urged to boycott garden furniture made by Carrefour and other retailers. The campaign had an immediate impact, and Carrefour recognised that it needed to sort out its supply lines.

Because Perum Perhutani, the state-owned company which manages most of Java's teak, could no longer supply timber certified as sustainably managed - certification was withdrawn after the company clashed with local villagers - Carrefour decided it had to establish its own tracking system. CIFOR helped the retailer to refine it.

If a tracking system is to work properly, then the 'chain of custody' must not have any weak links. There is no point in ensuring that the timber is managed properly in the forest, if logging crews are forced to work in unsafe conditions, or if the furniture workshops are breaking employment laws. 'What we have tried to do,' says Guizol, 'is

set up a system where everybody will be dependent on one another. If anyone along the chain fails to observe the necessary standards, then everybody loses out.' If, however, everyone sticks to the rules, then they will all share a premium for their product. And Carrefour will have a product which it can sell to consumers, and which they can buy, with a clear conscience.

The legal teak harvest in Indonesia amounts to 600,000 cubic metres per year. The illegal teak harvest probably pushes the figure up to 1.5 million cubic metres. Guizol believes that one of the reasons why illegal logging is rife is because local communities have until recently had no incentive to prevent it. Under the old system operated by Perum Perhutani, once teak had been clear-felled, villagers were given limited access to the land. They could briefly work as labourers for the company, planting the next crop of teak, and they were allowed to plant their own crops on the land for two years. However, during the next 78 years of the teak rotation, they had neither access to the land nor any share in the profits.

Discontent and agitation has led Perum Perhutani to review its policies, and it has now agreed to share some of its profits with local communities. 'I think this will help to reduce the illegal logging,' says Guizol. 'If people know that they and their children will get something from the forests, they will have a much greater incentive to tackle illegal logging.' And only when the illegal logging ceases is there any chance of the plantations being better managed. At present the plantations yield on average around 0.6 cubic metres per hectare per year. If properly managed they would yield at least 10 cubic metres per hectare per year. 'These plantations have the potential to provide sustainable livelihoods for hundreds of thousands more people than they do at present,' says Guizol.



CIFOR researchers are helping a European retailer to source sustainably managed, legally harvested teak from Java. The retailer is also taking into account conditions in sawmills and workshops. (Photos by Philippe Guizol)



Male orangutan (*Pongo pygmaeus*) in Gunung Palung National Park, West Kalimantan, Indonesia. (Photo by Ramsay Ravenel)

A diverse approach to biodiversity

It's a long way from the World Trade Centre in Montreal, headquarters of the Convention on Biological Diversity (CBD), to the remote forests of Borneo or Amazonia, but CIFOR researchers are equally at home in both environments. Influencing the processes that determine how governments and international agencies conserve biodiversity is just as important as studying species on the ground, or establishing which animals and plants matter to forest-dependent people. Scientists who don a suit and tie one week can often be found in jeans and jungle boots the next.

In 2003, the Secretariat to the CBD commissioned CIFOR to undertake a review of the convention's 'ecosystem approach' to conservation. The review, written by Peter Frost, Luke Hanson and Bruce Campbell, helped to shape the deliberations of the CBD's Subsidiary Body on Science, Technical and Technological Advice (SBSTTA). The scientists suggested that that the existing ecosystem approach used by the parties to the CBD was in some ways flawed. They proposed a revised series of principles and guidelines.

Meanwhile, in East Kalimantan scientists working with CIFOR discovered a specimen of *Rafflesia*, an exceptionally rare and unusual plant. Another CIFOR collaborator found several species of ginger new to science. CIFOR scientists also found that one of the

plots they had established during a reduced impact logging trial had the highest diversity of tree species ever found in Asia. If there is a message that links these stories, it is that we still have an enormous amount to learn about the world's forests.

A remarkable plant

In the 1960s an amateur British botanist, already in his eighties, set off into the forests of Sabah in northern Borneo in search of plants belonging to the genus *Rafflesia*, the largest of which has a flower almost a metre across. William Price found a new species which was given his name: *Rafflesia pricei*. In April 2003 a team of Sumatran field assistants working with a project from Cambridge University, collaborating with CIFOR, discovered a specimen of *Rafflesia pricei* near CIFOR's forest camp at Seturan in East Kalimantan. This was only the second record of the species for Indonesian Borneo.

Rafflesia is a strange plant. It possesses no leaves and lives parasitically on certain vine species. Its flowers are either male or female and they are pollinated by flies which are attracted by their foul smell. Unfortunately, its flower buds are much coveted by traditional medicine sellers, and in parts of Peninsula Malaysia the survival of *Rafflesia* is threatened by collectors, as well as by habitat loss.



Makokou Research Station in Gabon. (Photo by Markku Kanninen)

No sign of good indicators

Scientists are eager to identify animals and plants whose presence or absence will tell them whether logging is having little impact on a forest, or far too much. In an ideal world, there would be the equivalent of the canary, as indispensable to coalminers in the old days as their pickaxes and lamps. When the caged canaries keeled over, miners knew there was poisonous gas around and it was time to head for the surface. Similarly, the presence of tubiflex worms tells ecologists that water bodies are low in oxygen, while cut-throat trout in the Rocky Mountains are a good indicator of clean and unpolluted water.

Unfortunately, indicator species are proving hard to come by in tropical forests, as Claudia Azevedo-Ramos and Oswaldo de Carvalho from Brazil's Instituto de Pesquisa Ambiental da Amazonia (IPAM) discovered when they conducted a review of the literature with Robert Nasi, a CIFOR ecologist. Logging undoubtedly influences which animals survive, and their abundance in the forests, but each species tends to respond differently. The authors conclude that nobody has identified any satisfactory indicator species to gauge the influence of logging on forests. They also point out that counting animals is extremely expensive, and often difficult, particularly if they are rare or nocturnal, and that when a species is declining it is difficult to disaggregate the influence of logging from other activities such as hunting. So should scientists abandon the search for bioindicators in tropical forests? No, says Azevedo-Ramos. 'Indicator development continues to be a critical research need in forest ecology,' she suggests.

Turning down a quick buck

The Dayak villagers who live in the area covered by the Malinau Regency in East Kalimantan are used to the sight of money - other people's money, at least. For years, people from outside the area have come in search of valuable timber, armed with wads of hard cash. Frequently, village leaders have sold off their forests, and the results are plain to see. Most of the tropical forest in the accessible lowlands has been logged - much of it illegally.

But one village has resisted the temptation of selling out to the loggers, and Setulang's considerable achievement in safeguarding over 5,000 hectares of forest has been recognised by the Indonesian Minister for the Environment. In 2003, on World Environment Day, the village received the prestigious *Kalpataru* award, on the recommendation of CIFOR scientists working in the area.

'Many businessmen have offered us billions of rupiah for our forests,' explains Kole Ajang, the village chief. 'Offers like these are not easy to refuse, bearing in mind that our everyday needs are becoming increasingly expensive.' But the villagers are putting their children's future first. The village chief explains that without the forests they would lose a steady supply of clean water, raw materials to make handicrafts, medicinal plants and many other vitally important forest products.

Earlier in the year Setulang was a finalist at an international water contest in Japan. Although it did not win first prize, the attendance of one of its representatives, Ramses Iwan, was a source of considerable pride to the villagers. They have provided a glowing example to others who might be tempted to sell their resources for short-term gain.



A specimen of *Rafflesia pricei*, only the second recorded in Indonesian Borneo, was discovered near CIFOR's camp at Seturan, East Kalimantan. (Photo by Team Beruang MRF)



Richard Nyirenda from CIFOR's ACM research team in Zimbabwe facilitates a reflection meeting of a broom and thatch grass user group in Mafungautsi State Forest. (Photo by Ravi Prabhu)

FORESTS AND GOVERNANCE

Improving the way we make decisions

If we are to understand why species-rich forests are destroyed, or forest-dwellers are losing their land and livelihoods, we need to look far beyond the chainsaw, the plough and the individuals immediately responsible. We need to understand how the decision-making process works, and how the people who make decisions exercise their power and authority. We need to look at laws, policies, regulations and the systems of property rights which determine whether or not forests are managed sustainably. In short, we must focus on governance.

Forests are used and coveted by a remarkable array of different interests, ranging from peasant farmers to logging companies, from forestry departments to conservationists, from charcoal-makers to collectors of medicinal plants. Some wield great influence and power; others have little or none at all. Some are quoted on international stock markets; others live in thatched huts without electricity.

At present the decision-making agenda is dominated by state agencies, private companies, donor organisations and international conservation bodies. All too often the people who live in the forests have the least influence. Furthermore, laws and regulations are often inconsistently applied and unjustly discriminate against the poor.

Research conducted under CIFOR's Forests and Governance Programme promotes good forest governance. This implies that decisions are made in a manner that is just and fair to all interests; that the decision-making process is transparent; and that decision-makers are held to account.



A community meeting in Cururu, Bolivia.
(Photo by Kristen Evans)

CIFOR researchers are exploring governance issues at many different levels. Social scientists involved in adaptive collaborative management (ACM) research are looking, among other things, at the way in which communities make decisions about how to use their resources. CIFOR economists have been exploring the financial drivers which lead to forest loss, and their research is helping governments and international institutions to address such issues as money-laundering and forest law enforcement. A key aim is to improve the decision-making of banks and those who regulate the financial sector. CIFOR researchers have also been investigating decentralisation issues, with the aim of improving the impact of decentralisation on forests and the poor, and enhancing the capacity of local governments to implement forest policies. Finally, the governance programme is undertaking research on forest-related conflicts.



Over four-fifths of the timber harvested in Indonesia comes from illegal sources. Here, timber is extracted from a forest in Riau, Sumatra. (Photo by Romain Pirard)

Cracking down on the money launderers

If you are in the business of drug smuggling, kidnapping for ransom, prostitution, illegal arms trading or illegal logging, you don't stuff the profits from your nefarious activities into a cardboard box under your bed. You launder them through the banking system. If you're going to do that without getting into trouble, you need banks which don't ask too many questions about where and how you made your money.

'Getting banks and other financial institutions to clamp down on money laundering is essential if these illegal activities are to be curbed,' explains CIFOR financial analyst Bambang Setiono. During 2003, Setiono, a former Indonesian government official, worked with the government's Reporting and Financial Transaction Analysis Centre (PPATK) to get illegal logging listed as a money-laundering

crime. At present, around 80-90 per cent of the timber harvested in Indonesia comes from illegal sources. The trade in illegal timber damages the environment, deprives the government of billions of dollars in lost revenues and encourages corruption.

In 2000, Indonesia was placed on the list of non-cooperative countries and territories by the G-7's Financial Action Task Force on Money Laundering (FATF). This was a serious situation, as it meant that Indonesian banks could be subject to sanctions which could halt transactions with foreign banks. Two years later, the government published a new anti-money-laundering law, but it was still considered unsatisfactory by FATF. 'It was around that time that I got involved,' explains Setiono. 'I had been working on forest finance, and I offered to provide input on the money-laundering issue.'

Setiono was invited to workshops and seminars organised by PPAK. 'I argued that you couldn't tackle illegal logging - something the government has pledged to do - simply through forestry laws,' he explains. 'Illegal loggers have to put their money somewhere. That means we need to make banks responsible for checking where large sums of money come from.'

Thanks in part to Setiono's efforts, the government introduced a new law in September 2003 which classified forestry and environmental crimes as 'predicate offences' for money laundering. The penalties are harsh: up to 15 years' imprisonment and a maximum fine of 15 billion rupiah (US\$1.7

billion). Indonesia is the first country in the world to have done this, and it represents a major step in the fight against illegal logging. The law now requires banks to inform the government of any suspicious transactions, and if they fail to do so they can be prosecuted.

Setiono believes that the new anti-money-laundering law is a significant move in the right direction, but it can only be one element in a multi-pronged strategy. 'Whatever attempts are made to clamp down on the laundering of money derived from illegal exploitation of natural resources, it will be to no avail unless there is a significant improvement in law enforcement,' he says.

Tracking debt

Many key decisions about Indonesia's forests are made not by the Ministry of Forestry, but by the various agencies under the Ministry of Finance. One of these is the Indonesian Bank Restructuring Agency (IBRA), which was set up in 1999 to help sort out the country's banking crisis. In return for an injection of cash, bankrupt banks selected for recapitalisation handed over their bad loans to IBRA, whose task it has been to get defaulting companies to settle their debts. Forestry-related assets pledged to IBRA amounted to some US\$3 billion in outstanding loans and over US\$8 billion in shares and physical assets.

In February 2000, at a meeting of the Consultative Group on Indonesia (CGI), whose 33 members had been providing over US\$3 billion in loans each year to keep the Indonesian economy afloat, donors persuaded the government to close the heavily indebted forest industries under IBRA. The aim was to downsize Indonesia's processing capacity, thus reducing pressure on the forests. By closing these companies down, IBRA would also save Indonesian taxpayers considerable sums of money.

Unfortunately, little has been done to meet these commitments. 'What is happening is that bankrupt timber companies have been buying back their debts at sharply discounted prices and the government is writing off the rest,' explains CIFOR policy scientist Chris Barr. This is enabling the companies to continue consuming large volumes of timber.

Even more worrying is the fact that in 2003 IBRA sold US\$1.3 billion of forestry debt to Bank Mandiri, a government-owned bank which was soon to be privatised. This meant that the government's net revenue from the sale was zero, as opposed to the 20-30 cents a dollar it was getting for sales to external buyers.

CIFOR raised this issue prior to a meeting of the CGI in June 2003. It urged members of the CGI to insist that Bank Mandiri call in the forest-sector debts on its books before offering shares to the public prior to privatisation. It argued that companies which failed to repay their debts should be closed, as the Minister of Forestry had suggested. CIFOR's efforts to raise this issue received widespread coverage in both the national and international press.



Despite being heavily in debt, many Indonesian forestry companies are still in business and they continue to consume large volumes of timber. (Photo by Christian Cossalter)

Bridging the gap

If you asked a forester what community forestry meant 25 years ago, he or she would probably have told you about experimental wood lots growing firewood for the rural poor. Since then, community forestry has become a major preoccupation not just of communities seeking to manage forests to meet their own needs, but of international donors and governments. Local communities now control over 20 per cent of all forests in developing countries, and community-led movements have been demanding, sometimes successfully, significant reforms of the forestry sector.

Since the mid-1980s, a growing number of international networks have sought to promote community forestry and the rights of forest-dependent people. They have done this in a variety of ways, with very different mixes of people and varying objectives. To find out how they have fared, CIFOR commissioned an analysis of their achievements and shortcomings, the findings of which were published in 2003.

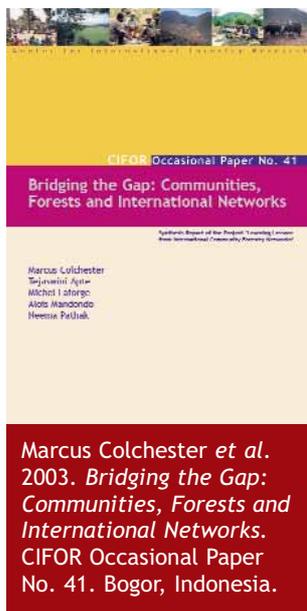
The researchers, led by Marcus Colchester, director of the Forest Peoples Programme, looked at the influence of nine international networks in Brazil, Cameroon, China, India, Indonesia, Mexico and Uganda. These included networks like FAO's Forest, Trees and People Program, the Central American Indigenous and Peasant Coordinator of Communal Agroforestry (ACICAFOC), the World Rainforest Movement and the Asia Forest Network. The researchers found that the networks have undoubtedly shaped the ideas of some key individuals, and helped to give credibility to the whole idea of community forestry, although they have seldom had any direct impact on the ground.

The networks mostly work in isolation from one another, which surprised Colchester. 'We expected there to be a greater exchange of information, and more coordination over advocacy initiatives than there was,' he says.

The study also found that there is a pronounced digital divide between the activists who run the networks - they tend to be city-based, and often from the North - and their constituencies, who tend to be rural and remote. The network coordinators rely heavily on e-mail, but many communities do not even have electricity, let alone computers.

So how can these networks work more effectively? The researchers suggest that they need to foster better links between international, national and local levels. They also think the networks could do more to get the positive gains made at the international policy level on to national reform agendas. Communication strategies also need to be improved if communities are to be reached effectively. This means less reliance on e-mail, and more on face-to-face contact. And the networks need to recognise their inherent limitations: they cannot act as a substitute for the voice of local communities.

At the 2002 World Summit on Sustainable Development, held in Johannesburg, some 200 networks came together under the banner of the Global Caucus on Community-Based Forest Management. Following the publication of CIFOR's Occasional Paper, *Bridging the Gap*, the Global Caucus has referred to the report to explore the extent to which it has taken on board the lessons highlighted by the CIFOR research project. 'The Caucus is definitely one to watch,' suggests Colchester.



A woman collects eru, a wild vegetable, on a community farm in Cameroon. (Photo by Ousseynou Ndoye)

Decentralisation in Latin America

Decentralising forest management is nothing new. In countries like Switzerland, Canada and India, they have been doing it for decades, with town councils, local authorities and municipal mayors playing a far more important role in forest management than central government. Since the early 1990s, the decentralisation of natural resource management has begun to catch on throughout much of the developing world. Decentralisation, it is hoped, will make decision-making more democratic, help to distribute the benefits which flow from forests more fairly, and ensure that the forests are used more efficiently.

