

Contents:

- Catastrophic Bushfires in Victoria, Australia

Association news

- London livery company's Devon forestry visit
- CFA launches the Young Scientist Research Award

Forest scenes

- Paying for Forests
- Close to Nature Forestry in Asia-Pacific
- Forest Research and Climate Change
- Strategic Framework for Forests and Climate Change
- Seeing people through the trees: scaling up efforts to advance rights and address poverty, conflict and climate change

Around the world

CFA Newsletter

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Catastrophic Bushfires in Victoria, Australia



February's disastrous forest fires have raised important issues regarding forest management in Victoria.

Many CFA members around the world will have seen dramatic news reports of the catastrophic bushfires that occurred in Victoria on 7 February 2009. These fires claimed the lives of at least 200 people, destroying about 2000 homes and burnt more than 300,000 hectares of forest, farmland and urban developments. The weather on the day was the worst ever recorded in Victoria, with the maximum temperature in Melbourne reaching 46.4 degrees Centigrade (115F), the relative humidity falling to 6% and the wind gusting to over 80kph. With more than 200 fires occurring in a 24 hour period throughout Victoria and the worst forest fire dangers ever recorded, the State experienced 12 major fires of unprecedented intensity.

The largest fire began at Kilmore East, about 50km north of Melbourne, at around 1130 am as a result of fallen electricity lines. It quickly raged out of control and travelled in a south-easterly

direction towards the mountain settlement of Kinglake, located 30km away, which it reached about 5 hours later. A second fire, which is believed to have been lit by an arsonist, began at Murrindindi about 50 km to the east of the first fire in the mid afternoon and it quickly raced towards the pretty tourist town of Marysville. These two fires joined together and burnt more than 220,000 hectares. Both Kinglake and Marysville and surrounding towns were largely destroyed by the fires and most of the deaths occurred in these areas. But the fires also burnt into forest lifestyle residential areas, and even through vineyards, in the outer eastern suburbs of Melbourne. These areas are the equivalent of the Chilterns north of London.

At the time of writing the final death toll is uncertain, but more than 100 people are still listed as missing in addition to the confirmed deaths. Fortunately, there were no deaths of firefighters. Media reports suggest that most people died either attempting to flee the fires in cars or

trying to protect their property. Australian fire authorities have a policy of "Leave early or be prepared to stay and defend your home". This policy is well founded on the basis of survivals and deaths in previous bushfires. However, the enormous loss of life in these fires will inevitably bring this policy under review. Mind you it is difficult to contemplate evacuating up to one million people from rural areas in Victoria every time there is a day of extreme fire weather.

The Victorian Government has announced a Royal Commission inquiry into all circumstances surrounding the fires. It will carry out its work over the next 18 months. Inquiries into severe bushfires are not new, with previous Royal Commissions into the 1939 and 1983 fires as well as many Coronial Inquiries, Parliamentary Inquiries and a Council of Australian Governments Bushfire Inquiry after the 2003 fires. Most of these inquiries have made similar recommendations over the years, but for some reason not all of the recommendations have been implemented.

Being located in one of the three most severe fire environments in the world, Victoria has a history of major bushfires, with severe fires in 1926, 1939, 1969, 1983, 2003, 2006 and now in 2009. What is becoming very concerning is the evidence that severe fires are occurring more frequently, burning more forest and now claiming more lives than ever before. It is hard to deny the linkages between climate change and these catastrophic fires.

Fire is part of the Australian environment. Most of our unique plants and animals have evolved under a fire regime and need fire as part of their life cycle. Australia has well developed firefighting agencies, including volunteer bushfire services that manage fires on rural lands and government land managers that are responsible for forest fire management. We have good fire suppression systems and good knowledge and experience in the use of prescribed fire in forest landscapes. But in some extreme fire weather situations, man is powerless to control forest fires.

The impacts of these fires go well beyond the immediate issues that have received justifiable media attention. Many of the forest ecosystems burnt by these fires will have recommenced their natural regeneration cycle. Some threatened species, such as Leadbeaters possum, may have been eliminated in some areas, because the old trees on which they depend for nesting sites will have been destroyed. Part of Melbourne's water supply catchment has been impacted by these fires and this will result in deterioration of both water quality and quantity. Some forest industries will have their log supplies reduced and the communities that have been so severely impacted by these fires will take years to rebuild their lives and overcome the trauma experienced.

Some of the key issues that are likely to be examined by the Royal Commission are the level of preparedness of the fire

agencies and the community to deal with severe bushfires; the systems for warning people of the threat of existing fires; the "stay and defend" policy; the amount of prescribed burning that is undertaken in public forests to reduce fire hazards; the standard of houses that are built in bushfire prone areas and the adequacy of firebreaks around houses and other assets. Already the media is carrying stories from various experts about the pros and cons of implementing prescribed burning programs in forest areas.

Interestingly I have a friend, who trained with me as a forester in the 1970s, who lives on a small property in Kinglake and who experienced the full impact of the fire. Fortunately, he survived and was able to single-handedly save his house, all the outbuildings and all the livestock on the property. He had arranged for prescribed burning to be conducted in the public forest surrounding his property in the years preceding this fire, he spent the week before the fire preparing his property by pumping water from lower dams up to the area around the house and when the fire threatened his house he used an old truck and water tank and his forest fire skills to put out any small fires that took hold on his property.

Foresters have contributed strongly to the knowledge about bushfires in Australia and have the skills to manage both prescribed fires and wildfires. With more than 35 years experience in forest fire management, including 25 years in Victoria and experience from the devastating 2003 Canberra bushfires, I am convinced that the magnitude of the fires we have been experiencing in recent years means that the fire management strategies we have relied on for the past two decades will need to change. There is likely to be multiple additional responses that need to be adopted to be better prepared to face future catastrophic forest fires in south-eastern Australia. Only time will tell if the governments and the community are prepared to accept the recommendations of the inquiries and change the way we "live" with fire in our environment.

Tony Bartlett

CFA Governing Council
Canberra, Australia

Postscript: Sadly on 17 February, 10 days after the Victorian fires started, a firefighter from the Australian Capital Territory died while working on the Marysville fire when a burnt tree fell across the fire tanker he was working on. Many firefighters from around Australia and also from New Zealand, Canada and the USA have travelled to Victoria to assist with the massive fire suppression operations and the death of one of them is a tragedy in its own right.

Association News

London livery company's Devon forestry visit

The Worshipful Company of Builders Merchants recently made a two-day study tour of forestry in Devon, UK. Livery Companies have their roots in the medieval trades and crafts and the Worshipful Company of Builders Merchants, which is based in London, has recently provided generous financial support to the CFA's Young Forester Award. Timber is an important product for Builders Merchants - sawn timber and joinery products comprise some 30% of the throughput - hence the desire to have a better understanding of the raw material.

The visit started at the South West Forest which is a sponsored scheme designed to promote forestry in the area between Dartmoor, Exmoor and Bodmin Moor. Mick Bracken gave the group a tour of a woodland recently planted with help from their grant-aided initiative. The tour then moved on to Soussons wood where Peter Verney, the Forestry Commission's Area Forester, introduced the visitors to forestry on Dartmoor and a practical demonstration of harvesting with a processor.

The next day John Wilding, took the group around the Clinton Estate to show a fine example of traditional forestry and the group discussed the challenges of maintaining viable forestry in the 21st Century. Finally, the group experienced a new aspect to forestry; timber for fuel. Sam Whatmore of `Timber for fuel` explained all aspects of chipping timber to provide fuel for heating; indeed one of the party thought that his company, who are major merchants in the South West might be interested in supplying mill offcuts.



The group discusses the future of forests in the South West of the UK

All in all, this was an important visit to help promote a better understanding of British forestry. Thanks are extended to all of the organisations visited.

Christopher Latham
CFA Vice-President

CFA launches the Young Scientist Research Award

The CFA recognises the fundamental importance of scientific research in the development of our understanding of the growth of forests and their value to society and our planet. Since 1921 the CFA has published leading scientific papers on forest research, and has more recently established initiatives designed to encourage publication of research articles by young researchers (the Young Scientist Publication Award) and distribute our journal, the International Forestry Review, free of charge to developing countries via the Programme for the Enhancement of Research Information (PERI).

In January 2009, the CFA launched a new initiative, the **CFA Young Scientist Research Award**, with the following terms of reference:

Objective of scheme To provide financial support to Commonwealth students undertaking forest-related research in pursuit of an academic qualification.

Age Up to 35 years of age

Nationality and location Citizen of a Commonwealth country carrying out research in a Commonwealth country within a recognized academic programme working towards an academic qualification.

Educational status No restrictions.

Amount of money available Up to £1000.

Number of awards and their frequency One award per year.

Terms and conditions for use of money Funds provided to the academic institution. Report provided to CFA of work carried out.

For more information please visit www.cfa-international.org/Young_Scientist_Research_Award.html

Forest scenes

Paying for Forests

If the world is to solve the problem of climate change it must first solve the problem of forest loss. Each year forest is lost for many different reasons: conversion for agriculture, wood fuel, ranching, palm oil plantation, population expansion, infrastructure growth and also from logging (both legal and illegal). This conversion of forest land to other uses is responsible annually for the release into the atmosphere of up to 20% of all greenhouse gas emissions. That is why one of the successes of the Bali conference in December 2007 was the decision to include reduced emissions from deforestation and degradation as part of the solution in a post 2012 framework for combating climate change.

The basic idea from Bali is that we should reward developing countries which slow down their rate of deforestation; paying in effect for the difference between what they have cut down and what they might otherwise have cut down. The method is one that calculates a historical rate of deforestation and then extrapolates it into the future gradually reducing it over decades. Any improvement between this “reference rate” and the country’s actual rate of deforestation is then measured as “avoided deforestation” against which tradable credits may be issued. It is important that the UNFCCC get it right. But what if their model were flawed -- not just technically but practically and politically? The world would have squandered a unique opportunity to solve a major element of the climate change problem. As we continue to engage in the detailed negotiations we must not stop examining the model as a whole. If we find that flaws exist and if we recognise them to be serious we must have the courage to start afresh from first principles.

