

## Contents

- The Stern Review

### Association news

- Newsletter sponsorship
- Thanks to our Life Members
- Gold Medal for Peter Savill
- Obituaries and Bequests
- To be, or not to be in colour
- CFA Young Foresters travelling overseas

### Youth News

- Climate change, forestry and increasing momentum: a young forester's perspective

### Forest Scenes

- Forestry statistics in the UK
- Gold, silver and wood
- Guyana and the wider world
- La Forêt de Tronçais
- Community Based Biodiversity Conservation in Nepal
- Extracting washing soap and ropes from trees
- All change in forestry at Bangor University

### Around the world

#### *CFA Newsletter*

is the newsletter of the Commonwealth Forestry Association

Editor: Alan Pottinger

Contact: Crib, Dinchope, Craven Arms, Shropshire SY7 9JJ, UK

Tel: + 44 (0) 1588 67 28 68

Email: [cfa@cfa-international.org](mailto:cfa@cfa-international.org)

Web: [www.cfa-international.org](http://www.cfa-international.org)

The views expressed are not necessarily those of the CFA.

## The Stern Review - a call to arms for the international forestry community

**'There is still time to avoid the worst impacts of climate change, if we take strong action now'**

**'Curbing deforestation is a highly cost effective way of reducing greenhouse gas emissions and has the potential to offer significant reductions fairly quickly'**

The **Stern Review on the Economics of Climate Change**, published in late 2006, is an independent report to the UK Prime Minister and Treasury which seeks to comprehensively survey the economics of climate change from a global perspective. Sir Nicholas Stern, a former World Bank Chief Economist and head of



the UK Government Economics Service, carried out an extensive review process that included stakeholder consultation, international evidence gathering, and supporting studies. One of these explored the cost of reducing emissions from deforestation<sup>a</sup>.

The outcome is a substantial document of over 500 pages, the economics for which is founded upon an examination of the scientific evidence, and ethical issues, including inequalities between generations and countries. Potential mitigation measures to stabilise CO<sub>2</sub> levels are identified, as well as adaptation measures and collective international action required. Curbing deforestation appears high in the list of priorities.

The scientific scene is set with the assessment that 'business as usual' would result in a doubling of pre-industrial levels of greenhouse gases in the atmosphere,

which could result in a 4-5°C global average temperature rise - a situation which is described as being potentially 'far outside the experience of human civilisation'. Furthermore, positive feedback mechanisms could exacerbate this situation. However, potentially beneficial increases in forest growth and sequestration resulting from 'carbon

fertilisation' from CO<sub>2</sub> in the atmosphere is cited, but attention drawn to its limits, from increased respiration and water and nutrient constraints. Release of methane (a much more serious greenhouse gas than CO<sub>2</sub>), and carbon from drying peatlands may provide a dangerous positive feedback. But the Review states that if action is taken to stabilise concentrations of CO<sub>2</sub> levels between 450 and 550 parts per million, this will lead to a 50% chance of our incurring only a 2-3°C temperature change. Even at these levels, the impacts could be damaging, but they are far less damaging than those we could see at 5°C.

A clear explanation of climate change as an economic problem sets out its character as an 'externality', entailing costs not paid for by those creating emissions. It is unique in being global, long term, and bringing very uncertain

<sup>a</sup> Grieg-Gran, M. (2006): 'The Cost of Avoiding Deforestation', Report prepared for the Stern Review, International Institute for Environment and Development.

risks, including irreversible changes. The long term effects also raise questions of intergenerational equity familiar to forest economists. Assuming that there will be future generations (and the risk of a meteorite strike ending human generations is noted), the Review departs from many other analyses in seeing no ethical reason to value the well-being of future generations any lower than our own. This implies a pure rate of time preference of (nearly) zero. This reasoning is backed by an impressive array of quotes. Intuitively, we usually value the welfare losses of future generations less because we expect them to be richer but the sorts of changes that can occur due to climate change can lead to very different growth paths, and thus the Review finds no unique discount rate for the paths considered. The Review also holds that equivalent changes in wealth between rich and poor should be treated as more equal in value than other commentators suggest. These ethical viewpoints, as well as the possible damages that Stern incorporates, have attracted criticism but Stern has defended his approach strongly, and addressed some points by further sensitivity analysis.

The review emphasises the increasing challenge posed by climate change, and that, without early action, the costs of its effects and required remedial actions will rise steeply. The latter arises in part because of the low discount rate applied. The cost of climate change to global gross domestic product (GDP) is estimated at between 5% and 20% per year, but it is proposed that this could be arrested, for a cost to global GDP of 1% *if strong, well designed action is taken promptly*.