In 2003, CIFOR and the International Development Research Centre jointly published one of the most comprehensive reviews of decentralisation to date. *Municipal Forest Management in Latin America* tells the story of how the decentralisation programmes have played out in Bolivia, Honduras, Guatemala, Nicaragua, Brazil and Costa Rica. While some countries have made considerable progress in decentralising forest management - Bolivia being the most obvious example - others lag far behind, with central governments continuing to act as the autocratic manager of most forest land. In some places decentralisation has been good for the forests and local people; in others, it has benefited local élites to the detriment of the forests and the rural poor.

The different outcomes are mainly due to the ways in which decentralisation policies are implemented. Sometimes central governments have little interest in transferring powers to local institutions, yet a variety of sectors demand greater local control. The result is a process that reflects these tensions. The outcomes also depend on the priority given by government to democratic institution-building, transparency and accountability, as well as the capacity of civil society institutions to demand good governance.

The publication of the book was followed by a series of workshops in Honduras, Guatemala and Nicaragua. The relevant

country chapters were presented at each of these. 'We also aimed to promote a dialogue among the key stakeholders about specific issues related to forestry decentralisation,' explains Anne Larson, a researcher based at the Nitlapan Research Institute in Nicaragua. 'For example, we looked at how different groups viewed the roles of central and local government when it came to authorising logging permits, monitoring resource use and sharing the income derived from forest resources.' Larsen believes that the workshops raised local awareness about all these issues, and helped interested parties work out how to improve the decentralisation process.

The workshop reports contributed towards the 'best practices' document written by Larson for the SIDA-International Development Bank partnership. The document was also sent out to an e-mail list of some 15,000 people and to organisations working on local government issues in Latin America.

CIFOR's decentralisation research, like decentralisation itself, is a work in process. CIFOR is currently examining the ways in which it can work most effectively with other organisations and institutions. Besides capacity building, the research will focus on the legal and economic aspects of decentralisation. For example, researchers will study the economic effects of decentralisation on local livelihoods.



Community members monitor regeneration of their forests after logging in Salvatierra, Bolivia. (Photo by Kristen Evans)



Lyès Ferroukhi (ed.). 2003. *Municipal Forest Management in Latin America*. CIFOR and IDRC. Costa Rica.

Community forestry and devolution

Giving local people a greater say in forest management

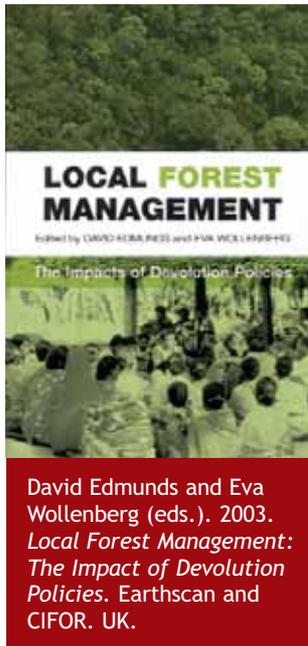
Virtually every developing country has introduced devolution policies for its natural resources. The rationale for devolution is relatively simple. By transferring the authority to manage natural resources such as forests to local communities, central governments aim to cut costs. At the same time local communities should gain better access to the resources they need and have a greater say in how they are used. Local involvement should mean that the forests are better managed, as they are being looked after by people who are close to the resource and have a strong vested interest in its survival.

This is the theory. In practice, however, devolution has often failed to deliver what it promises, as a three-year study in Asia, coordinated by CIFOR and commissioned by the International Fund for Agricultural Development (IFAD), has revealed. 'One of our key findings,' explains Eva Wollenberg, co-editor of *Local Forest Management: The Impact of Devolution Policies*, 'is that when forest departments promote devolution they promote their own interests in timber production and forest conservation, often to the detriment of local communities.'

A team of researchers analysed the impact of devolution in China, India and the Philippines. Community control, and access to forest products, increased most in China. Here devolution provided some villagers and farmers with significant benefits and greater authority to manage forests and harvest forest products. In China devolution has led to an increase in forest area, and forest departments were found to be generally sympathetic to villagers' needs, although little attention was given to the unequal impacts of devolutionary policies.

A very different picture emerged from India, where the reality of devolution has not matched the rhetoric promoting it. The researchers found that in some states the forest departments have actually used Joint Forest Management - one of the instruments of devolution - to gain greater control of the forests.

Take, for example, Orissa. Here non-timber forest products contribute up to 40 per cent of rural household income, and forests are critical to the welfare of the rural poor. Over many decades, local communities have responded to forest degradation by setting up their own community forest management



David Edmunds and Eva Wollenberg (eds.). 2003. *Local Forest Management: The Impact of Devolution Policies*. Earthscan and CIFOR. UK.



Non-timber forest products are particularly important for impoverished, predominantly tribal forest-dwellers in India. Women may earn a significant portion of household income by stitching plates made out of sal leaves. Recent moves by the Forest Department in Orissa to clamp down on the sal-leaf trade could adversely affect the poor. (Photo by Charlie Pye-Smith)

mechanisms. These have often been very effective, and helped to restore degraded forests, although their existence has generally been ignored by the state authorities.

When Orissa introduced Joint Forest Management in 1993, it stipulated that 50 per cent of the income from forests should go to the Forest Department and the rest to committees which it established. As far as the villagers were concerned, this meant that they were forced to relinquish half their forest-related income. And instead of local communities determining how best to manage the forests, as they had in the past, the Forest Department began telling them what to do.

'Devolution policies promoted through forest departments are ultimately limited by the departments' bureaucratic structures and mandates,' suggests Wollenberg. 'Instead of only going through forest departments, donors need to think about supporting



Collecting debris of Chinese fir (*Cunninghamiana lanceolata*) for firewood. (Photo by Christian Cossalter)

agencies with the capacity to empower communities. They should also support community groups and NGOs working on their behalf, and community federations such as the ones that exist in Nepal and Orissa.'

Involving women in the Bolivian Lowlands

If communal land management is to be what it says, then it must involve women as well as men. But getting women involved, and getting men (and foresters) to accept their involvement, is not always easy.

In the mid-1990s, the Bolivian government devolved rights to large areas of territory to indigenous people. This meant that the Guarayo Indians of Salvatierra, in eastern Bolivia, had to work out a communal plan about how they should manage what amounted to thousands of hectares of forest, whose produce they could now exploit and sell. They have been assisted in this task by the USAID-funded Bolivian Sustainable Forestry Project (BOLFOR), which has helped to develop and implement the country's new forest policies.

Peter Cronkleton, a CIFOR anthropologist who helped BOLFOR establish a gender action plan, found that many foresters were reluctant to involve women. Like the local men, they saw forestry as a man's business. The word 'gender' also had negative connotations. 'Some associated it with topics like reproductive health,' explains Cronkleton. 'Others saw it as a codeword for radical feminism.'

So Cronkleton and the other members of the evaluation team changed tack. They

stopped talking about gender. 'Instead we talked about how communal projects need broad participation, male and female, both to develop local institutions and to prevent conflicts arising because some people feel excluded.' Gradually, the foresters came round to the idea of involving women.

Many of the local men were likewise reluctant to involve women when discussions began in 2001. Traditionally, Guarayo women fetch firewood and water, and attend to matters in the home; they do not normally work in the forests. However, commercial forestry was a new concept here and the villagers needed to learn new skills and plan differently. BOLFOR's technicians persuaded the men that the project would affect entire households: if community forestry management was to become a reality, the women had to be involved. 'In the early days, a few women would shyly peep through windows during meetings,' recalls Cronkleton. 'Now we can count on a vocal contingent of women at management meetings.' He believes that this is not just a matter of equity. 'Including women is crucial for project stability and for promoting local control over the forests,' he says.



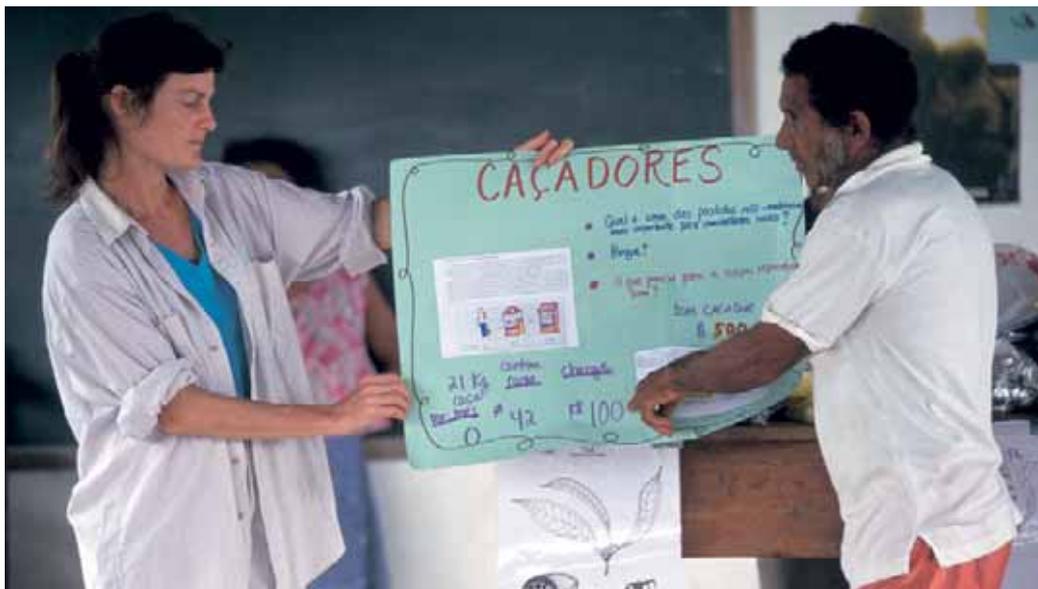
Community members participate in a meeting about their forestry management plan, Cururu, Bolivia. (Photo by Kristen Evans)



Community mapping in the village of Nkolbibanda, Cameroon. (Photo by Marieke Sassen)

HOW WE WORK

The importance of partnerships and communications



A forest fruits workshop led by Patricia Shanley in Quiandeua, a small village on the Brazilian Amazon. By using easy-to-read charts, pictures and booklets, Shanley and her group, 'Women of the Forest', are teaching villagers about the value of healthy, unlogged rainforests. (Photo by Joel Sartore)

Collaboration lies at a heart of all CIFOR's research. CIFOR scientists now have working links with more than 300 researchers based in some 50 international, regional and national organisations spread across 30 countries. These partnerships have proved invaluable both for CIFOR and for its partners. Were CIFOR to go it alone, it would never achieve nearly as much as it does.

CIFOR is committed to strengthening the capabilities and opportunities of developing country scientists, governments, civil society organisations and communities. The ultimate aim is to help them develop and promote their own solutions to a wide range of forestry problems. CIFOR does this through collaborative research, and by providing high quality, unbiased and timely information to everyone from policy-makers to local communities, from forest-related industries to research scientists.

CIFOR recognises that building capacity is a two-way process. While CIFOR's partners benefit from its scientists' expertise and the tools and resources that CIFOR can provide, many CIFOR research projects benefit greatly from the skills and knowledge which its

research partners bring to the table.

If the research conducted by CIFOR and its partners is to have real impact, then it must be widely disseminated. CIFOR's communication strategy is many-pronged. Besides publishing books, occasional papers and monographs, CIFOR seeks to get a wider audience for its research findings by using the international and national media. During 2003, over 300 separate stories appeared about CIFOR in newspapers and on the internet, radio and television.



Learning by doing

During its first 10 years, CIFOR has established working links with hundreds of scientists and research institutions around the world. Some of the relationships are relatively short-term, and focus on a single project. However, partnerships frequently last for many years, with CIFOR scientists and their partners collaborating on a succession of different projects.

CIFOR's partnerships put a strong accent on 'learning by doing'. But how successful have these partnerships been? In 2003, CIFOR research fellow Purabi Bose sought to find out by canvassing the views of CIFOR's partners through informal interviews and an e-mail survey. Over 70 scientists and institutional partners responded. Eighty per cent had been associated with CIFOR for five years or more, and 20 per cent for less. 'Nearly all of them expressed the view that their partnerships with CIFOR yielded many benefits,' says Bose. 'It seems the collaborative research does yield a high rate of return, but it needs to be long-term.'

Some research partners felt that working with CIFOR gave them greater credibility, as well as access to other organisations.

Besides helping its partners to improve their research capacity, CIFOR also encourages capacity building through training and workshops. During 2003, CIFOR training courses benefited over 500 individuals in Africa, Latin America and Asia. The total number of training days - a measure of the number of days during which training took place and the numbers which attended - was 2610. The number of training days at meetings and workshops which had a capacity-building component amounted to 4414 person days.

2003 saw the launch of one of CIFOR's most ambitious training schemes - Building Leadership for Forestry Forms of the Future - funded by the Ford Foundation and aimed at improving forest management in Indonesia. CIFOR designed a competition for scholarships for students and sabbaticals for professionals. Students would attend two 2-



The sale of forest products may provide regular household income or serve as a safety net in times of hardship. Here, women sell plants (*Gnetum africanum*) collected from the forest, along with maize and cassava flour, at the Mfoundi market, in Yaoundé, Cameroon. (Photo by Michael Hailu)

Working with women in Cameroon

Visit virtually any market in Cameroon, or for that matter anywhere in west Africa, and you will be struck by the number of women selling non-timber forest products (NTFPs) such as wild fruits, nuts, leaves and medicinal plants. When CIFOR researchers first began investigating the importance of these markets to women, they found that many of the traders lacked the information needed if they were to improve their marketing strategy and increase their incomes.

Since 2000, CIFOR has been providing the traders with market information at regular intervals. But has the information helped? A 2003 survey of 72 traders, all but three of whom were women, suggests it has. Eighty-one per cent of the traders said that the information had helped to increase their incomes, on average by 55 per cent. The information and training provided by CIFOR had enabled the traders to expand their businesses, and to improve their purchasing strategies and accounting methods.

Eleven per cent of the traders said that the market information had had a negative impact, and their incomes had declined by an average of 37 per cent. 'Before CIFOR provided market information, these traders were better informed than the others, and were able to capture a significant share of the profit to be made from NTFPs,' explains Ousseynou Ndoye, CIFOR's regional coordinator for central and west Africa. 'However, the information has improved the transparency of NTFP markets and increased the level of competition, preventing a few people from profiting to the detriment of all the other traders.'

This research partnership has provided CIFOR with important information about the way in which NTFP markets work, and their importance for women. At the same time, it has helped the majority of traders to increase their income and raise their standard of living.

week workshops in Bogor and undertake field research. The professionals would spend up to 12 weeks in Bogor, and write at least one policy brief related to the issue of decentralisation and forests. 12 students and 10 professionals were selected.

The first workshop was held in August 2003 and attended by the students, all of whom were undertaking research either for their degrees or doctoral theses. CIFOR staff helped them to think through the nature of their research proposals, and refine their plans for field work. According to CIFOR's

Moira Moeliono, one of the project leaders, the feedback was very positive. 'Not long ago, all the decisions about forests were made in Jakarta,' explains Moeliono, 'but now local politicians are responsible for managing the natural resources in the regions, and many of them simply don't understand what this entails.' She and her colleagues are hoping that the students will end up working in the districts where they are carrying out their research, and that the knowledge they gain will help the process of decentralisation.



Forest-dependent people, Vietnam. (Photo by Reidar Persson)

Partnerships in Asia

During 2003, CIFOR helped to establish and consolidate several important partnerships in Asia. Two of these are in Vietnam; one covers the entire South-east Asian region; and another focuses its attention on Indonesia.

The Vietnam War and rapid economic growth have led to the loss of large areas of forest. Some 300 rehabilitation projects are now underway in Vietnam, and the lessons learned from these are being reviewed under a major new research project involving seven organisations, led by CIFOR and the Forest Science Institute of Vietnam. A memorandum of agreement was signed in July 2003.

'In a country like Vietnam, you have to establish good collaborative programmes if you are going to get access to all the information you need,' explains CIFOR scientist Wil de Jong. By involving a wide range of partners, the project is tapping a deep well of knowledge. At the same time, the project aims to increase local research capacity. A separate memorandum of agreement between international donors and banks, the Vietnamese government and CIFOR committed the signatories to the sustainable management of forests.

The Asia Forest Partnership (AFP), established at

the Earth Summit in Johannesburg in 2002, began to take shape during 2003. The lead agencies are the governments of Indonesia and Japan, CIFOR and the Nature Conservancy. 'Although it is still in its embryonic stage, the partnership promises exciting outcomes for the future,' says Takeshi Toma of CIFOR. The main issues it is tackling are good governance and forest law enforcement; effective forest management; the control of illegal logging; the control of forest fires; and rehabilitation. CIFOR helped to organise the second meeting of the AFP, held in Indonesia in July 2003.