Technically avoided deforestation is a calculation that is measured as a deviation from a hypothetical. So poor is some of the satellite data from past years that the historical deforestation rate itself is more conjecture than fact! More important than this though, the hypothetical reference rate is itself open to widely differing and subjective interpretations. Arguments can and do arise about the time period from which the appropriate reference rate of deforestation should be extrapolated. Countries can and will object if the period used to calculate their own baseline rate is not applied equally to their international neighbour. Yet their neighbour may have a startlingly different profile of population growth and economic development in that period that renders such a calculation wholly inappropriate. One need only recall the effect of the choice of 1990 as the appropriate baseline year in the Kyoto Protocol which led to Russia’s enormous surplus of emission allowances and the United States refusal to ratify. Even were such factors to converge perfectly across all developing forest nations, any reference rate is blind to subsequent events. This means that it becomes progressively less and less useful and appropriate from the moment it is adopted. To insist that there will be periodic renegotiations of the reference rate is to do no more than to admit that this basic flaw in the system exists.

Assuming these technical issues were to be resolved, there remain fundamental objections on the level of practical policy. Not least of these is the problem of perverse incentive. Any indication by the international community that it will adopt

a system of payment for avoided deforestation automatically encourages developing forest nations to increase their current destruction of forest. By doing so they will increase their ultimately agreed reference rate and maximise the differential between their hypothetical loss and the actual loss they incur. By artificially boosting the measurement of avoided deforestation in this way, countries would be able to secure additional payments for actions they would have taken in any event. To compound this problem; countries whose historic rate of forest loss is commendably low, may feel themselves aggrieved by a system that ensures larger payments to those who have failed to preserve their forest cover whilst countries with more successful conservation records benefit least of all.

Perhaps the single most damning aspect of the current proposals for payment for avoided deforestation, however, is that they fail to pass the common sense test of the average voter. The public are already suspicious that carbon trading is more for the benefit of the financial markets and city traders than for the benefit of the planet. Any politician who proposes that billions of dollars should be paid over to foreign countries -- not in return for something tangible that actually exists, but for something intangible (something that hasn’t been done) and is measured as a deviation from a hypothetical reference rate -- is a politician sadly disconnected from his or her electorate!

Voters do not talk about forests in the language of “global public utilities”, but they know that in addressing climate change, forests are good things that the world needs more of. If the UNFCCC is to persuade voters around the world to allow governments to spend your and my money in this area, then it must be in a system that rewards good practice and not bad and that pays for real things not hypothetical ones.

Politicians must regulate the trading structures so that the financial markets can be used to benefit forests; not structure regulations so that forests can be used to benefit the financial markets. This means that instead of paying for avoided deforestation we must create a market that pays for forests -- actual standing stock. This market must be simple enough to incentivise the things we want done such as planting new forest and reforestation of previously degraded land. It must also be powerful enough to stop people destroying the forest that currently still exists.

Above all the market must revolve around the trees and in doing so must properly value the many ecosystem services that the trees provide. A mature tree provides benefit to the environment not only through locking up carbon that would otherwise be released into the atmosphere as CO₂. It functions also to regulate our climate by pumping moisture into the air, to provide watershed protection, to stop soil erosion, to provide sources of food and habitat for an enormous range of biodiversity, to provide fuel and construction materials, and sometimes it acts as a reservoir of secrets for pharmaceutical companies to harness.

But most tropical hardwood species do not mature until they are at least eighty years old and many will take one hundred and twenty years to establish their proper place in the canopy. If a market is to be centred around the trees it must

encompass the life cycle of the forest.

What would such a tree-centred financial market look like? The answer is that it still generates credits, but it does so over a 100-year cycle. Every year a country's total standing forest should be measured and each year the country be authorised to issue credits that correspond to one per cent of its measured stock. This means that over the 100-year cycle that approximates the cycle of mature forest growth the total forest cover will be accounted for. By restricting the release of credits to one per cent of standing stock each year we also avoid the danger of flooding the market with carbon. The link between the forest and the credit that rewards it is both direct and positive. Deforestation at a higher rate will result in less reward the following year. Afforestation or deforestation at a lower rate will result in a greater reward.

A credit can either be traded or used to emit and it is important that there should not develop an imbalance in the market by traders hedging long into the future. To prevent this and ensure that the total credits in circulation could never exceed the actual forest cover; credits should be restricted to a 10-year life span. This tightens the arbitrage window available to traders and would make a credit potentially less valuable the older it becomes as the scope for hedging is reduced. Critically, the new credits available would fluctuate each year in proportion to forest cover. Developed countries wishing to offset their carbon emissions by use of these credits would therefore find it more expensive as forest cover declines but easier and cheaper if forest cover expands. Thus the market is made to work for forests not the other way round.

Under this model it is the sovereign national government that would be authorised to issue credits. In order to ensure positive future revenue streams from the forest, governments would need to co-operate with and incentivise private landowners, regional government and indigenous peoples, amongst others. To ensure this co-operation, governments would be able to delegate the right to trade these credits by granting permits to such groups in return for an appropriate fee. To protect and respect national sovereignty however, these sub-national level arrangements should not form part of the international market regulations. Equally the model would not support governments who obdurately continue to deforest whilst using the model as a revenue stream (albeit a diminishing one) for the next 100 years! For each percentage of forest lost beyond a certain level, credits authorised might also fall by one tenth from 1% of measured stock to 0.9%, 0.8% and so on.

The logic of the carbon market as embodied in the Kyoto Protocol was to enable the Parties to reduce carbon emissions in the most cost-effective manner. Kyoto recognised that, whilst the cost of reducing carbon emissions varied considerably from country to country the benefit to the planet was the same regardless of where the action was taken. This has often been expressed in the truism "A tonne of carbon is a tonne of carbon". Because of this the carbon market has always operated on a strict one for one basis. I want to suggest that this rule could be modified in order to deliver additional environmental benefits.

Carbon markets are a part of the international community's response to the challenge of climate change. But climate change has increasingly come to be seen in isolation from its ecological context. It should be remembered that a change in climate, in and of itself would not matter if species were

able to keep pace with the rate of change. It is because the rate of change is so rapid and species cannot keep up with it that biodiversity is suffering such rapid depletion. The Millennium Ecosystem Assessment suggests that the rate of extinctions of species is now running at 1,000 times the normal background rate that we see in the fossil record. This depletion of biodiversity results in the degradation of the ecosystem services upon which human life depends. Ultimately this is what makes climate change so important: because biodiversity and ecosystems are vital to supporting human life. Perhaps then we should regulate the market so that it is turbocharged in favour of biodiversity and ecosystem services other than carbon sequestration alone.

The first thing to recognise is that whilst the Kyoto principle of "one for one" is a perfectly rational way, it is not a necessary way of structuring the market. Indeed it could be argued that if millions of tonnes of new carbon, in the form of standing forest, are to be introduced into the system post 2012 it is rational to introduce a gearing effect. Emitters who want the privilege of offsetting emissions might better be required to pay for two tonnes or even four tonnes of standing carbon for every one emitted. If we regulate the market in this way then it would seem a small step to favour IUCN Red List Habitat forest by allowing that every unit here counts as two or even four. The value of red listed forest would then be of far greater significance to governments who would find that a market, turbocharged in this way, actually provided them with the financial revenues necessary to protect this vital planetary resource. Similar gearing criteria could be determined for other ecosystem services, such as forests that provide significant watershed protection or soil stabilisation functions.

To conclude:

- The problem of climate change requires that we solve the problem of forest loss.
- The decision to include forests into a post Kyoto framework provides a vital opportunity that must not be squandered.
- The current model of "avoided deforestation" appears technically, strategically and politically flawed.
- Payment must be for something real not something hypothetical.
- The carbon markets must be structured to ensure the maximum benefit to forests not the other way round.
- Credits must have a direct positive link to forest cover
- We can turbocharge the market structure to promote other essential ecosystem services.

Many people and organisations have invested significant time and resource in advancing different models of how the carbon markets might incorporate forestry. We must rigorously test each of them against first principles. All of us engaged in this area should be happy to see our own model cast aside if a more adequate one is able to replace it. Ultimately, success will be measured not by whose model wins the argument, but by how much of the world's forest we manage to save.

Barry Gardiner

Member of the UK parliament and a former Minister for Biodiversity

(Mr Gardiner was Prime Minister Gordon Brown's Special Envoy for Forestry until September 2008)

Close to Nature Forestry in Asia-Pacific

Physical disabilities, intellectual weakness and hostile circumstances kept *homo sapiens* during most of its evolution close to nature as shelter, benefactor and merciless teacher: learn, adapt or die. Improvements of skills came through observation and by trial and error, often painfully. Logically, also, early forestry had to cling close to nature. Wilful escapades against nature quickly ended and still end in failure and disaster. Professor Friedrich Wilhelm L. Pfeil, first director of the Prussian Forestry Academy, Berlin – Eberwalde in the first half of the 19th century, proponent of Beaulieu – Marconnay’s traditional concept of the “iron law of site-specificity”, famous for epitomising: “Ask the trees how they want to be brought up; they will teach you more than books can”, understood the feed-back nature of the interaction between the forester and the forest, and recognised that the forest is an open (eco-)system. He believed that foresters not only need understanding to succeed, but also love of forests and nature.

Later, in the 1850s-1860s, the botanist Dr. Dietrich Brandis applied this love and understanding in the form of close-to-nature-forestry (CNF) to the teak forests of Pegu, Burma, and their people. He succeeded in replacing customary timber mining with sustainable, socially responsible traditional forest management and conservation based on reliable information (strip-enumeration), quantitative guidelines (tree density:diameter class curves), strict enforcement and participation. Brandis’ work inspired forestry development in India, Malaya, Thailand, Indonesia and, finally, in China and even at home in Europe. Pfeil’s and Brandis’ spirit and thought still persist in German- and are reflected in EU-forestry thinking and practices. In the 1920s, Professor Alfred Möller, Eberswalde/Berlin, based his controversial *Dauerwald* (continuous forest, continuous canopy cover forest) theory and CNF practices solidly on the insights which he had gained by ecological (mycorrhiza) field and laboratory research in the tropical rainforests of Brazil, but also derived from the same source his exotic idea to liken the forest ecosystem, or at that time, biocoenosis plus processes, to an organism. Professor Franz Heske, Tharandt/Dresden, extended this organismic perception and CNF principle to the world as a whole and included all sectors of forestry and forest industry. His globalising *Weltforstwirtschaft* (World Forestry) linked forestry in Europe with those in the tropics by a network of interdependences, interactions and inter-responsibilities in a natural-cultural ecosystem hierarchy. Before the Second World War, a society to promote CNF was formed in Germany, which is still very much alive today, and the CNF concept was made law and became legally binding.