## Deforestation

Deforestation is the forestry issue which figures most highly in the report's content and conclusions. The argument starts with the striking assessment that the carbon locked up in forest ecosystems 'is greater than the amount of carbon in the atmosphere' and that 'annual emissions from deforestation represent 18% of global greenhouse gas emissions'. It is suggested that these emissions could be cut significantly, 'fairly quickly' and without new technology, but that 'considerable challenges have to be addressed'<sup>1</sup>. The scale of the issue is put into perspective (rather poetically) by equating likely deforestation emissions between 2008 and 2012 with 'cumulative total aviation emissions from the invention of the flying machine until at least 2012.'

The Review notes the win-win of biodiversity preserved by curbing deforestation. Herein lies a question; foresters and conservationists have been concerned about deforestation since before climate change emerged as an issue, but *it has remained a problem*. A quick (and slightly random) reach for the bookshelf took me to Nigel Dudley's 1985 book 'The Death of Trees', and the quote, 'Every month an area the size of Wales is felled'<sup>b</sup>. Many reasons for halting deforestation besides climate change are listed, but also, presciently and revealingly; 'of all the possible effects of deforestation, perhaps the most potentially serious are the changes in climate'. That was over twenty years ago, the science is ever more certain, and Stern's economics now direct us to address deforestation as an *urgent and achievable* action.

The supporting paper assessed the likely cost of preventing deforestation in Bolivia, Brazil, Cameroon, Democratic Republic of Congo, Indonesia, Malaysia and Papua New

Guinea. 'Annual net forest loss in these countries averaged 6.2 million ha over the period 2000-2005, equal to just under half of FAO's estimate of annual global deforestation in this period.' The estimated cost of reducing this is put at \$5 billion per year, dependent upon assumptions about land use change, and with additional administrative costs. This is described as a relatively low 'opportunity cost'.

The Review recognises various drivers for deforestation: small scale subsistence farmers in Africa, farming enterprises in South America, and a mixture of both, including timber production, in South East Asia. Opportunity costs to these interest groups are assessed.

Handling deforestation under the 'International Co-operation' heading, the review recognises major 'institutional and policy challenges.' Forests are recognised as belonging to the nations where they stand, but 'there should be strong help from the international community', which will benefit.

A need for clearer property rights and involvement of communities and loggers is cited, together with stronger governance institutions and land use planning. The review notes the international forestry processes which might support action, but also that their focus upon deforestation is limited.

Potential measures surveyed and commended include: 'Debt Forgiveness', insurance markets, and direct international financial support. Stern is a strong advocate of 'deep and liquid' markets for carbon, but recognises the danger that including forestry could be both complex and potentially destabilising. It is identified as a long term goal, to be piloted in the next Kyoto commitment period<sup>c</sup>. Proposals for compensation proposed by various rainforest countries are discussed.

The difficulties in carbon measurement, and the risk of 'accidental deforestation' and 'leakage' (displacement of felling to unregulated areas) are outlined. Such problems lead to the conclusion that large scale approaches, at country level, are most appropriate, in the short-term at least, as these pilots help to bottom out those issues. A role for specific supporting funds is also identified.

## Afforestation and Reforestation

The review notes that there are 'potentially large areas of land in many countries where new forests could be planted.' It suggests a cost for this of 'around \$5/t CO<sub>2</sub> - \$15/t CO<sub>2</sub>', and goes further to quote the Intergovernmental Panel on Climate Change report in 2000; 'a technical potential of 4 - 6 Gt CO<sub>2</sub>/year from the planting of new forests alone between 1995 and 2050, 70% of which would come from tropical countries.'

A section on successful national emissions reductions interestingly cites China's reduction of deforestation and afforestation, to increase forest area from 16% to 18% between 1990 and 2000. Potential 'export' of emissions through increases in timber imports are not explored.

The review notes the existence of voluntary carbon markets, but does not go into detail. Developing standards, or simply transparency for these, which often include forestry, seems likely to remain a priority.

## Biomass and Energy

The value of biomass in place of fossil fuels and the importance of better use of the biomass which is 'widely used in developing

<sup>1</sup> There has been discussion of whether this data is sufficiently robust – but even if the figure was halved, the sector would represent significant potential cost-effective carbon savings.

<sup>b</sup> Wales is 20,761 square km

<sup>c</sup> From 2013

countries as a source of domestic heat' is highlighted.