At a more parochial level, the International Working Group on Forest Finance (IWGFF), established by CIFOR and WWF in 2002, broadened its remit. Originally, the IWGFF was set up to work on the problems caused by the indebtedness of Indonesia's forest industry. The working group now has a larger membership, with a secretariat provided by the International NGO Forum on Indonesian Development, and it is tackling a range of issues related to money-laundering, forest debt and decentralisation. 'My feeling is that by bringing in other groups, the working group has become much more influential,' says CIFOR financial expert Bambang Setiono.



Broomgrass makers from Gababe Resource Management Committee (RMC), Mafungautsi State Forest, Zimbabwe, displaying the sustainably harvested 'improved brooms' that resulted from action research with CIFOR's ACM research team. (Photo by Ravi Prabhu)

Forest partnerships in Zimbabwe

Forest management in Africa is often inflexible and autocratic, with governments rather than local communities making all the key decisions. But times are changing, and in countries like Zimbabwe communities are now being encouraged to take a much more active role in forest management.

In Mafungautsi State Forest, the Forestry Commission (FC) and CIFOR have been working closely with local villagers to improve the way resources are managed. The FC extension officers have had to embrace new ideas and learn how to collaborate as equals with villagers. The success of this devolutionary process owes much to an approach known as adaptive collaborative management (ACM). This involves three broad processes: collaboration, social learning and collective action.

The ACM programme in Mafungautsi began in 2000, and by the end of the following year the relationship between the Forestry Commission and local people had improved dramatically. The harvesting and marketing of resources like thatch grass is now better planned, and more sustainable harvesting methods have been devised.

During 2002, CIFOR researchers began to initiate collaborative monitoring arrangements to assess the way resources were being used. In the past, monitoring was associated by local people with policing and law enforcement, and initial attempts were resisted by the communities. However, the villagers now see monitoring as an opportunity to improve the way resources are managed, according to CIFOR scientist Ravi Prabhu.

FC officials are enthusiastic partners in this venture, and they have introduced ideas from the ACM research into other areas around Mafungautsi. In 2003, the FC decided to extend research to six other districts in the country. It was agreed that all the activities would be facilitated by the FC, with CIFOR providing technical support and training.

A two-day training workshop, involving extended role playing, introduced FC extension officers to the ACM approach, stressing the need for flexibility. It is too early to say whether the ACM approach will be as successful throughout the country as it has been in Mafungautsi, but the extension officers are keen to try it out.

Training Peru's loggers

Until recently, Peru's forests were very badly managed. The 1975 forestry law awarded short-term harvesting contracts to large numbers of itinerant loggers who moved from one area to another, logging opportunistically and without the slightest consideration for the sustainable management of the forests. This system came to an end when a new forestry law was introduced in mid-2000. Now the government awards long-term concessions, mostly to associations of small-scale forest extractors, and management plans are mandatory.

But replacing a bad law with a good one was not itself enough to ensure good forest management. That is why a consortium of organisations - CIFOR, the Peruvian National Resource Management Agency (INRENA) and the Forest Development Fund (FONDEBOSQUE) - established a project to support the new forestry regime through a comprehensive training project.

The project has concentrated its efforts on three departments which account for 80 per cent of the production forests in the Peruvian Amazon. The first phase consisted of four workshops attended by over 130 forestry professionals who advise or work with timber concessionaires. These resulted in the production of guidelines for forest management plans, published in 2003 by INRENA.

The second phase consisted of training courses for over 230 professionals and technicians on the planning, application and evaluation of good forest management techniques. The third phase introduced reduced impact logging techniques to 51 chainsaw and tractor operators. The final phase of the project, in preparation at the end of 2003, involved plans for a long-term programme on training and extension, and the publication of field manuals for trainers.

According to Oscar Melgarejo, a forest engineer working for a timber concessionaire in Ucayali, the manuals produced by the project will be of considerable assistance to forest professionals and technicians, as well as to timber concessionaires. César Sabogal, CIFOR's Regional Coordinator for Latin America, believes that the numbers involved, both in the consultation process designed to develop new regulations for forest management, and in the 15 training courses, provides one measure of the success of the project.

Training courses, jointly run by CIFOR, are helping to improve logging practices in countries like Peru. (Photo by César Sabogal)



Back to the Grassroots



The team spent many weeks refining the information presented in a series of posters. (Photo by Douglas Sheil)

Wild pigs, sago palms and a trojan horse

Being asked what they think about forest management - or, for that matter, anything else - is a novelty for the Dayaks of East Kalimantan. For decades prior to the fall of President Suharto in 1998, loggers, miners, traders and government officials did much as they pleased with the forests. The local people, many of them forest-dwellers, were seldom consulted.

But times have changed. Devolution has meant that local communities now have more say in what happens to their natural resources - in principle, at least. At the same time, scientists have taken a greater interest in how local people view the landscape. 'Classical biodiversity surveys tend to reveal what matters to scientists,' explains CIFOR ecologist Doug Sheil. 'What we're doing is establishing what matters to local people, and then feeding the research results back to the villagers and local decision-makers.'

Since 2000, the research team has been working in seven communities in Malinau Research Forest. Using a multi-disciplinary approach, they have collected a wide range of information about the needs, preferences, culture and aspirations of the local communities. They have also conducted surveys of the soil and vegetation in 200 sample plots, and recorded the presence of grave sites, settlements and farmland.

Virtually everybody canvassed considered unlogged forest to be the most important land cover. Logging, according to the villagers, was a major reason why many useful plants and animals were declining. Among these was the much-valued wild boar, which provides the bulk of animal fats and proteins for many forest communities.

Logging has also led to a shortage of construction materials, and a law which stipulates that logging companies must slash the undergrowth to clear away 'weeds' has led to the disappearance of many valuable plants. Even sensitive logging practices can have a damaging effect on key species. Reduced impact logging guidelines restrict heavy machinery to ridge tops. Unfortunately, this is the habitat favoured by sago palm, an important source of starch during times of crop failure.

In 2003 a grant from the World Bank enabled the researchers to establish a website and a data base (www.cifor.cgiar.org/mla), but this is neither accessible nor intelligible to people living in remote villages. 'We wanted to share the information we gathered with the local communities in a way they could identify with,' explains Miriam van Heist, a consultant to the project. The research team developed a series of posters which illustrates local perceptions about the landscape, as well as a pack of playing cards that tell the stories of the 40 most highly valued species of plant and animals.

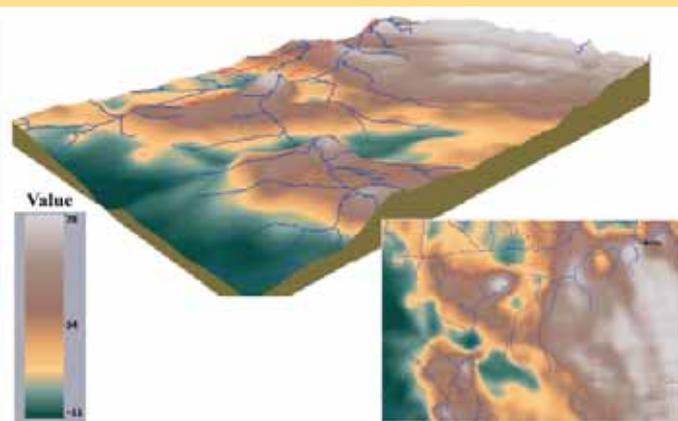
The posters are colourful and generously illustrated, with photographs of identifiable individuals involved in the project, as well as plants, animals and artifacts which are considered important. The researchers spent considerable time discussing the content of the posters with the villagers, and the final drafts were only produced once the latter declared themselves happy with the way in which the information was presented. 'Asking the villagers to validate our research findings has given them greater confidence in their own lifestyles,' suggests van Heist. This is certainly not the sort of thing that happened during the Suharto era.

However, will this information make any difference to the way the forests are managed? The researchers, and the villagers, believe it will. The posters will be popular with the villagers themselves, but they are not the only target. After all, they know which landscape features and species matter most to them. 'We see the posters as a sort of Trojan horse,' explains Sheil. 'They will be distributed to local government offices, village halls and schools, and we hope they



Playing cards tell the stories of key species used by villagers in East Kalimantan. Symbols indicate what the animal or plant is used for, where it occurs, what threatens it, and what can be done to conserve it.

will help everyone, including local politicians and civil servants, develop a much better understanding about which elements in the landscape matter to local people, and what that implies.' In future, decision-makers might think twice before they promote activities which threaten the interests and survival of forest communities.



The researchers are collaborating with the Resilience Alliance to develop ways of modelling and representing landscape in terms of its importance to local people. Here, the central area is empty of settlements or cultivation and might be assumed to have little value. However, such an assumption would be wrong. The raised areas - height in the model represents importance - indicate patches of forest valued by boat owners, who use the timber to build their boats.

Reaching out to the world

Some research projects help to shape the ideas of fellow scientists, but are unlikely to be reported outside the pages of academic journals. Others can influence public perceptions and change the way governments, businesses and civil society act. Either way, good research should always have an impact.

CIFOR adopts a range of strategies to communicate its research findings. On the one hand, CIFOR scientists write books, monographs, Occasional Papers and journal articles. Those published in 2003 are listed at the back of this report. On the other, CIFOR's communication department seeks to promote its research by getting articles into the press, and coverage on wire services, the internet, radio and television.

2003 was CIFOR's most successful year to date in terms of media coverage. Over 350

news stories mentioned CIFOR, compared to 170 in the previous year. Stories appeared in a wide range of publications, from prestigious international journals and newspapers like the *Economist*, the *New Scientist*, the *International Herald Tribune*, *Newsweek* and the *Asian Wall Street Journal*, to national newspapers like the *Jakarta Post* and *Kompas* in Indonesia, *Frankfurter Rundschau Ausgabe* in Germany, *Vietnam News* in Vietnam, *Business World* in the Philippines, *Savon Sanomat* in Finland and the *Canberra Times* in Australia. The topics which attracted most attention were illegal logging and money-laundering, forest debt in Indonesia, the relationship between the oil industry and tropical forests, forest fires, the impact of fast-growing tree plantations on tropical countries and CIFOR's 10th anniversary activities.

POLEX

POLEX messages, written by David Kaimowitz, CIFOR's Director General, specifically target the people who matter when it comes to making decisions about forests: government policy-makers, international donors, non-governmental organisations and university scientists. During 2003, around 13,000 people received 19 POLEX messages, each providing a snappy summary of recent research that has a bearing on forest policy. The messages covered a variety of topics, from the significance of bushmeat to the rural poor, to the impact of cattle ranching on the Amazonian rainforest, to the way political reforms are affecting China's forests.

POLEX goes out in English, Spanish, French, Indonesian and Japanese. In 2003 CIFOR intern Hiroaki Kuramitsu and impact assessment scientist Mike Spilisbury conducted an analysis of POLEX's effectiveness in Japanese. 163 subscribers answered their questionnaire. A third of recipients read all the POLEX messages they receive and over half read most of them. Over a third find POLEX to be of professional relevance most of the time, and half relevant at least some of the time. The majority of respondents said that POLEX had helped them to improve their knowledge and understanding of forest policy issues.

POLEX can also be accessed at:

http://www.cifor.cgiar.org/docs/_ref/polex/index.htm

Excerpts from CIFOR's media coverage



21 January 2003

Indonesia needs to collect a debt

David Kaimowitz

Bogor, Indonesia: Governments do not like to close down big businesses. But that is what international donors will probably demand of the Indonesian government at a meeting on Bali this Tuesday and Wednesday to discuss a new foreign aid package.

The big businesses in question are debt-ridden timber companies that borrowed billions of dollars in the twilight years of the Suharto regime. The loans fueled massive growth in timber-processing industries, particularly pulp and paper. Indonesia has millions of hectares of rainforest, and wood processing industries now need three to four times more wood than the forests can sustainably produce.



19 July 2003

Fruits of the forest

Charlie Pye-Smith

It's not every scientist who writes books for people who can't read. And how many scientists want their books to look as dog-eared as possible? But Patricia Shanley, an ethnobotanist with the Center for International Forestry Research (CIFOR), wanted to give something back. After the poorest people of the Amazon allowed her to study their land and its ecology, she and co-editor Gabriel Medina turned her research findings into a picture book that tells the local people how to get a good return on their trees without succumbing to the lure of a quick buck from a logging company. It has proved a big success, and so the last thing she wants is for the new edition, to be published in a few weeks, to end up on bookshelves and coffee tables. "It's a book to be used," says the author. "It's supposed to be dirty and ripped up."



26 June 2003

Oil drilling can protect forests

Countries which exploit their oil and mineral wealth are likelier to save their forests, researchers say.

- The more money they make from drilling and mining, the argument runs, the less temptation there is to clear the forests.
- The researchers say the real message is that economics have a marked effect on the environment.
- They believe cheap oil could be devastating for many tropical forests.
- The researchers, from the Center for International Forestry Research (CIFOR), based in Indonesia, say they receive no funding from oil or mining companies.
- Their report, *Oil wealth and the fate of the forest: a comparison of eight tropical countries*, says high incomes from oil and minerals can relieve forest pressure in several ways.

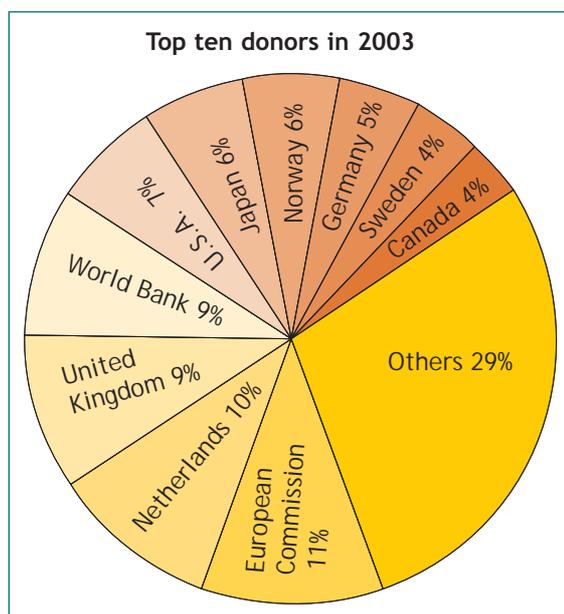
Donors

SCHEDULE OF GRANT REVENUE FOR THE YEARS ENDED 31 DECEMBER 2003 AND 2002

(in US Dollar 000s)

Unrestricted	2003	2002
Australia	162	212
Belgium	182	148
Canada	474	253
China	10	10
Finland	420	330
France	75	123
Germany	286	230
Indonesia	59	56
Japan	287	251
Korea	60	35
Netherlands	1,118	949
Norway	763	534
Philippines	7	7
Sweden	370	317
Switzerland	364	294
USA	650	650
World Bank	1,010	1,170
Sub total	6,297	5,569

Restricted	2003	2002
African Timber Organization	-	1
Aracruz Celulose SA - Brazil	-	10
Asian Development Bank	-	387
Australian Centre for International Agricultural Research	190	54
Brazil (EMBRAPA)	-	50
Belgium	17	-
Canada	13	11
CARPE	3	-
CGIAR Secretariat	15	7
CAREFOUR	37	-
CIRAD-Forêt	26	48
Conservation International Foundation	5	10
Technical Centre for Agricultural and Rural Co-operation (CTA)	13	-
Denmark	-	34
European Commission	1,500	2,079
Food and Agriculture Organization of the United Nations	51	22
Ford Foundation	327	210
Forest Trends	10	-
France	314	242
Germany (GTZ/BMZ)	408	106
German Foundation for International Cooperation	-	41
Indonesia Ministry of Forestry (FKKM/HKM)	4	8
IITA	23	-
INRENA	90	16
Inter-American Development Bank	63	-
IRM	19	-
Institut de Recherche pour le Developpement	-	1
International Centre for Research in Agroforestry	14	37
International Development Research Centre	15	82
International Food and Policy Research Institute	-	10
International Fund for Agricultural Development	48	-
International Tropical Timber Organization	350	60
Japan	546	340
MacArthur Foundation	1	77
National Oceanic and Atmospheric Administration	(1)	5
Netherlands	286	219
NRM	2	-
Norway	-	32
Overseas Development Institute	7	-
Others	(1)	1
PI Environmental Consulting	6	1
RSCI-Peruvian Secretariat	20	-
SANREM	7	-
Secretariat of the Convention on Biological Diversity	18	10
Swedish University of Agricultural Sciences	54	-
Sweden	217	137
Switzerland	92	135
The Overbrook Foundation	62	65
The Nature Conservancy	18	-
Tropical Forest Foundation	105	102
USA	262	376
United Kingdom (DFID)	1,282	1,039
United Nations Environment Programme	24	21
United National Educational, Scientific and Cultural Organization	4	-
United States Forest Service	34	76
United Nations Forum on Forest (UNFF)	40	-
Waseda University	27	-
World Bank	215	106
World Conservation Union (IUCN)	9	19
World Resources Institute	96	3
World Wildlife Fund	323	323
Sub total	7,310	6,613
Total Unrestricted and Restricted	13,607	12,182



Financial Statements

STATEMENTS OF FINANCIAL POSITION AS AT 31 DECEMBER 2003 AND 2002

(in US Dollar 000s)