When Malaysia was formed in 1963, natural science and forestry at its universities, research at the Forest Research Institute Malaysia (FRIM) and the art of forestry performed by the forest services had already set world standards. The continuing progress in the science, art and practice of rainforest biology, ecology, plantation and natural forest management, nature conservation and socio-economic development promised consolidation of sustainability and integration. Adequate forest policies and laws were in place and enforced, forestry and forestry industry were in balance. However, timber mining and land grabbing, totally unexpectedly and unpredictably, spread from the Philippines, domino-fashion, through the tropical rainforests in Asia-Pacific, Africa and America and blew the concepts of CNF and sustainable,

integrated, environmentally friendly forestry development out of the window. More recently, another threat to sustainable land and socio-economic development arose in the form of fashionable speculative plantation investments in crops of commodity timbers, chips and fibres, bio-fuel and carbon-storage. This was politically correct and desirable, as well as profitable, but ignored the rapid advances in information and energy sciences and technologies (paper, coal, solar, wind, fusion, batteries instead of oil) and the signals, if yet weak, of changing trends in timber markets and consumption back to quality in the EU. Therefore, to call for a symposium on CNF in the Asia-Pacific is not backward-looking nostalgia, but forward-looking awareness of unavoidably growing global wants and needs demanding solutions, including close to nature forest management and conservation, sustainable socially responsible forestry and integrated forestry industry development in the tropics.

The German Forestry Alumni Network, cooperating with the Forest Research Institute Malaysia (FRIM) and the Asia-Pacific Association of Forestry Research Institutions (APAFRI), held an international symposium on the challenging subject of “Close to Nature Forestry – Practices for Asia-Pacific towards the Millennium Development Goal Challenges” in Kuala Lumpur, 17th to 20th December, 2008. The participants were 28 research and practising foresters from ten nations: Cambodia (1), China (2), Fiji Islands (1), Germany (6), India (2), Indonesia (8), Malaysia (3), Nepal (1), Philippines (1), Sri Lanka (1), Vietnam (1). 26 reports were presented in six sections: Keynotes (2), Close to Nature Forestry (3), Economics and Policy (7), Forest Management (5), Forests & Diversity (6), Genetics and Silviculture (3), followed by a workshop to formulate an action plan.

Each contribution focussed on subjects of particular interest to the author(s), such as promoting CNF practices through green fiscal policy; CNF and REDD; CNF, SFM and law; allozyme variation in *Intsia bijuga* populations; or, more mundanely, technical aspects of silviculture and eco-tourism. This led to a certain lack of coherence, but still, major gaps in the wide range of subjects were filled in the discussions and a still sketchy, but interesting and informative overview over the state and processes of CNF in the 10 nations was finally produced. It appeared that in all the nations, interest in CNF and opportunities for its application existed, but also that in Asia-Pacific, as in many other parts of the world, many serious social, fiscal, political and administrative obstacles inside and outside forestry have to be overcome before CNF and sustainable forestry can be safely and effectively implemented.

In his keynote address, Dr. Abdul Rahman Kassim of FRIM said that a century of empirical trial-and-error development of various CNF management systems in the Lowland Mixed Dipterocarp Forests (LMDF) of Malaya, now Peninsular Malaysia, had practically failed. Also, most of this forest formation has in the meantime given way to urban or agro-plantation development. He mused that CNF practices originated in temperate forestry and therefore there are no suitable quantitative guidelines for applying CNF in tropical forests. However, the truth is that in the 1860s, Dr. Dietrich Brandis included simple but feasible Biolley-type tree-density over diameter class curves as quantitative guidelines in his Control Method of managing the teak forests of Pegu, Burma (now Myanmar). We still used Brandis’ ideas and experiences when we developed a teak growth simulation model in

Hamburg in the 1970s.

More recent development of system analysis, modelling and simulation of forest structure, tree and forest growth, and of integrated information and control systems supply even more sophisticated, flexible, adaptable and feasible tools to guide adaptive CNF in tropical forests, including tropical rainforests. Examples are those developed for local and regional planning in the Malaysian-German Sustainable Management Project, especially in the Demarked SMU, in Sabah, Malaysia. It was less the lack of concrete quantitative guidelines than the failure to enforce them and to defend standards of forest conservation, Low Impact Harvesting and management against the latter-day tsunami of lowland forest timber mining and conversion.

Abdul Rahman hoped that forest management will in future be supplied with the "require[d] accurate prediction of future stand development". This hope is unlikely to be fulfilled. Forest ecosystems share with every other complex, dynamic natural or cultural system, such as lakes, climate or markets, high degrees of uncertainty. Non-linearities, feed-back loops, stochastic occurrence of events and unexpected episodic, singular events will always affect the reliability of forecasts, the more so, the more focussed, precise, deterministic and long-range the forecasts are. Since the end of the Second World War in all ten countries, the long-term climatic, economic and political events and changes, including the drastic decline of forest resource values and corrosion of forestry's political weight, were neither predicted nor predictable with any certainty until way into the events. The slumps of the stock markets and the depressions of the real economy after 1929 and 2008 were not foreseen by most experts and analysts. Instead of hoping and calling for quantitative guidelines we should learn from nature and adopt flexible and adaptive CNF management to save the dwindling area of more or less intact natural forests and to rehabilitate and restore those which have already been degraded and plundered. The FRIM LMDF research and recreation forest is an example of what can be done by CNF.

The visit to this forest was the highlight of the symposium. The physiognomically pristine forest is in fact a young secondary forest. It was planted 1947 on barren ground in open land with a selection of "fast-growing, long-living" (*sensu* T.C. Whitmore) native Dipterocarps in blocks. I saw the forest for the first time in January, 1955, when it was a thriving pole stand and have been fascinated by its vigour and beauty ever since. In 1987, at age 40, the basal area ha⁻¹ of *Dryobalanops aromatica* Gaertner f. (Kapur) was 33.8 m² and of *Shorea parvifolia* Dyer 51.5 m² (B. HAHN-SCHILLING, 1988, Ph.D. Thesis, Univ. Göttingen, cited in E.F. BRUENIG: Conservation and Management of Tropical Rainforest, CABI, 1998, p.217). In 2008, during our visit, I guessed that the phytomass stocking had reached about 80-90%, and the floral richness by natural invasions perhaps 50% of the site-specific saturation levels. But the main A-layer canopy is unnaturally dense and uniform, the

crowns small, the stems slender and whippy, the forest stand is not stable and waits for storm, pests, diseases or drought to correct the human error. Recently, FRIM wanted to remedy the dangerous situation and open the canopy. This overdue CNF-type tending was successfully blocked by local citizens (who use the area for recreation) and politicians, indicating acute information gaps and knowledge deficits. Natural disturbances will now have to do the job, but how, when and what the result will be is, naturally, unpredictable. Nature is not lenient and her ways can sometimes be very rough dead ends.

In spite of these social and political impediments by the local power elite, this well-documented and internationally well-known secondary LMDF research forest is unique and demonstrates the enormous inherent vitality and vigour for growth and the intrinsic robustness of the tropical rainforest (TRF) on average sites. It is another example of the capacity of the TRF ecosystem to repair damage (vying with the human brain!), to recover from destruction and restore its natural features with little initial assistance and later tending, provided the forest is protected against further encroachment, destructive exploitation, and people's ignorance. This well-documented example of the inherent capacity to repair and restore, and of the high potential of restored TRF to produce and serve, is of global relevance, in view of the many myths about the nature of tropical forest trees and natural forest ecosystems are still being marketed by powerful interest groups.

In the final session, the formation of an Asia-Pacific CNF network was discussed and put on the agenda of the organisers. The proceedings of the symposium made it very clear that CNF is neither an esoteric concept of foresters nor an abstruse philosophy of nature lovers. Nor is CNF simply a silvicultural tool of choice or a rigid, positivistic and old-fashioned silvicultural dogma. CNF is an essential and very practical feature of holistic and ecosystem-orientated management and conservation of natural, near-natural and plantation forest (see the ITTO Guidelines for details). CNF's role and challenge are enhanced by the rate and nature of local to global changes in nature and society. Forests, forestry and the environment have to be steered through these changes with as little damage as possible. Their performance standards of services to society must be as high as feasible. This gives CNF an important responsibility and challenges foresters and governments to find the way back to the traditional principles of sustainable social forestry.

I am not aware of any plan to publish proceedings of the symposium. Enquiries can be made at the Centre for Tropical and Subtropical Agriculture and Forestry, Georg-August-Universität, Göttingen E-mail cetsaf@uni-goettingen.de or baskaran@frim.gov.my

Eberhard F. Bruenig
University of Hamburg

Forest Research and Climate Change

Forest Research is part of the Forestry Commission and is the leading UK organisation engaged in forestry and tree-related research. Forest Research's programme of climate change-related research is wide-ranging – including forest management, biosecurity, the management of woodland for biodiversity and the services that trees and woodlands provide to society. Forest Research is investing over a quarter of its total research budget (c.£10.3 million in FY 2008/09) directly on climate

change programmes. Forest Research has a number of research programmes (as outlined below) targeted at providing information regarding forests and climate change.

Climate change impacts on forest function

Long-term monitoring of climate information and the response of trees is fundamental to the understanding of forests and climate change. Forest Research's work draws together



The flux tower at Alice Holt Research Forest monitors the exchange of carbon dioxide between the atmosphere and the surrounding forest.

information from long-term monitoring and experimental work at Alice Holt Research Forest and elsewhere in the UK. The research includes analysis of long-term datasets in order to understand and characterise the impacts of climate change.