The report explores the energy effects of buildings and products, but the significantly lower emissions associated with timber compared with materials like concrete and steel are not fully analysed. The links between wood use and forest management do not seem to be fully explored.

### Conclusions

Overall the Stern Review is a major, and surprisingly readable, survey of a complex issue, bound to attract continued debate. The key challenge to foresters is that deforestation figures as one of four key elements in future international frameworks,

and that 'international support for action by countries to prevent deforestation should start as soon as possible', with an urgent need for 'pilot schemes'.

**Alec Dauncey**

(The author is a CFA member and Senior Policy Officer at the UK's Department for Environment Food and Rural Affairs, but this article is written in a personal capacity).

**Further reading:** [http://www.hm-treasury.gov.uk:80/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/sternreview\\_index.cfm](http://www.hm-treasury.gov.uk:80/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm)

---

# Association News

---

## Newsletter sponsorship

**N**o-one needs to be reminded that the cost of living increases every year, but those costs can be particularly difficult for businesses and charities. At the CFA we are constantly dealing with increasing costs from our suppliers but at the same time we try our best not to pass these on to our members (for example, our membership rates have remained the same as the previous year). We know that your annual subscription is not always easy to spare and we greatly appreciate your membership fees

which help to run the CFA and its activities. We prefer, where possible, to seek sponsorship for our activities and it is in this regard that we seek your help. We would like to find an organisation that might be interested in sponsoring the CFA Newsletter for the next three years and are asking you all for suggestions. If you do, or even if you know of an organisation that might like to sponsor an individual issue, please get in touch with us at +44 (0)1588 672868 or [cfa@cfa-international.org](mailto:cfa@cfa-international.org)

## Thanks to our Life Members

**A**t this time of the year when we are receiving annual subscriptions from members we would like to give special thanks to our Life Members who have always been our staunchest supporters. We are particularly grateful to the essential support that we receive from those who make an annual donation of £25, and thereby

ensure that they receive a copy of the International Forestry Review. If there are Life Members who do not currently donate on an annual basis but would like to please get in touch with us by phone at +44 (0)1588 672868 or email at [cfa@cfa-international.org](mailto:cfa@cfa-international.org)

## Gold Medal for Peter Savill

**W**e are pleased to announce that Peter Savill, CFA Life Member and Chair of the Publications Committee, will be presented with the Royal Forestry Society Gold Medal for Distinguished Services to Forestry at the joint RFS/FC/RASE 'Woodfuel' symposium at Stoneleigh Park on 17th April, 2007.

Peter has had a long and illustrious career in forestry both

in the UK and abroad. The award recognises in particular his role on forestry education in running the MSc in Forestry at the Oxford Forestry Institute 1980 to the early 2000s. During that time, he helped form a worldwide web of future forestry decision makers at home and abroad. Peter officially retired recently but continues his work with the Northmoor Trust, BIHIP, Woodland Heritage and others.

## Obituaries and Bequests

**F**oresters are among the lucky few whose work (usually) lives after them, but just to remind colleagues of a lifetime's achievements the CFA would like to publish an obituary of all members on their death. This is

not always easy, since sometimes those contemporaries who knew the deceased best have themselves died, and we have to write around to many colleagues to assemble a composite obituary.

For this reason we are asking all members to consider sending us their own autobiographical notes, which we will hold securely on file – hopefully for a very long time before we need them. By doing this you will ensure that your most important contributions to our profession will be accurately recorded. A former Chair has already done this, and our current Chair is in the process of doing so. Please send your autobiographical notes to Alan Pottinger, Technical Director, Commonwealth Forestry Association, Craven Arms, Salop SY7 9JJ, England, or

by e-mail to [alan.pottinger@cfa-international.org](mailto:alan.pottinger@cfa-international.org)

While on this sombre topic may we remind members of the opportunity to give something back to our profession in the form of a bequest in your will to the CFA? This may be a sum for general use by the Association, or it may be earmarked for a specific purpose, such as supporting the Young Forester Award or the Queen's Award. In the latter case the funds are designated by the donor and used for that purpose only. For more details please contact Alan Pottinger.

## To be, or not to be in colour...

**W**e have been discussing within the Publications Committee the issue of the format and presentation of the newsletter. These discussions have focussed on the layout, adoption of colour and quality of paper used. As you know, some newsletters are glossy and full of colour and I would be dishonest if I said I didn't look at them (and the budgets behind them) with a certain degree of envy. But our discussions have concluded that we will stick with our low cost production in terms of paper quality and not adopting any more colour than currently used. We are aware that the format has been in need of updating and are considering incorporating a new banner on the front

page and made a very small design change to the beginning of each article, in order to break up the text and make it more readable.