	2003	2002
CURRENT ASSETS		
Cash and cash equivalents	6,392	6,306
Accounts receivable		
Donors (net)	3,380	2,674
Employees	274	176
Others	620	492
Prepaid expenses	396	382
Other assets	<u>3,048</u>	<u>2,380</u>
Total current assets	<u>14,110</u>	<u>12,410</u>
NON-CURRENT ASSETS		
Fixed assets (net)	1,650	1,733
Other assets	<u>651</u>	<u>493</u>
Total non-current assets	<u>2,301</u>	<u>2,226</u>
TOTAL ASSETS	<u>16,411</u>	<u>14,636</u>
CURRENT LIABILITIES		
Accounts payable		
Donors	3,569	3,128
Others	66	79
Accrued expenses	<u>1,097</u>	<u>487</u>
Total current liabilities	<u>4,732</u>	<u>3,694</u>
NON-CURRENT LIABILITIES		
Provision for employee benefits	<u>2,860</u>	<u>2,341</u>
Total non-current liabilities	<u>2,860</u>	<u>2,341</u>
NET ASSETS		
Unrestricted		
Unappropriated	5,816	5,598
Appropriated	<u>3,003</u>	<u>3,003</u>
Total net assets	<u>8,819</u>	<u>8,601</u>
TOTAL LIABILITIES AND NET ASSETS	<u>16,411</u>	<u>14,636</u>

STATEMENTS OF ACTIVITIES FOR THE YEARS ENDED 31 DECEMBER 2003 AND 2002

(in US Dollar 000s)

	2003			2002
	Unrestricted	Restricted	Total	Total
REVENUES				
Grants	6,297	7,310	13,607	12,182
Other revenues	<u>202</u>	<u>-</u>	<u>202</u>	<u>284</u>
Total revenues	<u>6,499</u>	<u>7,310</u>	<u>13,809</u>	<u>12,466</u>
OPERATING EXPENSES				
Research programs	3,640	7,310	10,950	9,578
Research support	1,163	-	1,163	958
Management and general expenses	<u>1,927</u>	<u>-</u>	<u>1,927</u>	<u>1,630</u>
Total operating expenses	6,730	7,310	14,040	12,166
Indirect cost recovery	<u>(449)</u>	<u>-</u>	<u>(449)</u>	<u>(505)</u>
Total operating expenses (net)	<u>6,281</u>	<u>7,310</u>	<u>13,591</u>	<u>11,661</u>
Change in net assets	218	-	218	805
Net assets at the beginning of the year	<u>8,601</u>	<u>-</u>	<u>8,601</u>	<u>7,796</u>
NET ASSETS AT THE END OF THE YEAR	<u>8,819</u>	<u>-</u>	<u>8,819</u>	<u>8,601</u>
OPERATING EXPENSES - BY NATURAL CLASSIFICATION				
Personnel costs	3,709	3,101	6,810	5,948
Supplies and services	1,793	675	2,468	2,107
Partnership activities	566	3,124	3,690	3,148
Operational travel	351	410	761	551
Depreciation of fixed assets	<u>311</u>	<u>-</u>	<u>311</u>	<u>412</u>
TOTAL OPERATING EXPENSES	<u>6,730</u>	<u>7,310</u>	<u>14,040</u>	<u>12,166</u>

Collaborators

Australia

Australian National University
Bushfires Council of the Northern Territory
Commonwealth Scientific and Industrial
Research Organisation
Murdoch University, Asia Research Centre
Murdoch University, School of Biological
Sciences and Biotechnology
Northern Territory University
Queensland Department of Primary Industry
(Forestry)
Queensland Forest Research Institute
Southern Cross University
University of Adelaide
University of Victoria, Spatial Sciences
Laboratory
World Wide Fund for Nature - People and
Plants Initiative

Austria

Ministry of Environment/Umweltbundesamt

Argentina

Universidad Nacional de Misiones, Facultad
de Ciencias Forestales

Belgium

Université Libre de Bruxelles
Université de Gembloux

Belize

Programme for Belize

Bolivia

Centro de Estudios para el Desarrollo Laboral
y Agrario (CEDLA)
FORESTA
Fundación Amigos de la Naturaleza (FAN)
Fundación Jose Manuel Pando (FJMP)
Fundación TIERRA
Instituto Boliviano de Investigación Forestal
(IBIF)
Museo de Historia Natural Noel Kempff
Mercado
Programa de Manejo de Bosques de la
Amazonía Boliviana (PROMAB)
Proyecto de Manejo Forestal Sostenible
(BOLFOR)
Superintendencia Forestal de Bolivia
Fundacion Jose Manuel Pando
Herencia

Botswana

Southern African Development Community
Forestry Sector, Technical Coordination
Unit

Burkina Faso

Centre National de la Recherche Scientifique
et Technique (CNRST)
Institut National de l'Enseignement et
Recherche Agricole (INERA)
Université de Ouagadougou, Burkina Faso

Brazil

Banco da Amazônia (BASA)
Belém Botanical Garden 'El Bosque
Rodriguez Alves'
Centre International de Recherche Agricole
pour le Développement (Convênio
Embrapa - CIRAD)
Centro dos Trabalhadores da Amazônia (CTA)
Cikel Brasil Verde SA
Empresa Brasileira de Pesquisa Agropecuária
(EMBRAPA) - and its regional research
centres in the Amazon Region
Federação de Organizações de Assistência
Social e Educacional (FASE-Gurupá)
Fundação Floresta Tropical (FFT)
Fundação Norte-Riograndese de Pesquisa e
Cultura
Grupo de Pesquisa e Extensão em Sistemas
Agroflorestais do Acre (PESACRE)
Instituto Brasileiro do Meio Ambiente e dos
Recursos Naturais Renováveis (IBAMA)
Instituto de Pesquisa Ambiental da Amazônia
(IPAM)
Instituto de Pesquisas e Estudos Florestais (IPEF)
Instituto do Homem e Meio Ambiente da
Amazônia (IMAZON)
Instituto Floresta Tropical (IFT)
Juruá Florestal Ltda
Laboratório Agro-ecológico da Transamazônia
(LAET)
Ministério do Meio Ambiente, Diretoria de
Florestas (MMA-DIFLOR)
Ministério do Meio Ambiente, Programa
Nacional de Florestas (MMA-PNF)
Museu Paraense Emilio Goeldi (MPEG)
Reserva de desenvolvimento sustentável
Mamirauá (RDS Mamirauá)
Secretaria de Assistência Técnica e Extensão
Agroflorestal do Acre (SEATER)
Universidade Federal de Pará (UFPA)
Universidade Federal do Acre (UFAC)
Universidade Federal do Rio Grande do
Norte (UFRN)
Universidade Federal Rural da Amazônia (UFRA)

Cameroon

Agence Nationale d'Aménagement des Forêts
Agricultures Paysannes et Modernisation en
Afrique

Association Terre et Développement
 Campo-Ma'an Project
 Centre International de Recherche Agricole
 pour le Développement (CIRAD), Projet
 Forêts et Terroirs
 Centre International pour l'Agriculture
 Durable
 Centre pour l'Environnement et le
 Développement
 Centre Régional d'Appui et de
 Développement des Initiatives Féminines
 Cercle pour la Promotion des Forêts et des
 Initiatives Locales de Développement
 (CEPFILD)
 Community Forestry Development Project
 Confédération des Organisations Rurales pour
 le Cameroun Economique (FORCE)
 Fondation pour l'Environnement et le
 Développement au Cameroun (FEDEC)
 Initiative pour le Développement Rural et
 Urbain
 Innovative Resource Management
 Institut Africain pour le Développement
 Social-Formation
 Institut de Recherche Agricole pour le
 Développement (and the Tree
 Domestication Programme)
 International Institute of Tropical Agriculture
 - Humid Forest Ecoregional Center
 Limbe Botanic Garden
 Limbe Botanic Garden, African Rattan
 Research Programme
 L'Unité Technique Operationnelle
 Dimako/Doumé
 Ministry of Environment and Forestry (MINEF)
 Office National de Développement des Forêts
 (ONADEF)
 Presbyterian Church Dschang
 Presidency of the Republic
 Programme pour l'Utilisation Rationnelle des
 Ecosystemes Forestiers d'Afrique Centrale
 Secretariat General de la Présidence
 Stichting Nederlandse Vrijwilligers
 The Mount Cameroon Project
 University of Dschang
 University of Yaoundé I and II
 World Conservation Union - Central Africa
 (IUCN)
 World Wide Fund for Nature - Cameroon
 (WWF)

Canada

Canadian University Services Organisation
 ESSA Corporation - Forestry
 International Development Research Center
 Social and Community Forestry Consulting
 University of Alberta
 University of British Columbia
 University of Guelph
 University of Manitoba, Center for Earth
 Observation Science

University of Victoria
 University of Victoria, Department of Geography

China

China National Forestry Economics and
 Development Research Center, State
 Forestry Administration (CNFEDRC, SFA)
 Research Institute of Tropical Forestry,
 Chinese Academy of Forestry
 Research Institute of Subtropical Forestry,
 Chinese Academy of Forestry
 The Resource and Information Institute,
 Chinese Academy Forestry
 WWF China Programme Office
 Zhejiang University

Colombia

Corporación Nacional de Investigación
 y Fomento Forestal (CONIF)
 Fundacion Friedrich Ebert de Colombia
 Foro Nacional Ambiental
 Universidad de los Andes

Congo

Unité de Recherche sur la Productivité des
 Plantations Industrielles

Costa Rica

Ambientico
 Bougainvillea S.A.
 Centro Agronómico Tropical de Investigación
 y Enseñanza (CATIE)
 Centro de Derecho Ambiental y de los
 Recursos Naturales (CEDARENA - The
 Natural Resource Law Center)
 Consejo Nacional de Rectores
 Coordinadora Indígena Campesina Forestal
 de Costa Rica (CICAFOC)
 Instituto de Fomento y Asesoría Municipal
 (IFAM)
 Sistema Nacional de Areas de Conservación
 (SINAC)
 Universidad de la Paz (UPAZ)

Côte d'Ivoire

Société de Développement des Forêts
 (SODEFOR)

Cuba

Universidad de Pinar del Rio

Denmark

Danish Forest and Landscape Research
 Institute
 Royal Agricultural University

Ecuador

UICN Oficina regional para Suramérica

Finland

European Forest Institute

Finnish Forest Research Institute (METLA)
Ministry of Agriculture and Forestry

France

Centre de Coopération Internationale en
Recherche Agronomique pour le
Développement - Département Forestier
(CIRAD-Forêt)

Ecole Nationale du Génie Rural et des Eaux
et Forêt (ENGREF)

Institut National de la Recherche
Agronomique, Centre de Nancy

Institut de Recherche pour le
Développement (IRD)

Gabon

Centre National de la Recherche Scientifique
et Technologique, Institut de Recherche
en Ecologie Tropicale (IRET)

Centre National de la Recherche Scientifique
et Technologique, Institut de Recherche
Agronomique et Forestière (IRAF)

Wildlife Conservation Society - Gabon
Projet WWF Minkébé

Germany

Adelphi Research GmbH

Deutsche Gesellschaft für Technische
Zusammenarbeit GmbH

Forest Stewardship Council - international
Initiative Tropenwald

Internationale Weiterbildung und
Entwicklung gGmbH

University of Berlin

University of Bonn, Center for Development
Research

University of Freiburg, Institut für
Völkerkunde

University of Freiburg, Institute of Forest
and Environmental Policy, Markets and
Marketing Section

Ghana

Forestry Research Institute of Ghana

Forest Department of Ghana

Forestry Commission, Forest Service Division

Kwame Nkrumah University of Science and
Technology, Institute of Renewable Natural
Resources

University of Science and Technology,
Kumasi

Guatemala

Centro Agronomico Tropical de Investigacion
y Ensenanza (CATIE)

Plan de Accion Forestal Guatemala (PAF)

Plan de Accion Forestal Maya (PAF-Maya)

Honduras

Agencia Canadiense para la Cooperación
Internacional (ACDI)

Asociación de Municipios de Honduras (AHMON)
Consultores ECOJURIS

Corporación Hondureña de Desarrollo
Forestal (COHDEFOR)

Escuela Nacional de Ciencias Forestales
(ESNACIFOR)

Fundación para el Desarrollo Municipal
(FUNDEMUN)

Inter-American Development Bank - Natural
Resource Management Project in Priority
Watersheds

International Development Research Center
(Canada), Regional Office for Latin
America and the Caribbean, MINGA
initiative

Programa de Apoyo a los Pequeños y
Medianos Productores de Olancho
(PROLANCHO)

Programa de Descentralización y Desarrollo
Local (PRODEL)

Programa Nacional para el Desarrollo Local
(PRONADEL)

Programa Nacional para el Desarrollo Rural
Sostenible (PRONADERS)

Secretaria de Recursos Naturales y Ambiente
(SERNA)

World Bank Rural Areas Administration
Project

India

Delhi School of Economics, University of
Delhi

Jharkhand Ministry of Forests and
Environment

Kerala Forest Research Institute

Indonesia

APRIL

Badan Litbang Kehutanan

Badan Perencanaan Pembangunan Daerah
(BAPPEDA), Kabupaten Bungo, Provinsi
Jambi

Badan Pertanahan Nasional Kabupaten
Bungo, Provinsi Jambi

Balai Penelitian dan Pengembangan
Kehutanan Samarinda

Balai Penelitian Kehutanan Kupang

Bandung Institute of Technology

Berau Forest Management Project, East
Kalimantan

Birdlife International

Bisnis Indonesia

Bogor Agricultural University

Caterpillar Co.

Center for Population and Manpower
Studies, the Indonesian Institute of
Sciences (PPT-LIPI)

Center for Strategic and International Studies
Conservation International Indonesia
Programme

Conservation Training and Resource Centre

Dinas Kehutanan Kutai Barat
 Dinas Kehutanan dan Perkebunan Kabupaten Bungo, Provinsi Jambi
 Dinas Pemberdayaan Masyarakat Kabupaten Malinau
 Dinas Pertambangan dan Lingkungan Hidup Kabupaten Bungo, Provinsi Jambi
 Directorate General of Forest Production Management, Ministry of Forestry
 Directorate of Conservation Areas, Directorate General of Forest Protection and Nature Conservation (PHKA)
 Directorate of Forest Product and Cellulose, Ministry of Trade and Industry
 Directorate of Forest Protection, Ministry of Forestry
 District Government of Malinau
 European Commission-sponsored fire projects
 Forest Fire Management Project in East Kalimantan
 Forest and Nature Conservation Research and Development Center (FNCRDC, FORDA)
 Forest Watch Indonesia
 Forestry Service Unit, Jambi Province
 Forestry Service Unit, Papua Province
 Ford Foundation Indonesia
 Forum Penyelamat Hutan Jambi
 Government of Kutai Barat
 Indonesia Working Group on Forest Finance
 Indonesian Community Forum on Community Forestry
 Indonesian Forest Concessionaires Association
 Indonesian Forestry Research and Development Agency (FORDA)
 Indonesian Peat Association
 Indonesian Rattan Manufacturers Association Industry and Trade Department
 Institut Hukum dan Sumber daya Alam (IHSA)
 Institut Pertanian Bogor
 Institut Pertanian Bogor, Forestry Faculty
 International Centre for Research in Agroforestry, Southeast Asia Programme
 International NGO Forum on Indonesian Development (INFID)
 Jakarta Post
 JICA/PKA Forest Fire Prevention and Management Project
 Kompas
 Koran Tempo
 Lembaga Alam Tropika Indonesia (LATIN)
 Lembaga Bantuan Hukum
 Lembaga Bina Benua Puti Aji
 Lembaga Ekolabeling Indonesia (LEI)
 Lembaga Ilmu Pengetahuan Indonesia
 Lembaga Pemberdayaan Masyarakat Adat
 Lembaga Swadaya Masyarakat Makaritutu
 Ministry of Agriculture, Agency for Agricultural Research and Development
 Ministry of Environment
 Ministry of Forestry
 Mulawarman University, Centre for Social Forestry
 Natural Resource Management - Kalimantan Timur (NRM - Kaltim)
 Nature Conservancy, Indonesia Programme
 NTT Provincial Planning Board (BAPPEDA)
 Office of the Coordinating Minister of Economic Affairs, Deputy Minister for Natural Resources and Agriculture Development
 Pelangi Indonesia
 Pemerintah Kabupaten Bungo, Provinsi Jambi
 Perkumpulan untuk Pembaharuan Hukum Berbasis Masyarakat dan Ekologis (HUMA)
 Perpustakaan Manggala Wanabhakti
 Persatuan Sarjana Kehutanan Indonesia (PERSAKI)
 Plant Resources of South-East Asia
 Program Magister Ilmu Hukum, Universitas Sumatra Utara
 PT Barito Pacific
 PT Finnantara Intiga
 PT INHUTANI (Tropical Forest Foundation) I and II
 PT Musi Hutan Persada
 PT Pratama Cipta Inaweb
 PT Riau Andalan Pulp and Paper
 PT Tanjung Redeb Hutani
 PT Trakindo Utama
 PT Wirakarya Sakti Jambi
 PT Xylo Indah Pratama
 Pusat Pelaporan dan Analisis Transaksi Keuangan (PPATK)
 Pusat Penelitian dan Pengembangan Biologi
 Pusat Penelitian Hasil Hutan Bogor
 Pusat Penelitian Hutan Tropis
 Pusat Penelitian Sumber Daya Alam Kalimantan Pancur Kasih
 Pusat Studi Hukum dan Kebijakan Otonomi Daerah (PSHK-ODA - Center for the Study of Law and Regional Autonomy)
 Regional Development Planning Agency, East Kalimantan Province
 Rimbawan Muda Indonesia
 Siliwangi University
 Sinar Harapan
 Sistem Hutan Kemasyarakatan, East Kalimantan
 South East Asia Regional Centre for Tropical Biology
 Suara Pembaruan
 Tanjungpura University, Pontianak
 Telapak
 The International Monetary Fund (IMF) Indonesia
 The World Bank Indonesia
 Tropenbos Foundation
 Tropenbos International, East Kalimantan
 Universitas Cendrawasih
 Universitas Gadjah Mada, Faculty of Forestry
 Universitas Hasanuddin
 Universitas Indonesia
 Universitas Mulawarman, Center for Social Forestry
 Universitas Mulawarman, Faculty of Forestry