Climate change is clearly a huge and important matter at international and local level, and impacts upon the choice of species planted. Research Note (FCRN101), 'Impacts of climate change on forestry in Scotland – a synopsis of spatial modelling research', highlights that predicted warmer summers and higher levels of CO₂ are likely to raise forest productivity. For example, Sitka spruce increases of yield classes (YC) 2-4 are possible. So isn't a higher YC good news? Yes, but as ever with climate change, there are always less-desirable consequences. In this case, any increases in yield could be negated by greater tree instability causing more windthrow (caused by wetter winters and more-frequent, more-intense gales), increased frequency and magnitude of fires, summer droughts, higher deer populations and the spread of pests and diseases. Likewise, if summer droughts, as predicted, become more frequent in the east of Scotland how will that impact on Sitka spruce? Will it become a non-starter or just less productive? There are no clear answers at present other than it is clear that we need to start to plan now for future uncertainties – and that includes the development of a stronger evidence base for our decisions. This is one reason why targeted research is so important and why we need to know the questions for which the forestry sector wants answers.

Ecological Site Classification (ESC)

ESC has been developed both as a stand-based and spatial tool for matching tree species and native woodland communities to site types. It has been successfully used to inform GB forest policy, particularly in relation to the impact of future climate

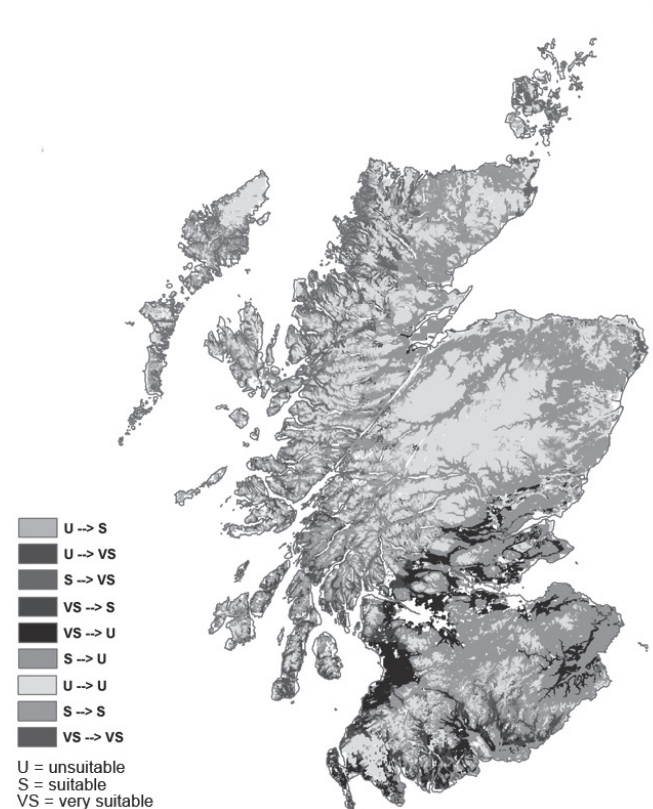
scenarios on tree species. The programme is also developing stand-based and spatial climate change impact and adaptation tools, including new ways to assess the risk of biotic and abiotic impacts of climate change scenarios.

Forestry as an instrument for mitigating climate change

This work focuses on evaluating mitigation options based on the management of forest carbon and greenhouse gas (GHG) dynamics for input to national GHG projections. The research includes an economic analysis of mitigation options, such as sequestering carbon in woodland, more efficient energy use in forestry operations and substituting wood products for more energy-intensive materials. Research also focuses on the reporting of carbon stocks and GHG balances, setting standards for assessment methods and determining indicators of different greenhouse gases. As a specific output, the research will model the GHG budget for a raised bog restoration project from a conifer plantation.

Silvicultural impacts on carbon

This work will provide scientific evidence to underpin appropriate silvicultural regimes that promote 'low carbon' land management practices. This will be achieved through field assessments, modelling approaches and the synthesis of existing knowledge. It will initially concentrate on determining the effects of conventional management practices on soil carbon stocks, which will enable an evaluation of the resource available to supply the expanding woodfuel market.



Forest Research's work includes modelling the effects of climate change on the suitability of tree species. This case shows expected changes to the suitability of Sitka spruce in Scotland by 2080.

Biosecurity

Climate change has the potential to alter the future distribution, abundance and impact of forest pests and pathogens. Their impact will depend on their life cycle characteristics and factors that influence their biology and population dynamics. By improving the understanding of how climate change affects the interactions of pests, pathogens and host trees, Forest Research can establish current and future risk profiles to inform tree species choice, and predictions and mitigation techniques to reduce the effects of damaging pests and diseases. Considerable research is being put into diseases such as Red Band needle blight, phytophthora and insects pests such as the green spruce aphid and Hylobius.

Tree stability

A forest wind risk decision support system (Forest GALES) is being extended. Forest GALES was initially developed to provide risk assessments for uniform conifer stands. It will now be used to aid the design planning process, to provide risk assessments at a regional or country scale and to provide assessments of wind risk from climate change and extreme event scenarios. Extending the model will allow risk assessments for stands being managed by continuous cover forestry, a measure that has been proposed to increase resilience to climate change.

Woodfuel research

The woodfuel research programme aims to support the characterisation and quantification of the available resource, develop best practice for the wood supply chain, together with disseminating improved information on fuel quality and energy values. There is also close integration between the woodfuel research programme and the Biomass Energy Centre (BEC). The BEC provides a 'one-stop-shop' information service for all aspects of biomass energy production.

In addition to the core climate change work noted above there are significant climate change elements in a number of other research programmes. The work of seed biology and climate change is just one example. A number of native tree

species need to be chilled for successful germination. There is some concern that, based on published climate change scenarios, this chilling requirement may not be met and natural regeneration in semi-natural woodlands may suffer. Research is currently focusing on interactions between seed origin/provenance, the chilling requirement and germination success.

Forest Research works on a number of partnership projects. One example concerns screening of juniper seeds with X-rays. In 2008 the Yorkshire Dales National Parks Authority (YDNPA) reported that it was collecting juniper seeds as part of a programme to supply local plants for new native woodlands. Juniper (*Juniperus communis*) is one of three conifers that are native to the United Kingdom. Unfortunately, juniper populations across the UK have declined by up to 60 per cent since 1960. At the same time, scientists from FR were using X-ray techniques to look at the viability of tree seed. Having seen the article, Peter Gosling, senior seed scientist at Forest Research, got in touch with the YDNPA to say, quite literally, "we have the technology to help you". Not only is juniper apparently failing to regenerate naturally in the NYDPA, but it is also proving difficult and very time-consuming to propagate artificially. FR is using x-rays as a non-destructive means of determining and selecting 'filled' seeds. Then FR can home in on studying the dormancy properties of only filled, potentially live seeds. FR is hoping to find out why it takes so long and, better still, find ways of speeding up the process and making it more reliable. This knowledge will help this project and the wider tree nursery sector. For example, nurseries have found that it takes at least 2-4 years of artificial pretreatment to obtain a very small proportion of seedlings. The results of this collaborative work are due out in 2009. Its findings could be a significant step forward in efforts to extend juniper habitats in the UK. Other species could also potentially benefit from this technique.

For more information on Forest Research's work on climate change go to [www.forestresearch.gov.uk/pdf/FR_climate_change_research_Sept08.pdf/\\$FILE/FR_climate_change_research-Sept08.pdf](http://www.forestresearch.gov.uk/pdf/FR_climate_change_research_Sept08.pdf/$FILE/FR_climate_change_research-Sept08.pdf)

Hugh Williams

Interim Communications Director Forest Research, UK

Strategic Framework for Forests and Climate Change

A proposal by CPF for coordinated forest sector response to the climate change agenda

Since April 2008, the members of the Collaborative Partnership on Forests (CPF)¹ have worked on a concerted effort to develop a Strategic framework for forests and climate change. It proposes a coordinated forest-sector response to the global climate change agenda. The CPF strategic framework puts forward a case for tactical role of sustainable forest management in achieving long-

term climate change mitigation and as a robust framework for effective adaptation. It also emphasizes action for adaptation and more focus on combating forest degradation through sustainable forest management, including forest conservation, rehabilitation and restoration.

The CPF strategic framework was launched in Poznań, Poland, during the 14th Conference of Parties of the United Nations Framework Convention on Climate Change (UNFCCC) in December 2008. It conveys six key messages, summarized as follows:

¹ **CPF member organizations:** Center for International Forestry Research (CIFOR); Food and Agriculture Organization of the United Nations (FAO, Chair); International Tropical Timber Organization (ITTO); International Union for Conservation of Nature (IUCN); International Union of Forest Research Organizations (IUFRO); Secretariat of the Convention on Biological Diversity (CBD); Secretariat of the Global Environment Facility (GEF); Secretariat of the United Nations Convention to Combat Desertification (UNCCD); Secretariat of the United Nations Forum on Forests (UNFF); Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC); United Nations Development Programme (UNDP); United Nations Environment Programme (UNEP); World Agroforestry Centre (ICRAF); World Bank

1. Sustainable forest management provides an effective framework for forest-based climate change mitigation and adaptation
2. Mitigation and adaptation measures should proceed concurrently – they are equally important
3. Inter-sectoral collaboration, economic incentives, and alternative livelihoods are essential for especially for reducing deforestation and also forest degradation
4. Capacity-building and governance reforms are urgently required
5. Forest monitoring and assessment require greater coordination, and carbon monitoring needs to be integrated into existing forest monitoring systems
6. CPF members are committed to a collaborative and comprehensive approach to forest-based climate change mitigation and adaptation.

The concept of sustainable forest management goes far beyond traditional management and includes conservation of biodiversity, support to livelihoods, provision of a range of forest goods and services, and issues related to governance and financing. However, given the increasing emphasis on forests as part of the solution to climate change, there is a need to better convey what this concept means and ensure it is well understood and fully utilized in the climate change negotiations. This is to avoid further proliferation of forest issues and building on existing, well-established concepts, terms and tools.