I hope that you agree with the principle put forward by the Publications Committee that we should not increase the cost of production (or the energy used in producing the Newsletter) by upgrading the colour and paper quality.

As always, we would be very pleased to receive your views.

**Peter Savill**

Chair, Publications Committee

## CFA Young Foresters looking forward to travelling overseas

**A**fter a long evaluation process we can finally announce the two winners of the 2006 CFA Young Forester Award, Irfan Ullah and Jenny Greaves. They will be working in Sri Lanka and Guyana respectively in 2008 and reporting back to CFA with a regular diary that will be published on our website. We look forward to following their progress.

Irfan Ullah (full name Sahibzada Irfanullah Khan) is a 32-year old forestry professional from Pakistan who has more than 8 years of experience in the field of natural resource management, working with a number of national and international development organizations including ICIMOD, SDC, IC, and IOBB. He has worked in diverse ecological and social conditions, ranging from the high hill Hindu Kush-Himalayan temperate region in Northern Pakistan to arid and semi-arid rainfed zones in the south. He is excited by the prospect of



*Sahibzada Irfanullah Khan*



*Jenny Greaves*

working in Sri Lanka and said "I have zeal to develop my professional capabilities to cope with diverse situations and challenges that I may face during my professional life. I like to share my knowledge and experiences with others and want to learn from others".

Jenny Greaves is 26 and her motivation to work in forestry grew from her early years in Britain when she was brought up "in the middle of a housing estate without a tree in sight". Although initially she wanted to work in conservation forestry, through study and work experience, she realised that commercial forestry is in fact more sustainable; it enhances the natural environment, provides local jobs and supports the economy. She said of her planned trip "I am motivated by the challenges and opportunities the forestry industry is facing, both nationally and internationally, and I am excited to be given the chance to see something other than Sitka spruce!"

---

# Youth News

---

## Climate change, forestry and increasing momentum: a young forester's perspective

Often I am compelled by the need to do more, to utilise my knowledge of the natural environment to contribute to improved sustainability and be a responsible global citizen. I have great ideas but then struggle to translate them into action within any sort of reasonable timeframe. My latest excuse, in addition to the demands of everyday life, happens to be pregnancy. But in truth, even if I was not currently incubating my contribution to next generation, would the situation really be different? Do most young professionals struggle with maintaining motivation to effect change, I ask myself?

Our society is great at giving the general population an easy way out. Last year I attended a dinner and presentation by the then Chief Scientist of Australia. This man was sharp, able to provide detailed evidence and quick responses across a broad range of fields to enthral the crowd. Yet as question time veered onto the subject of climate change I found myself losing respect for his position. There was a general failure to acknowledge human contributions to climate change. It seemed that even if the problem of climate change did indeed exist, there wasn't a whole lot that any of us, as individuals, could do to make a difference. Whether true or not, does this mean that we should just throw our hands up in the air?

In Australia climate change equates to shifting rainfall patterns and an increase in drought severity and frequency in southern and eastern areas. On a daily basis Australian rural newspapers overwhelm us by the number of articles dealing with direct observations of changes in climate. Reading of families struggling to stay afloat as a consequence of severe drought, the social impacts of this issue are brought into focus. Yet we also read (sometimes in the same edition of the paper) that these changes could be within the realms of natural variation. Still, the average person is given license to remain inactive.

The Australian political approach to this issue is slowly changing. February 2<sup>nd</sup> 2007 saw the Working Group 1 of the Intergovernmental Panel on Climate Change release the fourth assessment report "Climate Change 2007: The Physical Science Basis". This report draws together all data and findings from the past six years, that have improved our understanding of climate change. It is the first step in developing a local and global program for remediation of climate change effects.

The report states that it is very likely that anthropogenic activities have contributed to increases in greenhouse gases. Global increases in the concentrations of carbon dioxide, methane and nitrous oxide are continuing (and possibly accelerating for carbon dioxide). Global temperature increases are unequivocal, supported by both satellite and ground based measurements. Sea levels are rising. A summary for policy makers can be found at <http://www.ipcc.ch/SPM2feb07.pdf>

As young professionals that are seeking to develop careers,

maintain a livelihood or live in communities based upon the forestry industry, our situation is likely to become similar to that of farmers. The climatic envelope of each species will determine the results of increased temperatures and decreased rainfall. *For example* Pinus radiata, will initially benefit from increased temperature and carbon dioxide in higher rainfall areas. This is somewhat balanced by decreased growth with decreased rainfall until a point is reached at which conditions are less favourable for the species. Climate change may also lead to an increased incidents of plant disease, with greatest impacts on plantation monocultures. Such major impacts on growth of planted and natural forests have the potential to threaten the future of any industry.