Universitas Mulawarman, Graduate Program of Forestry
 Universitas Mulawarman, Jurusan Manajemen Hutan - Unmul
 Universitas Mulawarman, Tropical Rain Forest Research Center
 Universitas Papua, Department of Forestry, Irian Jaya
 Universitas Tanjungpura
 Wahana Lingkungan Indonesia (Walhi), National Executive
 Walhi Jambi
 Walhi Riau
 Wanariset Semboja
 Warung Informasi Konservasi
 Wetlands International - Palembang
 Wildlife Conservation Society, Indonesia Programme
 Wira Wacana Christian School of Economics
 World Wide Fund for Nature - Indonesia
 Yayasan Adat Punan, East Kalimantan
 Yayasan Biosfer Manusia (BIOMA)
 Yayasan Dian Tama
 Yayasan Gita Buana
 Yayasan Karya Sosial Pancur Kasih
 Yayasan Konservasi Borneo
 Yayasan Padi
 Yayasan Pionir
 Yayasan Sylva Lestari
 Yayasan Teladan
 YDIS Amuntai

Japan

Center for South East Asia Studies, Kyoto University
 Forestry and Forest Products Research Institute
 Graduate School of Asian and African Area Studies (ASAFAS)
 Institute of Developing Economies (IDE-JETRO) Japan (New)
 Institute of Kyoto University
 Japan Center for Area Studies, National Museum of Ethnology
 Japan Overseas Forestry Consultants Association
 Japan Overseas Plantation Center for Pulpwood (JOPP)
 Kyoto University, Center for Southeast Asia Studies
 University of Tsukuba
 Waseda University, Graduate School of Human Sciences

Kenya

Care International - Nairobi, Kenya
 Kenya Forestry Research Institute
 National Museums of Kenya, Coastal Forest Conservation Unit

Kyrgyzstan

KYRGYZ-SWISS Forestry Support Programme (KIRFOR)

Lao People's Democratic Republic

World Conservation Union, Non-timber Forest Products Project, Vientienne
 World Wide Fund for Nature - Laos

Madagascar

Appui à la Gestion de l'Environnement Régionalisée et à l'Approche Spatiale, Fianarantsoa
 Association Nationale Pour la Gestion Des Aires Protégées
 Landscape Development Intervention, Moramanga
 Madagascar Institute pour la Conservation des Ecosystemes Tropicaux
 Ramanofana National Park Project
 Station Thermal of Ranomafana
 University of Antananarivo
 University of Fianar

Malawi

Agriculture Policy Research Unit
 Center for Social Research
 Forestry Research Institute of Malawi
 University of Malawi, Bunda College of Agriculture
 University of Malawi, Centre for Social Research and Agricultural Policy Research Unit
 University of Mzuzu, Department of Forestry

Malaysia

Forest Research Institute Malaysia
 Innoprise Corporation
 Sabah Forest Development Authority
 Universiti Kebangsaan Malaysia
 Universiti Putra Malaysia
 World Wide Fund for Nature - Malaysia

Mexico

Forest Stewardship Council (FSC)
 Instituto de Ecología
 Instituto Nacional de Antropología e Historia
 Organización de Ejidos Productores Forestales de la Zona Maya
 Universidad Nacional Autónoma de México
 Universidad Nacional Autónoma de México, Estación de Biología Tropical Los Tuxtlas
 Universidad Nacional Autónoma de México, Jardín Botánico del Instituto de Biología

Mozambique

Eduardo Mondlane University
 Ministry of Agriculture and Fisheries, Centre for Forestry Research

Nepal

Forest Resources Studies and Action Team
 New Era Limited

Netherlands

European Centre for Development Policy Management (ECDPM)
Expertisecentrum LNV (formerly IKC Natuurbeheer)
Learning by Design
Ministry of Foreign Affairs, Poverty Policy and Institutional Development Division, Social and Institutional Development Department
National Reference Center for Nature Management
ProFound
Tropenbos International
Wageningen University

Nicaragua

Universidad Centroamericana, Instituto de Investigación y Desarrollo NITLAPAN
Interamerican Development Bank - Natural Resources and Environment
Proyecto PASMA-DANIDA
Centro de Analisis Socio-Cultural (CASC), Universidad Centroamericana
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Papua New Guinea

Forest Research Institute
Papua New Guinea Forest Authority
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Department of Environment and Natural Resources, Forest Management Bureau
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Enterprise Works Worldwide
Foundation for the Philippine Environment
International Institute of Rural Reconstruction
Kapwa Upliftment Foundation Inc.
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Xavier University, Research Institute for Mindanao Culture (RIMCU)

Republic of Korea

Korea Forest Research Institute
North East Asia Forest Forum
Sangju National University
Seoul National University, College of Agricultural and Life Sciences, Department of Forest Resources

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Institute of Commercial Forestry Research
Institute of Natural Resources
KZN Wildlife
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University of Rhodes, Institute of Social and Economic Research
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The International Union for Conservation of Nature and Natural Resources (IUCN)

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Center for Social and Economic Research on the Global Environment
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Global Witness
Imperial College of Science, Technology and Medicine
Institute of Terrestrial Ecology

International Institute for Environmental Development

London School of Economics
National History Museum
Overseas Development Institute
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Oxford Forestry Institute
Proforest
Royal Botanic Gardens Kew, African Rattan Research Programme
Stirling University
University College London
University College of North Wales, Bangor, School of Agricultural and Forest Sciences
University of Edinburgh, Institute of Ecology and Resource Management
University of Kent, Canterbury, Department of Anthropology
University of Oxford
University of Reading, International and Rural Development Department
University of Strathclyde, Graduate School of Environmental Studies
University of Surrey, Guildford
University of Sussex, Institute of Development Studies
UWB Enterprises Ltd
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Environmental Systems Research Institute
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Forest Trends
Harvard University
Michigan University Basic Science and Remote Sensing Initiative
Oregon State University
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Rainforest Alliance
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Smithsonian University, Center for Tropical Forest Science
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University of Cornell
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University of Illinois, Department of Natural Resource and Environmental Sciences

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Asia Pacific Association of Forestry Research
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Conservation International
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European Tropical Forestry Research Network
Forest Trends
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Southeast Asian Ministers of Education
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Southern African Alliance for Indigenous
Resources
The Nature Conservancy
Tropenbos Foundation
Tropical Forest Foundation
Tropical Rain Forest Information Center
United Nations Convention on Biological
Diversity Secretariat
United Nations Convention on Combating
Desertification
United Nations Development Programme
United Nations Educational, Scientific and
Cultural Organization
United Nations Environment Programme
United Nations Food and Agriculture
Organization
United Nations Forum on Forests
United Nations Framework Convention on
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Publications

General

- Allmand, M., Ramos, M.M., Soeripto, S.W., Goldberg, E.D. Global agricultural knowledge sharing: the CGIAR libraries consortium. The Quarterly Bulletin of International Association of Agricultural Information Specialists (IAALD) 48(1/2): 52-56.
- CIFOR. CIFOR research abstracts 2002. CIFOR, Bogor, Indonesia. 113pp.
- Campbell, B.M., Sayer, J.A., eds. *Integrated natural resource management: linking productivity, the environment and development*. CABI Publishing in association with the Center for International Forestry Research (CIFOR), Wallingford, UK. 315pp. ISBN: 0-85199-731-7.
- CIFOR. *Forests and people: research that makes a difference*. CIFOR, Bogor, Indonesia. 90pp.
- CIFOR. *Bosques y comunidades: investigacion que marca la diferencia*. CIFOR, Bogor, Indonesia. 90pp.
- CIFOR. *Forets et populations: vers une recherche qui fait une difference*. CIFOR, Bogor, Indonesia. 90pp.
- Colfer, C.J.P. Tastes in landscapes. *Impulse Journal*: pp.24-5.
- Ramos, M.M., Soeripto, S.W., Ali, M.K. Cultivating communities of practice: the CGIAR information management professionals' experience. In: Information resources empowerment: enhancing knowledge heritage, volume 1: proceedings of 12th Congress of Southeast Asian Librarians (CONSAL XII), held in Bandar Seri Begawan, 20-23 October 2003. pp.27-37. Bandar Seri Begawan, Brunei.
- Sunderlin, W.D. *Ideology, social theory, and the environment*. Rowman & Littlefield Publishers, Lanham, USA. 261pp. ISBN: 0-7425-1970-8.
- assemblage collapse along a land-use intensification gradient in lowland central Sumatra, Indonesia, *Journal of Applied Ecology* 40, pp.380-91.
- Nasi, R. and Forni, E. La gestion durable des forets, *Le Flamboyant* 56, pp.39-40.
- Sheil, D., Burslem, D.F.R.P. Disturbing hypotheses in tropical forests, *Trends in Ecology and Evolution* 18(1), pp.18-26.
- Sheil, D. The value of tropical forests to the people who live there: an interview. *Environmental Review* 10(7), pp.6-14 [Online] URL: www.environmentalreview.org/vol10/Vol10No7.pdf.
- Sheil, D., Liswanti, N., van Heist, M., Basuki, I., Syaefuddin, Samsuedin, I., Rukmiyati, Sardjono, M.A. Local priorities and biodiversity. *ITTO Tropical Forest Update* 13(1): pp.16-18.
- Sheil, D., Puri, R.K., Basuki, I., van Heist, M., Wan, M., Liswanti, N., Rukmiyati Sardjono, M.A., Samsuedin, I., Sidiyasa, K.D., Chrisandini, Permana, E., Angi, E.M., Gatzweiler, F., Johnson, B., Wijaya, A. *Exploring biological diversity, environment and local people's perspectives in forest landscapes: methods for a multidisciplinary landscape assessment*. CIFOR, Bogor, Indonesia. 93pp. ISBN: 979-8764-88-9. Also available in Indonesian.
- Sheil, D., Ducey, M.J., Sidiyasa, K.D., Samsuedin, I. A new type of sample unit for the efficient assessment of diverse tree communities in complex forest landscapes. *Journal of Tropical Forest Science* 15(1), pp.117-35.
- Sheil, D. Observations of long-term change in an African rain forest. In: ter Steege, Hans (eds.). *Long-term changes in tropical tree diversity as a result of natural and man made disturbances: studies from the Guiana Shield, Africa, Borneo and Melanesia*. pp.37-59. Tropenbos Series, No.22. Tropenbos International, Wageningen, Netherlands.
- Sheil, D., Liswanti, N., Wan, M., van Heist, M., Samsuedin, I., Kartawinata, K., Rukmiyati, Sardjono, M. A. Prioritas lokal dan keanekaragaman hayati dalam lansekap hutan: apa yang penting menurut masyarakat? *Jurnal Hutan Indonesia*, Agustus 2003.
- Sist, P., Fimbel, R., Sheil, D., Nasi, R., Chevallier, M-H. Towards sustainable management of mixed dipterocarp forests of South-east Asia: moving beyond

Biodiversity

- Buku panduan 41 taman nasional di Indonesia: Guidebook of 41 national parks in Indonesia*. Ministry of Forestry, UNESCO and CIFOR, Jakarta, Indonesia. 166pp. ISBN: 979-8764-95-1. Also available in English.
- Guidebook of 41 national parks in Indonesia*. Ministry of Forestry, UNESCO and CIFOR, Jakarta, Indonesia. 168pp. ISBN: 979-8764-96-X. Also available in Indonesian.
- Jones, D.T., Susilo, F.X., Bignell, D.E., Hardiwinoto, S., Gillison, A.N. Termite

- minimum diameter cutting limits. *Environmental Conservation* 30(4): pp.364-74.
- Slik, J.W.F., Poulsen, A.D., Ashton, P.S., Cannon, C.H., Eichhorn, K.A.O., Kartawinata, K., Lanniari, I., Nagamasu, H., Nakagawa, M., van Nieuwstadt, M.G.L., Payne, J., Purwaningsih, Saridan, A., Sidiyasa, K.D., Verburg, R.W., Webb, C.O. A floristic analysis of the lowland dipterocarp forests of Borneo. *Journal of Biogeography* 30: pp.1517-31.
- ### Forest Governance and Community Forestry
- CIFOR.** *Refleksi empat tahun reformasi: mengembangkan sosial forestri di era desentralisasi: intisari lokakarya nasional sosial forestri*, Cimacan, 10-12 September 2002. CIFOR, Bogor, Indonesia. 64pp. + 1 CD-ROM. ISBN: 979-3361-08-5.
- Angelsen, A., Wunder, S.** *Exploring the forest-poverty link: key concepts, issues and research implications*. CIFOR Occasional Paper, No.40. CIFOR, Bogor, Indonesia. 58pp.
- Applegate, G., Smith, R., Fox, J.J., Mitchell, A., Packham, D., Tapper, N., Baines, G.** Kebakaran hutan di Indonesia: dampak dan pemecahannya. In: Colfer, C.J.P., Resosudarmo, I.A.P. (eds.). *Ke mana harus melangkah?: masyarakat hutan, dan perumusan kebijakan di Indonesia*. pp.358-77. Yayasan Obor, Jakarta, Indonesia.
- Barr, C., Brown, D., Casson, A., Kaimowitz, D.** Hutang perusahaan dan sektor kehutanan Indonesia. In: Colfer, C.J.P., Resosudarmo, I.A.P. (eds.). *Ke mana harus melangkah?: masyarakat hutan, dan perumusan kebijakan di Indonesia*. pp.338-57. Yayasan Obor, Jakarta, Indonesia.
- Barr, C.** Reformasi konsesi HPH: mempertanyakan paradigma 'pembalakan lestari' (sustainable logging). In: Colfer, C.J.P., Resosudarmo, I.A.P. (eds.). *Ke mana harus melangkah?: masyarakat hutan, dan perumusan kebijakan di Indonesia*. pp.236-71. Yayasan Obor, Jakarta, Indonesia.
- Campbell, B.M., Sayer, J.A., Frost, P., Vermeulen, S., Ruiz Perez, M., Cunningham, A.B., Prabhu, R.** Assessing the performance of natural resource systems. *Conservation Ecology* [online] 5(2). [Online] URL: <http://www.consecol.org/vol5/iss2/art2>. It is also published in Campbell, B.M., Sayer, J.A. (eds.) 2003. *Integrated natural resource management: linking productivity, the environment and development*. pp.267-92. CABI Publishing in association with the Center for International Forestry Research (CIFOR), Wallingford, UK.
- Campbell, B.M., Gunarso, P., Kartawinata, K., Levang, P., Rhee, S., Sheil, D., Sist, P., Wollenberg, E.** Empowering forest dwellers and managing forests more sustainably in the landscapes of Borneo. In: Hardwood, R.R. and Kassam, A.H. (eds.). *Research towards integrated natural resources management: examples of research problems, approaches and partnerships in action in the CGIAR*. pp.79-95. FAO, Rome, Italy.
- Campbell, B.M., Shackleton, S., Wollenberg, E.** Overview: institutional arrangements for managing woodlands. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.9-15. CIFOR, Bogor, Indonesia.
- Casson, A.** Politik ekonomi subsektor perkebunan kelapa sawit di Indonesia. In: Colfer, C.J.P., Resosudarmo, I.A.P. (eds.). *Ke mana harus melangkah?: masyarakat hutan, dan perumusan kebijakan di Indonesia*. pp.272-300. Yayasan Obor, Jakarta, Indonesia.
- CIFOR.** ACM Team. *Co-Learn: collaborative learning*. CIFOR, Bogor, Indonesia. 1 CD ROM, accompanied with a manual; 95pp.
- Colchester, M., Apte, T., Laforge, M., Mandondo, A., Pathak, N.** *Bridging the gap: communities, forests and international networks: synthesis report of the project 'Learning lessons from International Community Forestry Networks'*. CIFOR Occasional Paper, No.41. CIFOR, Bogor, Indonesia. 60pp. Also available in French and Spanish.
- Colchester, M.** Bridging the gap: communities, forests and international networks. *ETFRN News* (39-40): pp.12-13.
- Colchester, M., Apte, T., Laforge, M., Mandondo, A., Pathak, N.** *Cerrando la Brech: comunidades, bosques y redes internacionales: informe sintetizado del proyecto "Lecciones aprendidas de las redes internacionales de manejo forestal comunal"*. CIFOR Occasional Paper, No.41(s). CIFOR, Bogor, Indonesia. 66pp. Also available in French and English.
- Colchester, M., Apte, T., Laforge, M., Mandondo, A., Pathak, N.** *Communautes, forets et reseaux internationux: des liaisons a renforcer: rapport de synthese du projet: "Enseignements tires des reseaux internationaux de foresterie communautaire"*. CIFOR Occasional Paper, No.41(f). CIFOR, Bogor, Indonesia. 67pp. Also available in English and Spanish.