The United Nations Forum on Forests (UNFF) recognizes sustainable forest management as “a dynamic and evolving concept that aims to maintain and enhance the economic, social and environmental values of all types of forests for the benefit of present and future generations.” In general, it addresses broad social, economic and environmental goals and seeks balance between society’s increasing demands for forest products and benefits, and the preservation of forest health and diversity. This balance is critical to the survival of forests, and to the well-being and livelihoods of forest-dependent people.

Why a coordinated forest-sector response?

The CPF undertook this joint initiative to capitalize on the fact that forestry is higher than ever before on the political agenda

for various reasons, including the importance given REDD by COP 13 of UNFCCC in 2007, and the adoption of the Non-Legally Binding Instrument of All Types of Forests by UNFF the same year. The time was opportune to start strategising and embark on implementation, i.e. action on the ground.

The CPF strategic framework draws on the experience that CPF members have in dealing with complex issues, such as forest law compliance, support to livelihoods, or integrating conservation aspects into land use planning, thus bringing together and sharing their collective wisdom in the field of forestry.

While enhancing coordinated approaches, CPF members are not speaking on behalf of the entire forest sector, given the rich array of stakeholders that deal with forest issues at various levels. An example of complementary effort that a number of CPF members have supported is the initiative on forests and climate change of the The Forests Dialogue, a network of private-sector and civil-society leaders seeking solutions for the challenges facing forests globally. The messages conveyed by both CPF and TFD are largely complementary.

The CPF strategic framework aims to:

- facilitate countries in the preparations for the post-2012 climate regime through information and in responding, from the forestry perspective, to the UNFCCC’s Bali Action Plan and the development of any future UNFCCC mechanism for reduction of emissions from deforestation and forest degradation (REDD) in developing countries
- contribute to the implementation of the UNFCCC, UNFF and other relevant agreements
- enhance coordinated action on the ground, including integration of relevant climate change aspects into sustainable forest management in a cross-sectoral manner
- assist in informing donors

The CPF strategic framework lays the groundwork for a coordinated forest-sector response to the global climate change agenda. Its force is in the fact that it has been jointly created and agreed by the world’s major forest organizations. It is offered as guidelines to all forest-related policy-makers and practitioners around the world.

The full document and a separate executive summary of the CPF *Strategic framework for forests and climate change* can be downloaded at: www.fao.org/forestry/cpf-climatechange.



Seeing people through the trees: scaling up efforts to advance rights and address poverty, conflict and climate change

The world is arguably on the verge of the last great land grab. As world demand for food, fibre, and bioenergy escalates, so too does the value of land. By 2030 the world is likely to need 515 million more hectares to grow food and biofuels, twice the amount of additional land that will be available. It is quite possible that, over the next several decades, investors and governments will take advantage of the unclear and insecure property rights prevailing in many rural areas, ignore the customary ownership and protests of local people, and divvy up and lay claim to the remaining public forest domain.

Should this scenario unfold, the world's poor will be unable to hold on to their only real capital asset—their land. The risk is high that millions of forest-dwelling people will be pushed further into poverty and conflict and that distinct cultures will be forced into extinction.

How tensions over forest lands play out will influence the severity of climate change, the course of wars and civil conflicts, and the ecological health of the planet. Yet few development interventions in forest areas have worked in favor of either the forest dwellers or the forests. A new approach and urgent action are needed.

Local rights

Recognizing and securing land rights, strengthening civil rights, and introducing more democratic governance systems in forest areas are critical not just for moral reasons but also for achieving national and global social, economic and environmental goals. They are fundamental to any viable strategy for dealing with the biggest challenges of the 21st century: climate change, poverty, conflict, and environmental degradation.

For many forest-dwelling communities, however, property rights are undermined by inappropriate regulatory frameworks that either fail to uphold the principles of rights, or impose rules and bureaucratic processes that are burdensome to communities and counterproductive to the enforcement of their rights.

Reasons for hope

Despite the obstacles, forest dwellers and other rural peoples are organizing themselves and gaining strength—both to advance their political and social agendas and to engage more effectively in economic activities that enhance their wellbeing. These steps are aided by improved communication and transparency and the availability of new rural mapping tools.

Forest dwellers and other rural peoples are organizing themselves and gaining strength—both to advance their political and social agendas and to engage more effectively in economic activities that enhance their wellbeing.

Some governments are beginning to recognize the territorial rights of local communities and to clarify the property rights of households and individual citizens. Over the last two decades,

local communities and indigenous people have won back rights to an increasingly large area of forest land.

Limited rights = poverty, conflict and low economic growth

But even where indigenous and traditional land and property rights are recognized, such rights rarely provide the same level of protection as other private property. Private rights, including to private property held by groups, are more robust and less easily controlled or expropriated by governments or more powerful actors. Communities that hold private rights have more leverage when negotiating with governments or outside investors than those communities with only long-term access rights to publicly held land.

Poverty

Insecure or limited property rights over forest lands and resources create and sustain poverty because they discourage customary owners from putting their assets to best use. Moreover, the poorest in many communities are unable to protect their interests against outsiders and local elites, who can take advantage of insecure customary regimes to privatize commonly held resources and otherwise capture benefits.

Low growth

A recent analysis of economic growth in 73 countries over the period 1960 to 2000 found that countries with inequitable initial land distribution grew at less than half the rate of those countries with more equitable land distribution.¹ Low economic growth in forest areas, therefore, is perpetuated by the continued preference of governments for industrial concessions and indifference towards community claims. Secure property rights, on the other hand, would give landholders the confidence and motivation to make investments, enable them to obtain loans by using land titles as collateral, and encourage external investment.

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Conflict

Grievances over the allocation of natural resources frequently lead to violent conflicts, many of which have their roots in the colonial and post-colonial appropriation of land from local communities. In mid 2008, at least 71 violent conflicts were underway worldwide, around two-thirds of which were driven by contested land rights claims.²

Climate change and local rights

The United Nations Framework Convention on Climate Change articulates two approaches for addressing climate change:

¹ Deininger, Klaus. 2003. Land policies for growth and poverty reduction. Washington DC: World Bank and Oxford University Press.

² Alden Wily, Liz. 2008. Current Conflicts around the World. Forthcoming.

mitigation, or reducing emissions and increasing carbon sequestration, and adaptation, or adjusting to the changing climate. Forest management will play a key role in both.

There is tremendous scope for making climate-related investments in a manner that strengthens local rights, reduces rural poverty and conflict, protects remaining natural forest areas, and restores degraded forest areas. Properly devised participatory forest projects would be a low-cost option for reducing emissions, sequestering additional carbon, and increasing adaptive capacity.

Two sets of action are required. The first would focus on securing ownership and civil rights for forest communities and indigenous people. The second would focus on the creation of governance structures to enable local people to effectively use and benefit from their property rights.

Neither is easy. Decisions on property and broader human and civil rights are challenging in the best of circumstances. In forest areas, the circumstances are usually far from optimal. Forest agencies are often captive to conventional ideas and overwhelmed by challenges that lie beyond the bounds of the forest sector. Overlapping jurisdictions between governmental ministries and departments can paralyse initiatives. Bureaucratic efficiency can be further crippled by a lack of funds and low capacity, and well-intentioned efforts can be distorted and undermined by poor governance and corruption.

Decisions on property and broader human and civil rights are challenging in the best of circumstances. In forest areas, the circumstances are usually far from optimal.

Strategic directions

In coming decades, governments and the private sector will spend billions of dollars on energy, food, and climate-related projects in or near forest areas. Those projects will only be effective and long-lasting, and will only avoid contributing to resentment and conflict, if they help repair the system of governance and restore rights to forest communities.

To ensure the greatest possible positive impact, the global development community should, in the near term, pursue the

following strategic directions.

Prioritize big emitters: Brazil, Cameroon, Democratic Republic of the Congo, Indonesia, Malaysia, Nepal, Nigeria, Papua New Guinea, Peru and Zambia account for two-thirds of global emissions from land-use change. Some of these countries are also taking important steps to address forest tenure and therefore should be targeted for the first wave of serious investment in reforming property rights and governance. Success would not just be symbolic—it would make a substantial difference to forest carbon emissions.

Support vulnerable countries: International forest-related support to very poor forested countries, such as Benin, Cameroon, Democratic Republic of the Congo, Côte d'Ivoire, Liberia, Madagascar, Nigeria and Zambia, should focus on: securing land rights for forest-dependent populations; the introduction of climate-resilient forest management systems; and ensuring a fair share of investments on forest-related climate mitigation measures.

Ensure transparency and accountability in financial arrangements to deal with climate change: Donors are making major commitments to combat climate change. It is imperative that the global community, supported by forest communities, civil society, and developing country governments, devise effective ground rules and monitoring systems for the deployment of these funds.

Ensure that carbon markets and other environmental service compensation mechanisms strengthen rights and governance and support forest communities: The carbon market will work most effectively if: there is secure forest access and ownership; regulatory barriers to the equal and full participation of smallholders are removed; and smallholders are involved in policy negotiations. The donor community should provide supplementary funds to help ensure that these conditions are met.

Megan Liddle

Rights and Resources Initiative
www.rightsandresources.org

Around the world

African forests gobble up more CO₂

Africa's tropical forests have stored huge amounts of carbon over the last four decades and become a critical sponge for greenhouse gases, according to a study published recently.

Long-term measurements taken across the continent's tropical belt showed that African forests absorb as much carbon dioxide as those in the Amazon.

Tropical forests only account for seven-to-ten percent of the Earth's land area. But they hold up to half of the carbon locked inside the planet's terrestrial vegetation, giving them an outsized role in regulating greenhouse gases in the atmosphere. Previous studies in South America have shown that Amazonian old-growth forests have absorbed, on average, an extra 620 kilogrammes (1,364 pounds) of carbon per hectare (2.47 acres) per year.

This adds up to some 650 billion kilos every year for the entire Amazon basin, which sits astride eight nations. Before the new study, however, it was not known whether this trend was common to all tropical forests, or varied from one continent to another, especially in Africa.

Having this information is important to broader attempts to project changes wrought by global warming, and how quickly temperatures are likely to rise.