- Colfer, C.J.P. Sepuluh usulan untuk menjelaskan kebakaran di Kalimantan. In: Colfer, C.J.P., Resosudarmo, I.A.P. (eds.). *Ke mana harus melangkah?: masyarakat hutan, dan perumusan kebijakan di Indonesia*. pp.378-96. Yayasan Obor, Jakarta, Indonesia.
- Corbett, J. *Empowering technologies?: introducing participatory geographic information and multimedia systems in two Indonesian communities*. Department of Geography, University of Victoria, Victoria, Canada, 251pp. Thesis - Ph.D. (Department of Geography, University of Victoria).
- de Jong, W., Becker, M., Ruiz, S., Gottwald, C. The impact of decentralised forest governance: a case study from Bolivia. *ETFRN News* (39-40): p.101.
- de Jong, W., Tuk-Po, L., Ken-ichi, A. The political ecology of tropical forests in Southeast Asia: historical roots of modern problems. In: de Jong, W., Tuk-Po, L., Ken-ichi, A. (eds.). *The political ecology of tropical forests in Southeast Asia: historical perspectives*. pp.1-28. Kyoto Area Studies on Asia, No.6. Kyoto University Press, Kyoto, Japan.
- Diaw, C., Tian, A.M., Jum, C.N., Milol, A., Wandji, D.N. Assessing long-term management options for the villages in the Korup National Park: an evaluation of all options. CIFOR, Bogor, Indonesia. 77pp. Unpublished report.
- du Toit, J.T., Walker, B.H., Campbell, B.M. Conserving tropical nature: current challenges for ecologists. *Trends in Ecology and Evolution* 1(19): pp.12-17.
- Edmunds, D., Wollenberg, E., Contreras, A.P., Liu Dachang, Kelkar, G., Sarin, M., Singh, N.M. Introduction. In: Edmunds, D., Wollenberg, E. (eds.). *Local forest management: the impacts of devolution policies*. pp.1-19. Earthscan Publications, London, UK.
- Edmunds, D., Wollenberg, E. (eds.) *Local forest management: the impacts of devolution policies*. Earthscan Publications, London, UK. 208pp. ISBN: 1-84407-023-9.
- Edmunds, D., Wollenberg, E., Contreras, A.P., Liu Dachang, Kelkar, G., Nathan, D., Sarin, M., Singh, N.M. Local forest management: conclusion. In: Edmunds, D., Wollenberg, E. (eds.). *Local forest management: the impacts of devolution policies*. pp.165-81. Earthscan Publications, London, UK.
- Edmunds, D., Wollenberg, E. Whose devolution is it anyway? - divergent constructs, interests and capacities between the poorest forest users and states. In: Edmunds, D., Wollenberg, E. (eds.). *Local forest management: the impacts of devolution policies*. pp.150-65. Earthscan Publications, London, UK.
- Eghenter, C., Sellato, B., Devung, G.S., eds. *Social science research and conservation management in the interior Borneo: unravelling past and present interactions of people and forests*. CIFOR, Bogor, Indonesia. 297pp. ISBN: 979-3361-02-6.
- Etoungou, P. *Decentralization viewed from inside: the implementation of community forests in East Cameroon*. Working Paper Series (WRI). World Resources Institute, Washington, D.C., USA. 28pp.
- Ferroukhi, L., Larson, A.M., Pacheco, P. Introduction. In: Ferroukhi, L. (ed.). *La gestion forestal municipal en American latina*. pp.7-18. CIFOR and IDRC, Bogor, Indonesia.
- Ferroukhi, L., Larson, A.M., Pacheco, P. Introduction. In: Ferroukhi, L. (ed.). *Municipal forest management in Latin America*. pp.7-18. CIFOR and IDRC, Bogor, Indonesia.
- Ferroukhi, L., ed. *La gestion forestal municipal en American latina*. 236pp. ISBN: 979-3361-05-0. CIFOR and IDRC, Bogor, Indonesia. Also available in English.
- Ferroukhi, L., ed. *Municipal forest management in Latin America*. CIFOR and IDRC, Bogor, Indonesia. 235pp. ISBN: 979-3361-05-0. Also available in Spanish.
- Hartanto, H. Facilitating collaboration and partnerships: lessons from adaptive collaborative management in the Philippines. *ETFRN News* (39-40): pp.118-120.
- Hartanto, H., Lorenzo, M.C.B., Valmores, C., Arda-Minas, L., Burton, L., Prabhu, R. *Learning together: responding to change and complexity to improve community forests in the Philippines*. CIFOR, Bogor, Indonesia. 166pp. ISBN: 979-3361-10-7.
- Haggith, M., Prabhu, R., Mudavanhu, H., Matose, F., Mutimukuru, T., Nyirenda, R., Standa-Gunda, W. The challenge of effective model scoping: a FLORES case study from the Mafungausti forest margins, Zimbabwe. *Small-scale Forest Economics, Management and Policy* 2(2): pp.155-69.
- Haggith, M., Prabhu, R., Colfer, C.J.P., Ritchie, B., Thomson, A., Mudavanhu, H. Infectious ideas: modelling the diffusion of ideas across social networks. *Small-scale Forest Economics, Management and Policy* 2(2): pp.225-39.
- Haggith, M., Prabhu, R. Unlocking complexity: the importance of idealisation in simulation modelling. *Small-scale Forest Economics, Management and Policy* 2(2): pp.293-312.

- Iwan, R. Setulang village protects its river: Ramses Iwan on behalf of the Setulang community. *Policy Matters* 12: pp.152-3.
- Kaimowitz, D.**, Faune, A. Contras and comandantes: armed movements and forest conservation in Nicaragua's Bosawas biosphere reserve. In: Price, S.V. (ed.). *War and tropical forests: conservation in areas of armed conflict*. pp.21-47. Food Products Press, Binghamton, NY, USA. This article has been co-published simultaneously in the *Journal of Sustainable Forestry*, vol.16, no.3/4, 2003.
- Kaimowitz, D.**, Faune, A., Mendoza, R. *Your biosphere is my backyard: the story of Bosawas in Nicaragua*. CIFOR Working Paper, No.25. CIFOR, Bogor, Indonesia. 19pp.
- Kaimowitz, D.**, Faune, A., Mendoza, R. Your biosphere is my backyard: the story of Bosawas in Nicaragua. *Policy Matters* 12: pp.6-15.
- Kartodihardjo, H., **Wollenberg, E.** Devolusi dan undang-undang kehutanan baru Indonesia. In: Colfer, C.J.P., Resosudarmo, I.A.P. (eds.). *Ke mana harus melangkah?: masyarakat hutan, dan perumusan kebijakan di Indonesia*. pp.98-136. Yayasan Obor, Jakarta, Indonesia.
- Kayambazinthu, D., Matose, F., Kajembe, G.C., **Nemarundwe, N.** Institutional arrangements governing natural resource management of the Miombo woodland. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.45-79. CIFOR, Bogor, Indonesia.
- Kowero, G.** The challenge to natural forest management in Sub-Saharan Africa rural development: experiences from the miombo woodlands of Southern Africa. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.1-8. CIFOR, Bogor, Indonesia.
- Kowero, G.**, Kaoneka, A.S., Nhantumbo, I., Gondo, P., Jumbe, C.B.L. Forest policies in Malawi, Mozambique, Tanzania and Zimbabwe. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.165-86. CIFOR, Bogor, Indonesia.
- Kowero, G.**, Sumaila, U.R. Manual for users of MIOMBOSM: a simulation model for the management of Miombo woodlands. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.239-56. CIFOR, Bogor, Indonesia.
- Kowero, G.** An overview: the influence of major policies on forestry. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.80-91. CIFOR, Bogor, Indonesia.
- Kowero, G.** An overview: reconciling demands on woodlands through modelling. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.212-17. CIFOR, Bogor, Indonesia.
- Kowero, G.**, **Campbell, B.M.**, Sumaila, U.R., eds. *Policies and governance structures in woodlands of Southern Africa*. CIFOR, Bogor, Indonesia. 438pp. ISBN: 979-3361-22-0.
- Larson, A.M.**, Ferroukhi, L. Conclusiones. In: Ferroukhi, L.(ed.). *La gestion forestal municipal en American latina*. pp.213-33. CIFOR and IDRC, Bogor, Indonesia.
- Larson, A.M.**, Ferroukhi, L. Conclusiones. In: Ferroukhi, L. (ed.). *Municipal forest management in Latin America*. pp.213-32. CIFOR and IDRC, Bogor, Indonesia.
- Larson, A.M.** Decentralisation and forest management in Latin America: towards a working model. *Public Administration and Development* 23: pp.211-26.
- Larson, A.M.** Gestion forestal municipal en Nicaragua: decentralizacion de cargas, centralization de beneficios. In: Ferroukhi, L.(ed.). *La gestion forestal municipal en American latina*. pp.114-44. CIFOR and IDRC, Bogor, Indonesia.
- Larson, A.M.** Municipal forest management in Nicaragua: decentralized burdens, decentralized benefits. In: Ferroukhi, L.(ed.). *Municipal forest management in Latin America*. pp.113-44. CIFOR and IDRC, Bogor, Indonesia.
- Liu Dachang, **Edmunds, D.** The promises and limitations of devolution and local forest management in China. In: Edmunds, D., Wollenberg, E. (eds.). *Local forest management: the impacts of devolution policies*. pp.20-54. Earthscan Publications, London.
- Logo, P.B. *The decentralized forestry taxation system in Cameroon: local management and state logic*. Working Paper Series (WRI). World Resources Institute, Washington, D.C., USA. 35pp.
- Lynam, T., Cunliffe, R., Mapaire, I., Bwerinofa, I. *Assessment of the value of woodland landscape function to local communities in Gorongosa and Muanza districts, Sofala province, Mozambique*. CIFOR, Bogor, Indonesia. 111pp. ISBN: 979-3361-11-5.
- Mataya, C., Gondo, P., **Kowero, G.** Evolution of land policies and legislation in Malawi and Zimbabwe: implications for forestry

- development. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.92-112. CIFOR, Bogor, Indonesia.
- McDougall, C., Braun, A.** Navigating complexity, diversity and dynamism: reflections on research for natural resource management. In: Pound, B., Snapp, S., McDougall, C., Braun, A., (eds.). *Managing natural resources for sustainable livelihoods: uniting science and participation*. pp.20-47. Earthscan Publications, London, UK.
- McDougall, C., Prabhu, R., Kusumanto, Y.** Participatory action research on adaptive collaborative management of community forests: a multi-country model. In: Pound, B., Snapp, S., McDougall, C., Braun, A., (eds.). *Managing natural resources for sustainable livelihoods: uniting science and participation*. pp.189-91. Earthscan Publications, London, UK. Annexe 1: Summaries of case studies 2.
- Mendoza, G.A., Prabhu, R., Nyirenda, R., Standa-Gunda, W., Mutimukuru, T.** A community-driven multi-criteria approach to developing indicators of sustainable resource management. *Journal of Forest Policy* 10(1): pp.1-21.
- Mlay, G., Turuka, F., Kowero, G., Kachule, R.** Agricultural policies and forestry development in Malawi, Mozambique, Tanzania and Zimbabwe: complementarities and conflicts. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.138-64. CIFOR, Bogor, Indonesia.
- Mlay, G., Falcao, M., Nhantumbo, I., Kowero, G.** Policy impact on woodland resource management, use and conservation in Mozambique: a case study of selected sites in Dondo, Nhamatanda, Gondola and Manica districts. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.358-400. CIFOR, Bogor, Indonesia.
- Mukamuri, B.B., Campbell, B.M., Kowero, G.** Local organisations and natural resource management in the face of economic hardship: a case study from Zimbabwe. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.28-44. CIFOR, Bogor, Indonesia.
- Nhantumbo, I., Kowero, G.** A goal programming model for planning management of Miombo woodlands. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.257-76. CIFOR, Bogor, Indonesia.
- Nhantumbo, I., Monela, G.C., Kowero, G.** Land policies in Mozambique and Tanzania: implications for forestry development. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.113-37. CIFOR, Bogor, Indonesia.
- Nhantumbo, I., Mlay, G., Kowero, G.** Linear and goal programming models for analysis of policy impacts on livelihoods in Miombo of Mozambique. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.334-57. CIFOR, Bogor, Indonesia.
- Ojha, H., Pokharel, B., McDougall, C., Paudel, K.** Learning to govern: how to improve monitoring system in community forestry in Nepal. *Journal of Forest and Livelihood* 2(2): pp.23-34.
- Oyono, P.R., Temple, L.** Metamorphose des organisations rurales au Cameroun: implications pour la recherche-developpement et la gestion des ressources naturelles. *Revue Internationale d'Économie Sociale* (288): pp.68-79.
- Pacheco, P.** Municipalidades y participation local en la gestion forestal en Bolivia. In: Ferroukhi, L. (ed.). *La gestion forestal municipal en American latina*. pp.20-56. CIFOR and IDRC, Bogor, Indonesia.
- Pacheco, P.** Municipalities and local participation in forest management in Bolivia. In: Ferroukhi, L.(ed.). *Municipal forest management in Latin America*. pp.19-56. CIFOR and IDRC, Bogor, Indonesia.
- Pokorny, B., Cayres, G., Nunes, W., Segebart, D., Drude, R., Steinbrenner, M.** *Adaptive collaborative management: criteria and indicators for assessing sustainability*. CIFOR, Bogor, Indonesia. 36pp. ISBN: 979–3361-03-4.
- Pokorny, B., Cayres, G., Nunes, W., Segebart, D., Drude, R.** First experiences with adaptive co-management in Para, Brazilian Amazon. In: Sabogal, C. and Silva, N. (eds.). *Integrated management of neotropical rain forests by industries and communities*. pp.258-80. EMBRAPA Amazonia Oriental, Belem, Brazil.
- Pokorny, B., Cayres, G., Nunes, W.** Participatory analysis of heterogeneity, an approach to consolidate collaborative initiatives at community level. *Forests, Trees and Livelihoods* 13(2): pp.161-75.
- Prabhu, R., Haggith, M., Mudavanhu, H., Muetzelfeldt, R., Standa-Gunda, W., Vanclay, J.K.** ZimFlores: a model to advice

- co-management of the Mafungautsi forest in zimbabwe. *Small-scale Forest Economics, Management and Policy* 2(2): pp.185-210
- Pound, B., Snapp, S., McDougall, C., Braun, A., (eds.). *Managing natural resources for sustainable livelihoods: uniting science and participation*. Earthscan Publications, London, UK. 352pp. ISBN: 1-84407-026-3.
- Prabhu, R., Haggith, M., Mudavanhu, H., Muetzelfeldt, R., Standa-Gunda, W., Vanclay, J.K. ZimFlores: a model to advice co-management of the Mafungautsi forest in zimbabwe. *Small-scale Forest Economics, Management and Policy* 2(2): pp.185-210
- Purnomo, H., Yasmi, Y., Prabhu, R., Hakim, S., Jafar, A., Suprihatin. Collaborative modelling to support forest management: qualitative systems analysis at Lumut Mountain, Indonesia. *Small-scale Forest Economics, Management and Policy* 2(2): pp.259-75.
- Purnomo, H., Guizol, P. Governing forest plantation to reduce poverty and improve forest landscape: a multiagent simulation approach. In: Post, D.A.(ed.). *MODSIM 2003 International Congress on Modelling and Simulation: Integrative Modelling of Biophysical, Social and Economic Systems for Resource Management Solutions*, 14-17 July 2003, Townsville, Australia. pp.1054-9. Modelling and Simulation Society of Australia and New Zealand, Canberra, Australia.
- Purnomo, H. *A modeling approach to collaborative forest management*. Bogor Agricultural University, Bogor, Indonesia. 218p. Thesis - Ph.D. (Bogor Agricultural University).
- Purnomo, H., Yasmi, Y., Prabhu, R., Yuliani, L., Priyadi, H., Vanclay, J.K. Multi-agent simulation of alternative scenarios of collaborative forest management. *Small-scale Forest Economics, Management and Policy* 2(2): pp.277-92.
- Resosudarmo, I.A.P., Dermawan, A. Hutan dan otonomi daerah: tantangan berbagi suka dan duka. In: Colfer, C.J.P., Resosudarmo, I.A.P. (eds.). *Ke mana harus melangkah?: masyarakat hutan, dan perumusan kebijakan di Indonesia*. pp.399-437. Yayasan Obor, Jakarta, Indonesia.
- Resosudarmo, I.A.P., Colfer, C.J.P., (eds.). *Ke mana harus melangkah?: masyarakat, hutan, dan perumusan kebijakan di Indonesia*. Yayasan Obor, Jakarta, Indonesia. 516pp. ISBN: 979-461-421-X. Also available in English.
- Resosudarmo, I.A.P. Shifting power to the periphery: the impact of decentralisation on forests and forest people. In: Aspinall, E. and Fealy, G. (eds.). *Local power and politics in Indonesia: decentralization and democratization*. pp.230-44. Institute of Southeast Asian Studies, Singapore.
- Resosudarmo, I.A.P. Tinjauan atas kebijakan sektor perikanan dan kebijakan terkait lainnya. In: Colfer, C.J.P., Resosudarmo, I.A.P. (eds.). *Ke mana harus melangkah?: masyarakat hutan, dan perumusan kebijakan di Indonesia*. pp.196-235. Yayasan Obor, Jakarta, Indonesia.
- Rhee, S. De facto decentralization and community conflicts in East Kalimantan, Indonesia: explanations from local history and implications for community forestry. In: de Jong, W., Tuk-PCo, L., Ken-ichi, A.(eds.). *The political ecology of tropical forests in Southeast Asia: historical perspectives*. pp.152-76. Kyoto Area Studies on Asia, No.6. Kyoto University Press, Kyoto, Japan.
- Robligio, V., Mala, W.A., Diaw, C. Mapping landscapes: integrating GIS and social science methods to model human-nature relationships in southern Cameroon. *Small-scale Forest Economics, Management and Policy* 2(2): pp.171-84.
- Sarin, M., Singh, N.M., Sundar, N., Boghal, R.K. *Devolution as a threat to democratic-decision making in forestry?: findings from three states in India*. ODI Working Paper, No.197. Overseas Development Institute (ODI), London, UK. 66pp. ISBN: 0-85003-637-2.
- Standa-Gunda, W., Mutimukuru, T., Nyirenda, R., Prabhu, R., Haggith, M., Vanclay, J.K. Participatory modelling to enhance social learning, collective action and mobilization among users of the Mafungautsi forest, Zimbabwe. *Small-scale Forest Economics, Management and Policy* 2(2): pp.313-26.
- Sumaila, U.R., Angelsen, A., Kowero, G. A system dynamics model for management of Miombo woodlands. In: Kowero, G., Campbell, B.M., Sumaila, U.R. (eds.). *Policies and governance structures in woodlands of Southern Africa*. pp.218-38. CIFOR, Bogor, Indonesia.
- Sunderlin, W.D. Dampak krisis dan perubahan politik, 1997-1999. In: Colfer, C.J.P., Resosudarmo, I.A.P. (eds.). *Ke mana harus melangkah?: masyarakat hutan, dan perumusan kebijakan di Indonesia*. pp.301-37. Yayasan Obor, Jakarta, Indonesia.
- Tuk-Po, L., de Jong, W., Ken-ichi, A., (eds.). *The political ecology of tropical forests in Southeast Asia: historical perspectives*. Kyoto Area Studies on Asia, No.6. Kyoto University Press, Kyoto, Japan. 293pp. ISBN: 4-87698-453-0.

- Vanclay, J.K., Haggith, M., Colfer, C.J.P. Participation and model-building: lessons learned from the Bukittinggi workshop. *Small-scale Forest Economics, Management and Policy* 2(2): p.135-54.
- Vanclay, J.K., Prabhu, R., Sinclair, F. (eds.) Participatory modelling of community forest landscape. Gattton, Australia, School of Natural and Rural Systems Management, the Univesity of Queensland. *Small-scale Forest Economics, Management and Policy* 2(2). 326pp.
- Vernooy, R., McDougall, C. Principles for good practice in participatory research: reflecting on lessons from the field. In: Pound, B., Snapp, S., McDougall, C., Braun, A. (eds.). *Managing natural resources for sustainable livelihoods: uniting science and participation*. pp.113-41. Earthscan Publications, London, UK.
- Wadley, R.L. Community cooperatives, illegal logging and regional autonomy in West Kalimantan, Indonesia. In: *Resource tenure, forest management and conflict resolution: perspectives from Borneo and New Guinea* (forthcoming). Research School of Pacific and Asian Studies, Australian National University, Canberra, Australia. Proceedings of this conference are currently being prepared. [Online] URL:http://rspas.anu.edu.au/rmap/conf_details.php?searchterm=resourcetenure_04_01_details.inc.
- Wadley, R.L. Lines in the forest: internal territorialization and local accommodation in West Kalimantan, Indonesia (1865-1979). *South East Asia Research* 11(1): pp.91-112.
- Wadley, R.L., Sissman, K. Pepper in a time of crisis: price booms, government subsidies and smallholder response during and after the Asian economic crisis. In: Mertz, O., Wadley, R.L., Christensen, A.E. (eds.). *Local land use strategies in a globalizing world: shaping sustainable social and natural environments*. Proceedings of the international conference, held on 21-23 August 2003, at Institute of Geography, University of Copenhagen, Denmark. pp.23-45. University of Copenhagen, Institute of Geography, Copenhagen, Denmark.
- Wollenberg, E. Boundary keeping and access to gaharu among Kenyah forest users. *Environment and Planning A* 35(6): pp.1007-23.
- Wollenberg, E., Campbell, B.M., Shackleton, S., Edmunds, D., Shanley, P. Central control of local resource management: the impacts of devolution. *ETFRN News* special issue (39-40): pp.98-100.
- Wunder, S. Native tourism, natural forests and local incomes on Ilha Grande, Brazil. In: Gossling, S. (ed.). *Tourism and development in tropical islands: political ecology perspectives*. pp.148-77. Edward Elgar Publishing, Cheltenham, UK.
- Yasmi, Y. Disharmony in the heart of Borneo: a closer look at forestry conflicts in the tropics. In: Birner, R., Nurrochmat, D., Rosyadi, S. (eds.). *Sustainable development: socio-economic and environmental problems focused on Indonesian cases*. Proceedings of the International Seminar held on 20 April 2002, Gottingen, Germany. pp.52-9. Cuvillier Verlag, Gottingen, Germany.
- Yasmi, Y., Kusumanto, Y. Learning in adaptive collaborative management of community forests: lessons from Indonesia. *ETFRN News* (39-40): pp.111-13.
- Yasmi, Y. Understanding conflict in the co-management of forests: the case of Bulungan Research Forest. *International Forestry Review* 5(1): pp.38-44.
- Zapata, D.M.O., Gonzales, L.A., Larrea, J.F., Gonzalez, B., Silva, E., Arellanos, A., Meo, S., de Jong, W. *Luz de America: comunidad y biodiversidad Amazonica*. CIFOR, Bogor, Indonesia. 90pp. ISBN: 979-3361-14-X.

Forest Management

- Castaneda, F.; Kuzee, M.; Chokkalingam, U.; Jama, B.; Dotzauer, H.; Savenije, H. *The Nairobi proposal for action: towards sustainable management and development of tropical secondary forests in Anglophone Africa*. Rome, Italy, FAO. 36pp. [Online] URL: <http://www.fao.org/DOCREP/006/J0709E/J0709E00.HTM>.
- Chokkalingam, U., de Jong, W., Sabogal, C. Secondary forest definitions and dynamics. In: Bernd Markus Liss, Coert Geldenhuys, Dali Mwangi, Mirjam Kuzee, Unna Chokkalingam, Herman Savenije, Froylan Castaneda (prepared by). *Proceedings of a Workshop on tropical secondary forest management in Africa: reality and perspectives*. Nairobi, Kenya, 9-13 December 2002. pp.12-15. FAO, Rome, Italy.
- Iskandar, H., Hubble, D.L., MacDicken, K.G. Estimating DBH of commercial trees from stump measurement in Malinau, East Kalimantan. *Journal of Tropical Forest Science* 15(3): pp.502-4.
- Liss, B.M., Geldenhuys, C., Mwangi, D., Kuzee, M., Chokkalingam, U., Savenije, H., Castaneda, F., (prepared by). *Proceedings of a Workshop on Tropical Secondary Forest Management in Africa: Reality and Perspectives*. Nairobi, Kenya, 9-13 December 2002. FAO, Rome, Italy.

- 390pp. The workshop was organised by FAO, GTZ (Germany) and EC-LNV (Netherlands) in collaboration with CIFOR and the World Agroforestry Centre (ICRAF).
- Masera, O.R., Garza-Caligaris, J.F., Kanninen, M., Karjalainen, T., Liski, J., Nabuurs, G.J., Pussinen, A., de Jong, B.H.J., Mohren, G.M.J. Modelling carbon sequestration in afforestation and forest management projects: the CO2FIX V 2.0 approach. *Ecological Modelling* 164(1-2): pp.177-99.
- Mendoza, G.A., Prabhu, R. Qualitative multi-criteria approaches to assessing indicators of sustainable forest resource management. *Forest Ecology and Management* 174: pp.329-43.
- Negros-Castillo, P., Snook, L.K., Mize, C.W. Regenerating mahogany (*Swietenia macrophylla*) from seed in Quintana Roo, Mexico: the effects of sowing method and clearing treatment. *Forest Ecology and Management* 183(1-3): pp.351-62.
- Nemarundwe, N., de Jong, W., Cronkleton, P. *Escenarios futuros: como instrumento para el manejo forestal*. CIFOR, Bogor, Indonesia. 31pp. ISBN: 979-3361-13-1.
- Nemarundwe, N., de Jong, W., Cronkleton, P. *Future scenarios as an instrument for forest management: manual for training facilitators of future scenarios*. CIFOR, Bogor, Indonesia. 31pp. ISBN: 979-3361-12-3.
- Oyono, P.R., Mala, W.A., Tonye, J. Rigidity versus adaptation : contribution to the debate on agricultural viability and forest sustainability in southern Cameroon. *Culture and Agriculture* 25(2): 32-40.
- Perez Cordero, L.D., Kanninen, M. Estimacion del volumen comercial a diametros y alturas variables para *Tectona grandis* L.F. en Costa Rica. *Revista Forestal Centroamericana* 39: pp.56-9.
- Perez Cordero, L.D., Kanninen, M. Provisional equations for estimating total and merchantable volume of *Tectona grandis* trees in Costa Rica. *Forests, Trees and Livelihoods* 13: pp.345-59.
- Pokorny, B., Adams, M. *Compatibilidade de conjuntos de criterios e indicadores para avaliar a sustentabilidade do manejo florestal na Amazonia Brasileira*. CIFOR, Bogor, Indonesia. 131pp. ISBN: 979-3361-04-2.
- Pokorny, B., Schanz, H. Empirical determination of political cultures as a basis for effective coordination of forest management systems. *Society and Natural Resources* 16(10): pp.887-908.
- Pokorny, B., Adams, M. What do criteria and indicators assess: an analysis of five C&I sets relevant for forest management in the Brazilian Amazon. *International Forestry Review* 5(1): pp.20-8.
- Priyadi, H. *Forest regeneration under reduced-impact and conventional logging in lowland mixed dipterocarps forest of East Kalimantan, Indonesia*. Tropical Forest Resource Management Program, University Putra Malaysia, Serdang, Malaysia. 80pp. Thesis - MSc (Universiti Putra Malaysia).
- Puntodewo, A., Dewi, S., Tarigan, J. *Sistem informasi geografis untuk pengelolaan sumberdaya alam*. CIFOR, Bogor, Indonesia. 127pp. ISBN: 979-3361-33-6.
- Salim, A., Pawitan, Y. Extensions of the Bartlett-Lewis model for rainfall processes. *Statistical Modelling* 1: pp.1-20.
- Scherr, S.J., White, A., Kaimowitz, D. Making markets work for forest communities. *International Forestry Review* 5(1): pp.67-73.
- Sheil, D. Growth assessment in tropical trees: large daily diameter fluctuations and their concealment by dendrometer bands. *Canadian Journal of Forest Research* 33(10): pp.2027-35.
- Sist, P., Sheil, D., Kartawinata, K., Priyadi, H. Reduced-impact logging in Indonesian Borneo: some results confirming the need for new silvicultural prescriptions. *Forest Ecology and Management* 179: pp.415-27.
- Snook, L.K., Lopez, C. *Executive summary: outcome of the Workshop on Regeneration of Mahogany (Swietenia macrophylla King): Results of Seven Years of Collaborative Research, Chetumal, Quintana Roo, Mexico 5-7 November 2003*. CIFOR, Bogor, Indonesia. 15pp. Also available in Spanish.
- Snook, L.K., Camara-Cabrales, L., Toledo-Sotillo, M., Negreros-Castillo, P., Lopez, C. *La regeneracion de la caoba: frutos de 7 anos de investigacion colaborativa* [brochure]. CIFOR, Bogor, Indonesia. A brochure prepared for a workshop held in Chetumal, Quintana Roo, Mexico, 5-7 November 2003.
- Snook, L.K., Santos Jimenez, M., Carreon Mundo, M., Chan Rivas, C., May Ek, F.J., Mas Kantun, P., Nolasco Morales, A., Hernandez Hernandez, C., Escobar Ruiz, C. Managing natural forests for sustainable harvests of mahogany (*Swietenia macrophylla*): experiences in Mexico's community forests. *Unasylva* 54(214/215): pp.68-73. Also available in Spanish.
- Snook, L.K., Santos Jimenez, M., Carreon Mundo, M., Chan Rivas, C., May Ek, F.J., Mas Kantun, P., Nolasco Morales, A., Hernandez Hernandez, C., Escobar Ruiz, C. Ordenacion de bosques naturales para la

explotacion sostenible de la caoba (*Swietenia macrophylla*): experiencias en bosques comunales de Mexico: experiencias en bosques comunales de Mexico. *Unasylva* 54(214/215): pp.68-73. Also available in English.

Snook, L.K. Partnerships and sustainable forest management: towards sustaining mahogany (*Swietenia macrophylla*) in the Maya forest of Mexico and Belize. *ETFRN News* (39-40): pp.89-90.

Snook, L.K. Regeneration, growth and sustainability of mahogany in Mexico's Yucatan forests. In: Lugo, A.E., Figueroa Colon, J.C., Alayon, M. (eds.). *Big-leaf mahogany: genetics, ecology and management*. pp.169-92. Ecological Studies, No.159. Springer-Verlag, Heidelberg, Germany.

Snook, L.K., Lopez, C. *Resumen ejecutivo: Logros y conclusiones principales del Taller La regeneracion de la Caoba (Swietenia macrophylla King): Frutos de Siete anos de Investigacion Colaborativa, Chetumal, Quintana Roo, Mexico 5-7 Noviembre del 2003*. CIFOR, Bogor, Indonesia. 15pp. Also available in English.

Non-Timber Forest Products

Arnold, J.E.M., Kohlin, G., Persson, R. *Fuelwood revisited: what has changed in the last decade?* CIFOR Occasional Paper, No.39. CIFOR, Bogor, Indonesia. 35pp.

Arnold, M., Persson, R. Reassessing the fuelwood situation in developing countries. *International Forestry Review* 5(4): pp.379-83.

Braedt, O. *Forest products and rural households: woodcraft commercialisation in Southern Zimbabwe*. Mitteilungen der Bundesforschungsanstalt für Forst- und Holzwirtschaft, No.210. Kommissionsverlag, Buchhandlung Max Wiedebusch, Hamburg, Germany. 207pp. Thesis - Ph.D. (Hamburg University, Faculty of Biology).

Campbell, B.M., Vermeulen, S.J., Mangono, J.J., Mabugu, R. The energy transition in action: domestic fuel choices in a changing Zimbabwe. *Energy Policy* 31: pp.553-62.

de Jong, W., Belcher, B., Rohadi, D., Mustikasari, R., Levang, P. The political ecology of forest products in Indonesia: a history of changing adversaries. In: de Jong, W., Tuk-Po, L., Ken-ichi, A. (eds.). *The political ecology of tropical forests in Southeast Asia: historical perspectives*. pp.107-32. Kyoto Area Studies on Asia, No.6. Kyoto University Press, Kyoto, Japan.

Dounias, E. L'exploitation méconnue d'une ressource connue: la collecte des larves comestibles de charançons dans les

palmiers raphias au sud Cameroun. In: Motte-Florac, E., Thomas, J.M.C. (eds.). *Les insectes dans la tradition orale*. pp.205-26. Peeters-SELAF, Paris, France.

Foote, A.L., Krogman, N.T., Grundy, I.M., Nemarundwe, N., Campbell, B.M., Gambiza, J., Gibbs, L. Ilala palm (*Hyphaene petersiana*) use in southern Zimbabwe: social and ecological factors influencing sustainability. *Forests, Trees and Livelihoods* 13: pp.275-96.

García-Fernández, C., Casado, M.A., Ruiz Perez, M. Benzoin gardens in North Sumatra, Indonesia: effects of management on tree diversity. *Conservation Biology* 17(3): pp.829-36.

Hyde, William F., Belcher, B., Jintao Xu. *China's forests: global lessons from market reforms*. Resources for the Future and CIFOR, Washington, D.C., USA. 224pp. ISBN: 1-891853-66-X.