Two dozen international researchers led by Simon Lewis of the University of Leeds in northern England pulled together data from 79 monitoring plots scattered across 10 countries in western and central Africa. Sifting through the data, the scientists found that the region's rain forests had pumped progressively more carbon dioxide out of the atmosphere as trees underwent photosynthesis and grew. The average

increase was almost identical to those for Amazonia, a net plus of 630 kilos per hectare each year between 1967 and 2007, reported the study, published in the British science journal *Nature*.

"African tropical forests are providing important ecosystem services by storing carbon and being a carbon sink, thereby reducing the rate of increase in atmospheric CO₂," the main driver of global warming, the authors note.

At least one puzzle remains. Left alone, forests will eventually reach a point at which tree growth and death are in equilibrium, meaning they neither take in or give off extra carbon.

The question, then, is why these tropical forests are continuing to draw down ever more CO₂. "There are two possible explanations," said Helen Muller-Landau in a commentary published in *Nature*. One is that major

disturbances hundreds, or thousands, of years ago -- massive fires, drought, changes in land use -- destroyed portions of the forest which have been growing back ever since. The second is that climate change has knocked tropical forests in South America and Africa off balance. "Perhaps the increase in atmospheric carbon dioxide is effectively fertilizing tropical tree growth," speculated Muller-Landau.

It is probable, she added, that both factors were at play. Whether remaining intact forests will continue to sequester carbon is unknown, and will depend in part on how humans manage this precious resource, Lewis and colleagues conclude. "With adequate protection, these forests are likely to remain large carbon stores in the longer term," they wrote.

news.yahoo.com

Australia: Fires release huge amount of CO₂

Bushfires that have scorched Australia's Victoria state released millions of tons of carbon dioxide and forest fires could become a growing source of carbon pollution as the planet warms, a top scientist said. Mark Adams of the University of Sydney said global warming could trigger a vicious cycle in which forests could stop becoming sinks of CO₂, further accelerating the rise of the planet-warming gas in the atmosphere.

"With increasing concerns about rising CO₂, rising temperatures and reduced rainfall in many of the forested areas, then we could well see much greater emissions from forest fires," Adams, dean of the Faculty of Agriculture, Food and Natural Resources, told Reuters.

The Victoria fires, which killed more than 200 people, were the worst in the nation's history and many are still burning. Firefighters battled seven wildfires in the state on Wednesday, hoping to control the flames before expected higher temperatures hit the fire-ravaged state on Friday.

"Scientists worldwide are worried about fires and forests. It doesn't matter if it's the Arctic tundra fires, or peat fires in Kalimantan or bushfires in Australia," said Adams, who has worked in collaboration with the Bushfire Co-operative Research Center. In a submission to the United Nations last year, the Australian government said wildfires in 2003 released 190 million tons of CO₂-equivalent, roughly a third of the nation's total greenhouse gas emissions for the year. Such large, one-off releases of CO₂ and other greenhouse gases such as methane, are not presently accounted for in Australia's annual list of national greenhouse gas emissions. If they were, the country would vastly exceed its emission limits under the Kyoto Protocol, the United Nations' main weapon

to fight climate change. Which is why Australia is calling for amendments to rules on land use change under the United Nations so that only human activities that "can be practicably influenced" are included.

Adams said U.N. climate talks at the end of the year in Denmark that aim to agree on a successor pact to Kyoto, should discuss the growing threat from forest fires and how to develop better legal frameworks to tackle the problem.

Adams, who has studied how much carbon Australia's forests and soil can store, has estimated that fires in 2003, which ravaged the capital Canberra, and in 2006-07 released about 550 million tons of CO₂. The current fires had already burned hundreds of thousands of hectares, he said, in areas with total carbon content of 200 tons per hectare or more.

Australia, though, was not the only concern. Annual fires in Indonesia also release vast amounts of CO₂. Huge fires in 1997 released up to 6 billion tons of CO₂, covering Southeast Asia in thick haze and causing a spike in global levels of the gas. Research on the forest and peat fires by a team of international scientists found the blazes released the equivalent of up to 40 percent of global annual emissions from burning fossil fuels.

Adams said the research was a wake-up call. "When you see the step-increases (of CO₂) that they observed, we have to sit up and take notice, that fires are a major problem," said Adams. He said in the past, native forest carbon had been in rough equilibrium over millions of years with fires, with very small accretion of carbon over very long periods of time.

"But then if you add rapid climate change and much greater fire frequency, the equilibrium carbon content of the native forests, instead of going up, is going to go down."

www.reuters.com

Bhutan: Sense of ownership up, forest fires down

With winter at its peak, forest fires in the east have started taking their annual toll once again. On February 10, a forest fire destroyed over 600 acres of pine forest above Duksum, Trashiyangtse, burning most of the re-plantation forestry officials carried out last year. Officials said that the fire had destroyed 70 percent of the pine

and bamboo re-plantation. The fire is suspected to have started from a roadside fire left unattended.

Earlier on February 7, a fire, fanned by strong winds, burnt over 150 acres of forest in Trashigang Pam, threatening even settlements. In another forest fire, caused by a 24-year-old man, after smoking marijuana, over an acre of vegetation was burnt down on February 4. However, according to forestry

officials, forest fire incidents are reduced, compared with past years and is decreasing every year.

Records show that 13 forest fires have occurred in Trashiyangtse dzongkhag last year alone, destroying about 2,830 acres of forests. Of the eight gewogs, six are fire prone areas. However, this year the dzongkhag saw only one case so far. "We were expecting to have a forest-fire-free year this year because a lot of awareness campaigns and precautionary measures have been put in place," said Trashiyangtse forest officer, Phuntsho Tobgay.

According to forest officials, earlier, people deliberately lit up forests to plant lemon grass and fodder grass for domestic animals but the trend has declined. "I think creating awareness amongst people and setting up community forests helped a lot to reduce forest fire incidences," said a forest officer in Mongar.

In Trashigang, forest fire committees were established at

the village level to tackle forest-fire-related problems. "In the past, people wouldn't even report a fire, forget fight them," said a forest officer in Trashigang, Karma Dorji. Since villagers were given the responsibility of managing forests, they're always vigil and careful," he said.

Trashigang and Trashiyangtse dzongkhags have handed over 17 community forests to local communities last year. Some said it has boosted the sense of belonging in the community. Loday, a villager from Pam, said that the villages react swiftly whenever they see a forest fire. "Some reported the fire, some rushed off to fight it, while some villagers went to gather friends," he said. The fire was subdued two metres away from his house, where he runs the only shop in the village. "I'm ever so grateful to them."

www.kuenselonline.com

Brazil: Hackers 'aid' Amazon logging scam

Hackers have helped logging firms in Brazil evade limits on tree felling, says a Greenpeace report. The hi-tech criminals penetrated a computer system designed to monitor logging in the Brazilian state of Para. Once inside the system, hackers issued fake permits so loggers could cut down far more timber than environmental officials were prepared to allow. Greenpeace estimates that 1.7m cubic metres of illegal timber may have been removed with the aid of the hackers.

Drawing on information released by Brazilian federal prosecutor Daniel Avelino, Greenpeace believes hackers were employed by 107 logging and charcoal companies. "Almost half of the companies involved in this scam have other law suits pending for environmental crimes or the use of slave labour," said Mr Avelino in a statement issued by Greenpeace. Mr Avelino is suing the companies behind the mass hack attack for two billion reals (£564m) - the estimated value of the timber illegally sold.

The Brazilian investigation of the hackers began in April 2007 and more than 30 ring leaders were arrested during the

summer of that year. The ongoing investigation means that now 202 people face charges for their involvement in the subversion of the logging system.

The hack was made possible by a decision in 2006 to do away with paper forms to help monitor whether logging and charcoal firms were keeping to the quotas they were set. Instead, the Amazon state of Para turned to a fully-computerised system that issued travel permits for the timber logging firms were removing. The intent was that travel permits would stop being issued once logging companies had reached their annual quota.

With the help of the hackers, Brazilian logging firms were able to issue fake permits allowing them to bust through these caps. "We've pointed out before that this method of controlling the transport of timber was subject to fraud," said Andre Muggiati, Greenpeace campaigner in Manaus. "And this is only the tip of the iceberg, because the same computer system is also used in two other Brazilian states."

news.bbc.co.uk

Cambodia: 'Ecstasy oil' factories destroyed in Cambodian rainforest

Illegal factories hidden in the Cambodian rainforest that were producing a raw ingredient for the drug ecstasy have been tracked down and destroyed by investigators from an international environmental agency, working with the Cambodian authorities.

In a month-long investigation the team from Fauna and Flora International (FFI) uncovered the illegal distilleries deep in the forest of the Cardamom mountains in south-west Cambodia.

The two new facilities were intended to make sassafras oil from the roots of the extremely rare Mreah Prew Phnom tree for export to neighbouring countries.

Sassafras oil is used to make cosmetics, but it can also be used as a precursor chemical to make methylenedioxyamphetamine, more commonly known as the recreational drug ecstasy.

FFI was alarmed that the rate of the illegal production of

the "ecstasy oil" could have wiped out the Mreah Prew Phnom tree within five years. The trees are felled and the excavated roots mechanically shredded and boiled in a cauldron during a process that takes about 12 hours to produce 30 litres of oil.

Surrounding trees are also felled to fuel fires for the distillation, threatening one of the last great rainforests in south-east Asia. Rivers are polluted by the effluent from the oil production.

The two factories were discovered last month during the investigation by FFI staff working with Cambodia's environment ministry, which called in the army.

The factories run by Vietnamese syndicates in the Phnom Samkos Wildlife Sanctuary were destroyed and two people arrested. Sassafras oil production is illegal in Cambodia.

Last year 33 tonnes of sassafras oil that FFI helped to seize was destroyed by the Cambodian government and the Australian police, who claimed it could have been used to

produce 245m ecstasy tablets with a street value of £4.82bn.

The environmental group first became involved in efforts to crack down on sassafras oil production in 2004 because of the alarming levels of deforestation. In the Phnom Samkos sanctuary FFI now supports 49 Cambodian environment ministry rangers who have closed dozens of factories.

FFI staff estimate there were 75 sassafras oil distilleries operating in the sanctuary at the industry's height in 2006. The number has plummeted, but tight monitoring is vital to prevent a fresh upsurge.