Hyde, William F., Jintao Xu, Belcher, B., Runsheng Yin, Jinlong Liu. Conclusions and policy implications. In: Hyde, William F., Jintao Xu, Belcher, B.(eds.). *China's forests: global lessons from market reforms*. pp.195-214. Resources for the Future and CIFOR, Washington, D.C., USA.

Ruiz Perez, M., Belcher, B., Maoyi Fu, Xiaosheng Yang. Forestry, poverty, and rural development: perspectives from the bamboo subsector. In: Hyde, William F., Jintao Xu, Belcher, B.(eds.). *China's forests: global lessons from market reforms*. pp.151-76. Resources for the Future and CIFOR, Washington, D.C., USA.

Sayer, J.A., Changjin Sun. Impacts of policy reforms on forestry environments and biodiversity. In: Hyde, William F., Jintao Xu, Belcher, B.(eds.). *China's forests: global lessons from market reforms*. pp.177-94. Resources for the Future and CIFOR, Washington, D.C., USA.

Shanley, P., Luz, L. The impacts of forest degradation on medicinal plant use and implications for health care in Eastern Amazonia. *BioScience* 53(6): pp.573-84.

Plantations and Rehabilitation of Degraded Forests

CIFOR. *Ensuring corporate-smallholder partnerships benefit all players and the environment*. CIFOR, Bogor, Indonesia. 1 CD-ROM. This CD-ROM includes two publications printed by CIFOR and FAO: A.A. Nawir, L. Santoso, I. Mudhovar. Towards mutually-beneficial company-community partnerships in timber plantation: lessons learnt from Indonesia 2. A.A. Nawir, C.H. Anyonge, D. Race,

- Vermeulen, S. Towards equitable partnerships between corporate and small holder partnerships - relating partnerships to social, economic and environment indicators: synthesis of a workshop to develop joint proposal for an action learning programme between farm foresters, private companies, and research and extension agencies, Bogor, Indonesia, 21-23 May 2002.
- Cossalter, C., Pye-Smith, C. *Fast-wood forestry: myths and realities*. Forest Perspectives. CIFOR, Bogor, Indonesia. 50pp. ISBN: 979-3361-09-3.
- Hartanto, H., Prabhu, R., Widayat, A.S.E., Asdak, C. Factors affecting runoff and soil erosion: plot-level soil loss monitoring for assessing sustainability of forest management. *Forest Ecology and Management* 180(1-3): pp.361-74.
- Kobayashi, S., Ueda, E. *Site management strategy on the forest harvesting and short/long-term rotation of plantation*. Proceedings of the joint meeting for the cooperative research project on ecological impact assessment of tropical plantation forest on the environments, 26 November 2002, Bangkok, Thailand. pp.81-92. Japan Overseas Plantation Center for Pulpwood, Tokyo, Japan.
- Liu Dachang, ed. *Rehabilitation of degraded forests to improve livelihoods of poor farmers in South China*. CIFOR, Bogor, Indonesia. 97pp. ISBN: 979-8764-98-6.
- Montero, M., Kanninen, M. Biomasa y carbono en plantaciones de Terminalia amazonia en la zona Sur de Costa Rica. *Revista Forestal Centroamericana* 39: pp.50-6.
- Nawir, A.A., Gumartini, T. Company-community partnership outgrower schemes in forestry plantations in Indonesia: an alternative to conventional rehabilitation programmes. In: Sim, H.C., Appanah, S., Durst, P.B. (eds.). *Bringing back the forests: policies and practices for degraded lands and forests*. Proceedings of an international conference, 7-10 October 2002, Kuala Lumpur, Malaysia. pp.317-29. FAO Regional Office for Asia and the Pacific, Bangkok, Thailand.
- Nawir, A.A., Anyonge, C.H., Race, D., Vermeulen, S. *Towards equitable partnerships between corporate and smallholder partners: relating partnerships to social, economic and environmental indicators: workshop synthesis*. FAO Rome, Italy. 234pp. [Online] URL:<http://www.fao.org/DOCREP/005/Y4803E/Y4803E00.HTM>. Synthesis of a workshop to develop joint proposals for an action learning programme among farm foresters, private companies, and research and extension agencies held in CIFOR, Bogor, Indonesia 21-23 May 2002. Co-sponsored by the center for International Forestry Research (CIFOR) and FAO Forest Resources Division.
- Nawir, A.A., Santoso, L., Mudhofar, I. *Towards mutually-beneficial company-community partnerships in timber plantation: lessons learnt from Indonesia*. CIFOR Working Paper, No.26. CIFOR, Bogor, Indonesia, 77pp.
- Nawir, A.A., Santoso, L., Mudhofar, I. Towards mutually beneficial partnership in outgrower schemes: lessons learned from Indonesia. In: Nawir, A.A., Anyonge, C.H., Race, D., Vermeulen, S.(eds.). *Towards equitable partnerships between corporate and smallholder partners: relating partnerships to social, economic and environmental indicators*. pp.117-44. FAO, Rome, Italy.
- Old, K.M., Wingfield, M.J., Zi Qing Yuan. *A manual of diseases of eucalyptus in South-East Asia*. CIFOR, Bogor, Indonesia. 98pp. ISBN: 064306530.
- Perez Cordero, L.D., Kanninen, M. Aboveground biomass of *Tectona grandis* plantations in Costa Rica. *Journal of Tropical Forest Science* 15(1): pp.199-213.
- Perez Cordero, L.D., Kanninen, M. *Growth and timber quality of Tectona grandis in high input plantations of Costa Rica*. International Conference on Quality Timber Products of Teak from Sustainable Forest Management, Kerala Forest Research Institute, Peechi, India, 2-5 December, 2003. pp.142-9.
- Perez Cordero, L.D., Kanninen, M. Heartwood, sapwood and bark content, and wood dry density of young and mature teak (*Tectona grandis*) trees grown in Costa Rica. *Silva Fennica* 37(1): pp.45-54.
- Perez Cordero, L.D., Kanninen, M., Ugalde Arias, L.A. Stand growth scenarios for *Bombacopsis quinata* plantations in Costa Rica. *Forest Ecology and Management* 174(1-3): pp.345-52.
- Piotto, D., Montagnini, F., Ugalde, L., Kanninen, M. Growth and effects of thinning of mixed and pure plantations with native trees in humid tropical Costa Rica. *Forest Ecology and Management* 177(1-3): pp.427-39.
- Piotto, D., Montagnini, F., Ugalde, L., Kanninen, M. Performance of forest plantations in small and medium-sized farms in the Atlantic lowlands of Costa Rica. *Forest Ecology and Management* 175(1-3): pp.195-204.
- Sonwa, D.J., Weise, S.F., Ndoye, O., Janssens, M.J.J. Initiatives endogenes d'intensification et de diversification a l'interieur des

agroforets-cacao au Sud-Cameroun: leçons pour une foresterie participative dans les systèmes à base de cultures pérennes en Afrique centrale et de l'Ouest. In: FAO. *Second international workshop on participatory forestry in Africa: defining the way forward: sustainable livelihoods and sustainable forest management through participatory forestry*, 18-22 February 2002, Arusha, Tanzania. pp.407-12. FAO, Rome, Italy. Summary in English.

Toma, T. Lessons from forest rehabilitation through agroforestry trials in lowland Kutai, East Kalimantan, Indonesia. In: Bunvong Thaiutsa, Ladawan Puangchit, Don Koo Lee, Sang Won Ahn (eds.). *Roles of agroforestry in restoration of degraded forest ecosystem: proceedings of the International Workshop*, 6-8 August 2003, Chiangmai, Thailand. pp.1-8. ASEAN-Korea Environmental Cooperation Project (AKECOP), Suwon, South Korea.

Policy and Extrasectoral Issues

Barr, C., Setiono, B. Writing off Indonesia's forestry debt: how the IMF, the Indonesian Bank Restructuring Agency and Bank Mandiri are financing forest destruction. *Multinational Monitor* 24(11). [Online] URL: <http://multinationalmonitor.org/mm2003/03november/nov03corp2.html> (Accessed on 23 December 2003).

Bose, P. Influencing the international forest policy: the role of collaborative research. *ETFRN News* (39-40): pp.114-15.

Frost, P. *Forests and water: some suggested strategic directions for CIFOR*. CIFOR, Bogor, Indonesia. 15pp.

Hirakuri, S.R. *Can law save the forest?: lessons from Finland and Brazil*. CIFOR, Bogor, Indonesia. 120pp. Thesis - Ph.D. (The Washington University School of Law).

Hyde, W.F., Jintao Xu, Belcher, B. Introduction. In: Hyde, William F., Jintao Xu, Belcher, B.(eds.). *China's forests: global lessons from market reforms*. pp.1-26. Resources for the Future and CIFOR, Washington, D.C., USA.

Kaimowitz, D. Forest law enforcement and rural livelihoods. *International Forestry Review* 5(3): pp.199-210.

Kaimowitz, D. *From Rio to Johannesburg and beyond: forest conservation and rural livelihoods in the global South*. Proceedings of the XXII World Forestry Congress: forests, source of life Quebec City, Canada 21-28 September 2003. pp.10-16. No.A - Forest for people. The Organizing Committee of the XII World Forestry Congress, Quebec, Canada.

Kaimowitz, D. Not by bread alone. forests and rural livelihoods in Sub-Saharan Africa. In: Oksanen, T, Pajari, B., Tuomasjukka, T. (eds.). *Forests in poverty reduction strategies: capturing the potential*. pp.45-64. EFI Proceedings, No.47. European Forest Institute, Joensuu, Finland. [Online] URL: <http://www.efi.fi/publications/Proceedings/>.

Lambin, E.F., Turner, B.L., Geist, H.J., Agbola, S.J., Angelsen, A., Bruce, J.W., Coomes, O.T., Dirzo, R., Fischer, G., Folke, C. The causes of land-use and land-cover change: moving beyond the myths. *Global Environmental Change* 11(4): pp.261-9.

Liu Dachang, Edmunds, D. Devolution as a means of expanding local forest management in South China. In: Hyde, William F., Jintao Xu, Belcher, B.(eds.). *China's forests: global lessons from market reforms*. pp.27-58. Resources for the Future and CIFOR, Washington, D.C., USA.

Merry, F., Amacher, G.S., Pokorny B., Lima, E., Scholz, I., Nepstad, D.C., Zweede, C.J. Some doubts about concessions in Brazil: should Brazil shelve its proposed system of forest concessions? *ITTO Tropical Forest Update* 13(3): pp.7-9.

Myatt-Hirvonen, O, Kanninen, M. Costa Rican metsät tuottavat ympäristöpalveluja. *Metsätieteen aikakauskirja* 1: pp.73-6.

Obidzinski, K., Barr, C. *The effects decentralisation on forests and forest industries in Berau district, East Kalimantan*. CIFOR, Bogor, Indonesia. 33pp. ISBN: 979-8764-86-2.

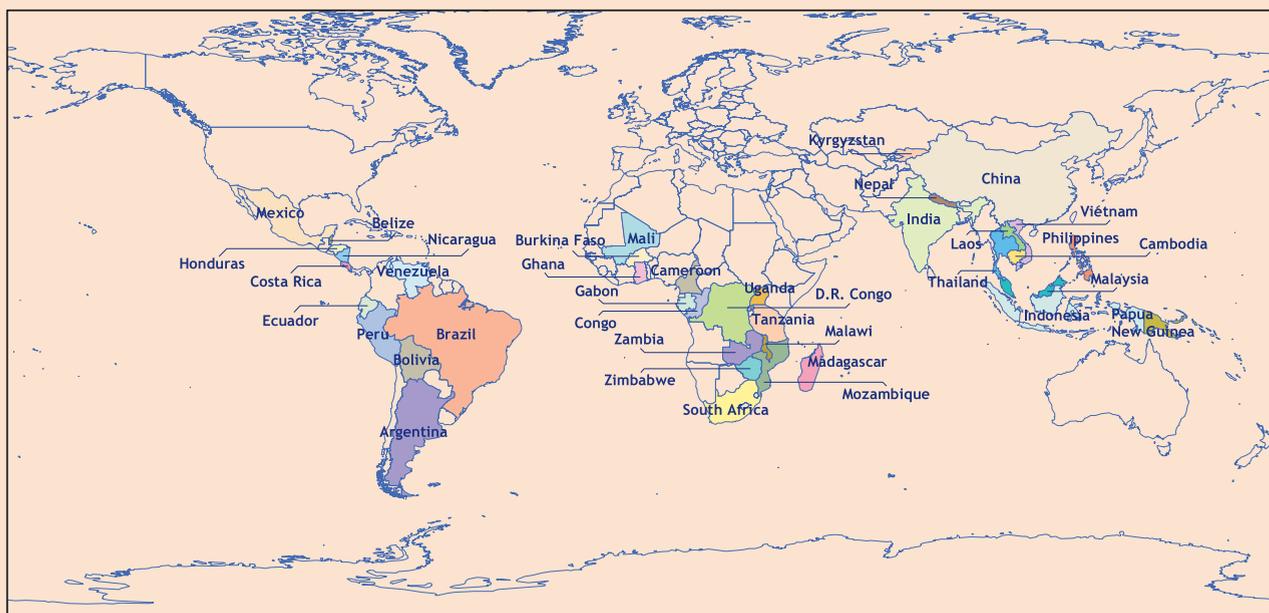
Salgado, I., Kaimowitz, D. Porto de moz: o prefeito, "dono do municipio". In: Toni, F., Kaimowitz, D. *Municipios e gestao florestal na Amazonia*. pp.219-52. Natal, A.S. Editores.

Sayer, J.A., Campbell, B.M. Research to integrate productivity enhancement, environmental protection, and human development. In: Campbell, B.M., Sayer, J.A. (eds.). *Integrated natural resource management: linking productivity, the environment and development*. pp.1-14. CABI Publishing in association with Center for International Forestry Research (CIFOR), Wallingford, Oxon, UK. Updated from Conservation Ecology [Online] 5(2). Online URL: <http://www.consecol.org/vol5/iss2/art32>.

Scherr, S.J., White, A., Kaimowitz, D. *A new agenda for forest conservation and poverty alleviation: making markets work for low-income producers*. Forest Trends and CIFOR, Washington, D.C., USA. 99pp. [Online] URL: <http://www.foresttrends.org/>

- resources/pdf/A%20New%20Agenda.pdf. ISBN: 0-9713606-6-9.
- Scherr, S.J., White, A., **Kaimowitz, D.** Time for something different: putting markets to the service of the forest poor. *ETFRN News special issue* (39-40): pp.24-5.
- Shanley, P.** Beyond timber: certification of non-timber forest products. *ETFRN News* (39-40): pp.65-7.
- Smith, J., Scherr, S.J.** Capturing the value of forest carbon for local livelihoods. *World Development* 31(12): pp.2143-60.
- Smith, J., Obidzinski, K., Subarudi, Suramenggala, I.** Illegal logging, collusive corruption and fragmented governments in Kalimantan, Indonesia. *International Forestry Review* 5(3): pp.293-302.
- Smith, J., Ferreira, S., van de Kop, P., Ferreira, C. A. P., Sabogal, C.** The persistence of secondary forests on colonist farms in the Brazilian Amazon. *Agroforestry Systems* 58: pp.125-35.
- Sunderlin, W.D., Angelsen, A., Wunder, S.** Forests and poverty alleviation. In: *FAO State of the world's forests 2003*. pp.61-73. FAO, Rome, Italy.
- Tacconi, L.** *Fires in Indonesia: causes, costs and policy implications*. CIFOR Occasional Paper, No.38. CIFOR, Bogor, Indonesia. 24pp. Also available in Indonesian.
- Tacconi, L.** *Kebakaran hutan di Indonesia: penyebab, biaya dan implikasi kebijakan*. CIFOR Occasional Paper, No.38(i). CIFOR, Bogor, Indonesia. 28pp. Also available in English.
- Tacconi, L., Boscolo, M., Brack, D.** *National and international policies to control illegal forest activities: a report prepared for the Ministry of Foreign Affairs, Government of Japan*. CIFOR, Bogor, Indonesia. 68pp.
- Toni, F., Kaimowitz, D.** *Municípios e gestão florestal na Amazonia*. A.S. Editores, Natal, Brazil. 428pp. ISBN: 85-88302-31-4.
- Toni, F., Kaimowitz, D.** Municípios e gestão florestal na Amazonia: introdução e marco teórico. In: *Toni, F., Kaimowitz, D. Municípios e gestão florestal na Amazonia*. pp.23-63. A.S. Editores, Natal, Brazil.
- Toni, F., Kaimowitz, D.** O papel dos municípios na gestão florestal: lições dos estudos de caso. In: *Toni, F., Kaimowitz, D. Municípios e gestão florestal na Amazonia*. pp. 373-415. A.S. Editores, Natal, Brazil.
- Wunder, S.** Does oil wealth help conserve the forests? *Sustainable Development International* (Autumn 2003): pp.43-5.
- Wunder, S., Verbist, B.** *The impact of trade and macroeconomic policies on frontier deforestation*. ASB Lecture Note, No.13. ICRAF South East Asia, Bogor, Indonesia. 33pp.
- Wunder, S.** *Oil wealth and the fate of forest: a comparative study of eight tropical countries*. Routledge, London, UK. 432pp. ISBN: 0-415-27867-8.
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