"The re-emergence of the sassafras factories in Phnom

Samkos wildlife sanctuary is of enormous concern to us," said FFI field coordinator, Tim Wood. "Recent law enforcement operations clearly show that this threat still persists and that we must remain very vigilant in our effort to suppress this and other forest crimes.

But the policing of the illegal trade is under threat from funding cuts and FFI is calling on the Cambodian government and international donors to support the work of the rangers in combating the production.

www.guardian.co.uk

Cameroon sets up Chicago-size national park to protect gorillas

Cameroon, with one of Africa's highest rates of deforestation, has set up a new national park to protect gorillas, chimpanzees, elephants and a rare type of antelope called bongo.

Deng Deng National Park extends 580 square kilometres (224 square miles), an area about the size of Chicago, and will help conserve some 600 western lowland gorillas, one of four sub-species of the great ape, said the New York-based Wildlife Conservation Society, which helped in the park's creation.

Western lowland gorillas are classified as "critically endangered" on the Red List of threatened species compiled annually by the Swiss-based International Union for Conservation of Nature. That's because their population has plummeted more than 80 percent in six decades and they

remain in danger due to hunting and diseases, including ebola.

The mountain gorilla, made famous by the primatologist Dian Fossey and the movie "Gorillas in the Mist," is limited to the mountains of Virunga, which straddle Uganda, Rwanda and the Democratic Republic of Congo southeast of Cameroon.

"Deng Deng National Park is a major step toward conserving all of Cameroon's gorilla populations and wildlife," WCS president Steven Sanderson said in a statement.

WCS, which helps enforce rules in Cameroon banning the transportation and sale of bushmeat, in November also helped Cameroon create Takamanda National Park, which links up to a wider protected area across the border in Nigeria, protecting another subspecies of gorilla, the Cross River gorilla

www.bloomberg.com

Canada: Better times ahead in forestry

Even in a recession, it seems people need tissues to blow their noses. "Tissue papers are recession-proof," says Avrim Lazar, president and chief executive officer of the Forest Products Association of Canada. "People blow their noses the same way."

But tissues are just about the only product made from Canadian trees for which demand hasn't dropped, according to Mr. Lazar. The global economic downturn has been nothing short of devastating to most of Canada's forestry products industry. But Mr. Lazar, who is based in Ottawa, says he expects a turnaround by the end of the year and a brighter picture for the industry in 18 months. "Even now you can see the (lumber) oversupply dwindling. . . . It will come back faster than you think,".

While the global demand for newsprint will likely continue to drop, market demand for other pulp and paper products and lumber will rebound, he said.

Canada exports most of its lumber to the United States. "It is fairly predictable (in the U.S.), if they have population growth with immigration and the demographics, they are going to have to build houses. And they are going to continue to build out of sticks. Pulp has got pretty good prospects for global return. "

Mr. Lazar said pulp and paper is a little trickier to predict than lumber. "All pulp and paper responds to advertising, to retail." But when the global economy recovers, Canada's

forestry industry will be in a strong position globally, mainly due to environmental progress it has made, he said.

Mr. Lazar recently headed where no forest industry official has gone before: to a meeting of the Green party convention in Pictou. He planned to talk about the environmental strides the industry has made in harvesting, production and manufacturing. When consumers start buying again, they will be demanding products made without leaving a big environmental footprint, Mr. Lazar said.

Canada's vast water and energy resources give the industry a competitive edge, he said.

But social and economic pressures also mean agricultural land around the globe will be used for growing food and biofuel crops, not trees, Mr. Lazar said.

"If you look at today and project forward you get the wrong picture, because tomorrow's world is an intersection of different forces: environmentalism and the need for renewable fuel, and the huge spike in the demand for agricultural land."

Garth Spencer, president of the Forests Products Association of Nova Scotia, said every aspect of the province's forest industry is hurting because of the downturn. Sawmills have closed and workers have been laid off.

"Definitely we are in a slowdown and there have been numerous jobs lost across the province, both in manufacturing — and by that I mean pulp mills and sawmills — and in harvesting and silviculture," he said.

But like Mr. Lazar, Mr. Spencer is confident the industry

will bounce back.

"There is no question," he said. "It may have a different face, but we will always have a forestry industry here because

there is a worldwide demand for our resource."

thechronicleherald.ca

Finland: Activists slam Finnish paper maker for logging 'virgin forest'

Environmental groups recently blasted Finnish paper maker Stora Enso for logging old growth forests in northern Finland, insisting the unique trees should be protected.

Environmental groups Greenpeace, Suomen Luonnonsuojeluliitto and Luonto-Liitto said they had found that some trees more than 300 years old had been logged in Finnish Lapland in the north of the country and shipped to Stora Enso's pulp mill in Oulu. The logged forests, also known as old growth forests or ancient woodlands, are owned by the Finnish state. "It is unbelievable that at a time when forestry companies have slashed their production sharply, untouchable forests are logged," Risto Mustonen from Luonto-Liitto said in a statement.

Old growth forests are often home to rare, threatened and endangered species of plants and animals, making them ecologically significant. Stora Enso said it had bought the wood from the state and admitted it was possible that some very old trees were included. "We don't need ancient trees and our production cannot be based on that," Stora Enso's environmental manager Pekka Kallio-Mannila said.

Environmentalists have since 2006 urged Metsähallitus, a state enterprise managing state-owned land and water areas, to conserve larger forests in the north. So far the parties have failed to reach an agreement. Meanwhile, Metsähallitus said the state had reviewed carefully its forests and noted that there were large conservation areas in Finnish Lapland as well.

"The forests in question are commercial forests. By no means are they old or indispensable forests," Metsähallitus regional director Kirsi-Maria Korhonen said. "The average age of those trees is not 300 years but between 80 and 200 years."

Stora Enso's Kallio-Mannila said deciding which forests to conserve was not easy and called for more dialogue with environmental groups and forest owners.

The forestry industry is important to the Finnish economy, accounting to nearly one-fifth of the country's exports. The global financial crisis has further dented demand and profitability of Finnish paper makers, which have announced massive job and capacity cuts.

www.google.com

India: NGO demands lifting of ban on plastic bags in Delhi

With the Delhi government imposing a ban on plastic bags in the capital, an NGO Wednesday demanded lifting of the ban and launched an awareness campaign to highlight the benefits of plastic.

Plastic Bag Awareness Forum launched a campaign to create awareness among the users that plastic bags are not harmful. Also, a series of radio jingles and TV commercials have been shot.

"It is a common misconception that the use of paper bags will help in sustainability of the environment and the society. We need to remind ourselves that paper is a byproduct of wood pulp and is a forestry product. The large scale production of paper will lead to deforestation," convener of the NGO Rajesh

Mittal said.

Delhi government ordered a complete ban on the use, sale and storage of all kinds of plastic bags Jan 7.

"There are a lot of misconceptions about the use of plastics and no product can replace plastic in the near future. We want the Delhi government to withdraw the ban as it is affecting the plastic industry," he said.

The All India Plastic Industry Association (AIPA) also filed a plea in a Delhi court for withdrawal of ban on plastic carry bags in the capital. The Delhi government has been asked to file its response by Mar 19.

www.calcuttanews.net

Indonesia: Deforestation behind Sumatran tiger attacks

Indonesia needs to urgently halt the destruction of forests in Sumatra, conservation group WWF said recently, after six people were attacked and killed by rare tigers in Jambi province in less than a month. "As people encroach into tiger habitat, it's creating a crisis

situation and further threatening this critically endangered subspecies," Ian Kosasih, director of WWF's Forest Program, said in a statement.

Further illustrating the conflict between humans and endangered tigers, three young tigers were killed by villagers

this month in Riau province, also in Sumatra, apparently after they strayed into a village in search of food, WWF said.

On Sunday, a tiger attacked and killed a man carrying logs near an illegal logging camp in Jambi in eastern Sumatra, Didy Wurjanto, head of the Jambi nature conservation agency said. Two other illegal loggers in the same area were mauled and killed on Saturday.

Authorities had trapped a female tiger believed to be behind three killings earlier this month in the area, Wurjanto told Reuters, but the capture had not stopped the latest killings. "In light of these killings, officials have got to make public safety a top concern and put a stop to illegal clearance of

forests in Sumatra," said WWF's Kosasih.

About 12 million hectares (29.65 million acres) of Sumatran forest has been cleared in the past 22 years, a loss of nearly 50 percent islandwide, according to WWF.

The Sumatran tiger is the most critically endangered of the world's tiger subspecies. Forest clearance often for palm oil or logging, killings due to human-tiger conflict, and illegal hunting for the trade in their parts, have led to tiger numbers halving to an estimated 400-500 or less on the Indonesian island from an estimated 1,000 in the 1970s, conservationists say.

www.reuters.com

PNG: 24% of Papua New Guinea's rainforest destroyed or degraded by logging in 30 years

Nearly one quarter of Papua New Guinea's rainforests were damaged or destroyed between 1972 and 2002, report researchers writing in the journal *Biotopica*. The results, which were published in a report last June, show that Papua New Guinea is losing forests at a much faster rate than previously believed. Over the 30-year study period 15 percent of Papua New Guinea's tropical forests were cleared and 8.8 percent were degraded through logging.

"Our analysis does not support the theory that PNG's forests have escaped the rapid changes recorded in other tropical regions," write the authors. "We conclude that rapid and substantial forest change has occurred in Papua New Guinea."

Deforestation and forest degradation in Papua New Guinea are primarily driven by logging, followed by clearing for subsistence agriculture. Since 2002 — a period not covered in the study — reports suggest that conversion of forest for industrial agriculture, especially oil palm plantations, has increased.

The study is based on comparisons between a land-cover map from 1972 and a land-cover map created from nationwide high-resolution satellite imagery recorded since 2002. The authors found that most deforestation occurred in commercially accessible forest, where forest loss range from 1.1 and 3.4 percent per year. Overall deforestation was 0.8 to 1.8 percent per year, higher than reported by the U.N. Food and Agriculture Organization (FAO), but lower than neighboring islands including Borneo and Sumatra. Overall Papua New Guinea's primary forest cover fell from 33.23 million hectares to

25.33 million hectares during the period. 2.92 million hectares of forest were degraded by logging.

Dr. Phil Shearman, director of the University of Papua New Guinea's Remote Sensing Centre and lead author of the paper, says that without incentives to keep forest standing, Papua New Guinea will continue to lose its forests.

"Forests in Papua New Guinea are being logged repeatedly and wastefully with little regard for the environmental consequences and with at least the passive complicity of government authorities," said Shearman, noting that nearly half of Papua New Guinea's 8.7 million hectares of forest accessible to mechanized logging have been allocated to the commercial logging industry.

Still there may be hope for the country's forests. Papua New Guinea has become a leader in the push by tropical nations to seek compensation from industrialized countries for conserving forests as a giant store of carbon. The mechanism — dubbed REDD for reducing emissions from deforestation and degradation — could put billions of dollars annually towards conservation, sustainable development, and poverty alleviation.

"The government could make a significant contribution to global efforts to combat climate change," said Shearman. "It is in its own interest to do so, as this nation is particularly susceptible to negative effects due to loss of the forest cover."

U.N. studies have show that coastal communities in Papua New Guinea are particularly at risk from climate change.

news.mongabay.com

UK: Plant diseases threaten woodland

Some of the finest gardens and woodlands in Britain are under threat from two closely related and aggressive fungus-like plant diseases. Environment minister Jane Kennedy said they were attacking "pristine" locations and could potentially damage the landscape and the tourism industry. The government has allocated £25m in a bid to eradicate the diseases which are spreading across the country.

They are *Phytophthora kernoviae* and *Phytophthora ramorum*. Rhododendrons, a carrier of both diseases, are likely to be removed in woodland to combat the problem.

The flowering shrubs, popular as an ornamental species in

many gardens, also grow wild in wooded areas and an area of the New Forest has already been cordoned off to allow rhododendrons to be cut down and burned.

Phytophthora kernoviae, first found in the south-west of England in 2003, reached Scotland five years later. It attacks and kills many trees and shrubs, including the oak and beech trees which make up so much of Britain's woodlands.

The Department of Environment, Food and Rural Affairs says 69 sites in England and Wales are currently affected, with Cornwall the worst-hit region.

Phytophthora ramorum, first identified in 1995, has devastated woodland on the west coast of the United States

where it has been responsible for the syndrome known as sudden oak death.

Few control mechanisms exist for the disease, so the importance of early detection - and proper disposal of the infected plant material - is key. The government is to earmark

some of the money for new research and development, and there will be a campaign to make landowners aware of the threat.

news.bbc.co.uk

USA: American taste for soft toilet roll 'worse than driving Hummers'

The tenderness of the delicate American buttock is causing more environmental devastation than the country's love of gas-guzzling cars, fast food or McMansions, according to green campaigners. At fault, they say, is the US public's insistence on extra-soft, quilted and multi-ply products when they use the bathroom.

"This is a product that we use for less than three seconds and the ecological consequences of manufacturing it from trees is enormous," said Allen Hershkowitz, a senior scientist at the Natural Resources Defence Council.

"Future generations are going to look at the way we make toilet paper as one of the greatest excesses of our age. Making toilet paper from virgin wood is a lot worse than driving Hummers in terms of global warming pollution." Making toilet paper has a significant impact because of chemicals used in pulp manufacture and cutting down forests.

A campaign by Greenpeace seeks to raise consciousness among Americans about the environmental costs of their toilet habits and counter an aggressive new push by the paper industry giants to market so-called luxury brands.

More than 98% of the toilet roll sold in America comes from virgin wood, said Hershkowitz. In Europe and Latin America, up to 40% of toilet paper comes from recycled products. Greenpeace this week launched a cut-out-and-keep ecological ranking of toilet paper products.

"We have this myth in the US that recycled is just so low quality, it's like cardboard and is impossible to use," said Lindsey Allen, the forestry campaigner of Greenpeace.

The campaigning group says it produced the guide to counter an aggressive marketing push by the big paper product makers in which celebrities talk about the comforts of luxury brands of toilet paper and tissue.

Those brands, which put quilting and pockets of air between several layers of paper, are especially damaging to the environment.

Paper manufacturers such as Kimberly-Clark have identified luxury brands such as three-ply tissues or tissues infused with hand lotion as the fastest-growing market share in a highly competitive industry. Its latest television advertisements show a woman caressing tissue infused with hand lotion.

The New York Times reported a 40% rise in sales of luxury brands of toilet paper in 2008. Paper companies are anxious to keep those percentages up, even as the recession bites. And Reuters reported that Kimberly-Clark spent \$25m in its third quarter on advertising to persuade Americans against trusting their bottoms to cheaper brands.

But Kimberly-Clark, which touts its green credentials on its website, rejects the idea that it is pushing destructive products on an unwitting American public. Dave Dixon, a company spokesman, said toilet paper and tissue from recycled fibre had been on the market for years. If Americans wanted to buy them, they could.

"For bath tissue Americans in particular like the softness and strength that virgin fibres provides," Dixon said. "It's the quality and softness the consumers in America have come to expect."

Longer fibres in virgin wood are easier to lay out and fluff up for a softer tissue. Dixon said the company used products from sustainably farmed forests in Canada.

Americans already consume vastly more paper than any other country — about three times more per person than the average European, and 100 times more than the average person in China.

Barely a third of the paper products sold in America are from recycled sources — most of it comes from virgin wood. "I really do think it is overwhelmingly an American phenomenon," said Hershkowitz. "People just don't understand that softness equals ecological destruction."

www.guardian.co.uk

USA: Clinton, Obama botch opportunity on climate, forest conservation

The Obama administration squandered a chance this week to show U.S. leadership on climate and forest conservation issues, when Secretary of State Hillary Clinton, during a visit to Jakarta, failed to bring up a new Indonesian government decree allowing conversion of carbon-rich peat forests to oil-palm plantations.

Scientists say the decree, which apparently met the approval of Indonesia's Ministry of the Environment on Wednesday, will result in massive greenhouse gas emissions

from the degradation and destruction of peatland ecosystems, which in some years can be the source of up to 8 percent of global CO₂ emissions. Draining peat soils to a depth of 60-80 cm as allowed under the decree will release 60-75 tons of carbon per hectare per year, according to Alex Kaat of Wetlands International. Some 2 million hectares of peatlands across Indonesia qualify for conversion, indicating that if fully converted, the decree could result in annual emissions 120-150 million tons of CO₂ — the equivalent of adding another Netherlands or Pakistan. Planting the land with oil palm will

make only a small dent in the carbon deficit since plantations sequester far less carbon than natural forests. Dr. Susan Page of the University of Leicester estimates that one ton of palm oil produced on peatland results in 15 to 70 tons of emissions over the 25-year lifecycle of a plantation.

At this point it is still unclear whether the decree is meant to actually boost palm oil production and appease political interests ahead of elections or simply a ruse to increase Indonesia's potential earnings under a carbon finance mechanism that rewards countries for reducing emissions from deforestation and degradation (to "reduce emissions" a forest

needs to be imminently threatened — i.e. concessioned). Regardless, the Obama administration, with the President's popularity in Indonesia, missed a golden opportunity to show the U.S. is serious about its commitment to addressing climate change.

The United States and Indonesia are respectively the second and third largest greenhouse gas emitters. More than 80 percent of Indonesia's emissions result from deforestation and destruction of peatlands rather than the burning of fossil fuels.

news.mongabay.com

World: Guitar industry greens up footprint

The industry is on the case - in part for the sake of its own survival, and thanks to the hard work of a handful of green groups, guitar makers and wood suppliers.

In 1996, Gibson, one of the world's premier guitar brands, became the first in the industry to make some of its instruments using wood certified as "sustainably harvested" by the nonprofit Forest Stewardship Council. By 2006, about 42 percent of the wood purchased by the company for its Gibson USA electric guitars came from FSC-certified sources. By 2012, Gibson expects to increase that to 80 percent.

Gibson isn't the only instrument maker greening up its footprint: Taylor, Fender, Martin, Guild, Walden and Yamaha, along with Gibson, have signed on as partners with the Music Wood Coalition, a project of the leading environmental nonprofit Greenpeace.

The coalition, which is made up of a half-dozen tonewood suppliers, hopes its efforts will protect threatened forest habitats and safeguard the future of trees critical in manufacturing instruments of all kinds.

Eco-advocates and guitar makers alike fear that the spruce, maple, mahogany, ebony and rosewood trees that have been the foundation of the wooden instrument industry for years are being cut down faster than they are replaced.

The coalition's initial focus is on halting the deforestation going on in Southeast Alaska.

Greenpeace has been in talks with Sealaska Timber Corporation, one of the biggest logging operations in Alaska,

to get 190,000 acres of the company's privately owned Southeast Alaska timberland - a prime source of Sitka spruce, a wood coveted by instrument makers for its use in guitar soundboards - certified by FSC.

Greenpeace Forest Campaign Coordinator Scott Paul said getting these forestlands certified as an important win-win opportunity for Sealaska, which wants to maintain a viable income stream, and for instrument makers who need a dependable source of resonant, durable and beautiful woods.

"These lands are going to be logged," Paul said. But with FSC oversight, the forests can be managed sustainably. The process has begun with the first part of the two-step certification process completed. "Our goal is to create a demand ... for FSC certified 'good wood' as the only acceptable music wood from the North American coastal temperate rainforest," Paul said.

Guitar makers know the woods they've used for years might not continue to be had at the quantities and low prices they're used to, but they are willing to adapt.

"Alternative woods are the key to successful guitars," said Bob Taylor of Taylor Guitars, which has been a pioneer in the use of sustainably harvested tonewoods in their acoustic guitars. "But the market needs to go there all together."

Tradition is a huge driving force, Paul said. "Players expect a spruce soundboard, a mahogany neck, an ebony or rosewood bridge." There needs to be a leap of faith in changing markets, where people are more environmentally conscious.

www.theolympian.com



The CFA

The Commonwealth Forestry Association

The Commonwealth Forestry Association (CFA) is the world's longest established international forestry organization, tracing its history back to 1921. Today it unites foresters, scientists, students, NGOs and policy makers throughout the world in a unique international network that provides professional support to its members and forms a key element of civil society.

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