Perhaps by highlighting the courses of action that an individual and young forester can take, I can gain a little momentum myself. I speak from an Australian perspective but these steps could be applicable to wherever you are in the world.

### 1. Calculate your carbon footprint

Carbon calculators are freely available on the internet, such as the Greenhouse calculator from the Environmental Protection Agency <http://www.epa.vic.gov.au/GreenhouseCalculator/calculator/default.asp> or the calculator found at [www.bestfootforward.com/carbonlife.htm](http://www.bestfootforward.com/carbonlife.htm). These calculators help to highlight some of the most detrimental activities at both a local and global scale.

### 2. Offset your emissions

Plant trees and better manage existing forests to enable us to sequester more carbon and hopefully delay any crisis point. This is a natural process to sequester carbon and if planted in appropriate parts of the catchment trees can have additional benefits for salinity mitigation and biodiversity.

Look for schemes with well publicised goals and achievements that are independently audited. Specifically, be aware of community schemes that are run by the local groups and maintain traditional land use rights rather than destroy both the ecological and social balance.

### 3. Minimise your energy consumption and seek or support renewable energy initiatives

Select energy efficient appliances, use efficient fluorescent lighting and utilise passive heating and cooling principles in the home. Note that these efforts can lead to significant financial savings over the years.

### 4. Support local industries and travel less

Buy local products and consider handmade alternatives. Supporting local food not only reduces your carbon emissions

by reducing transport costs, but it also supports local community farmers and economies. Use public transport where available and live close to where you work and play. Use electronic means of communication.

### 5. Support initiatives at the global level

This includes encouraging governments to meet targets for reduction in carbon emissions and establishment of carbon trading schemes. Carbon rights are well supported by law across Australia enabling individuals to own and trade carbon. Already carbon trading is occurring, and with time introduced regulation and compliance will lead to further development of markets.

### 6. Get motivated now

Lobby government for significant policy changes and join

groups in your area that focus on sustainable living, climate change and the health of the environment. Whilst it may well be futile for just one person to make these lifestyle changes, it isn't hard to figure out that if we all did this, we can effect significant change.

Also, keep your eyes out for the special edition of the International Forestry Review devoted to climate change. It's sure to give you more in depth answers rather than the ramblings of one, at times inactive, young forester. I'd love to hear any other good ideas and international perspectives on addressing climate change, and preserving this earth for future generations. Until then.....

**Courtney Johnson**  
CFA Youth Officer

# Forest Scenes

## Forestry statistics in the UK

### Introduction

A wide range of forestry statistics are published for the UK by the Forestry Commission. Three of the main topics covered are:

- woodland area,
- timber & trade, and
- recreation.

### Woodland area

Woodland area in the United Kingdom (UK) had declined over the centuries, reaching a low point of less than 5% land cover about 100 years ago. Extensive conifer planting during the 20<sup>th</sup> century, together with more broadleaved planting in the last 20 years, increased woodland cover to its current level of 2.8 million hectares, about 12% of land area.

The UK has few native conifer species so most of the new planting used introduced species, notably Sitka spruce, which now makes up more than a quarter of all UK woodland. In the early 1970s, new woodland creation was around 40,000 hectares a year, mostly conifers, about half by the Forestry Commission (Forest Service in Northern Ireland) and about half by the private sector. In the latest year the total is under 10,000 hectares, mostly broadleaves, and mostly by the private sector assisted by government grants.

Most of the woodland area statistics are based on a National Inventory of Woodland and Trees (NIWT, previously called Woodland Census) carried out at intervals of about 10-15 years. The most recent NIWT was a rolling programme in 1995-99. The next NIWT has just started to create a digital map of all woodland down to 0.5 hectares, with a field survey of up to 1% of area to start by 2009.

Woodland area statistics are updated annually, using information from administrative sources for state-owned

woodlands and for grant-aided planting. One gap in our statistics, which we are now trying to address, concerns woodland losses. Losses from conversion to agriculture have now largely ended, but there is continuing pressure from suburban and transport development, and in recent years increasing losses from restoring semi-natural habitats and building new wind farms.

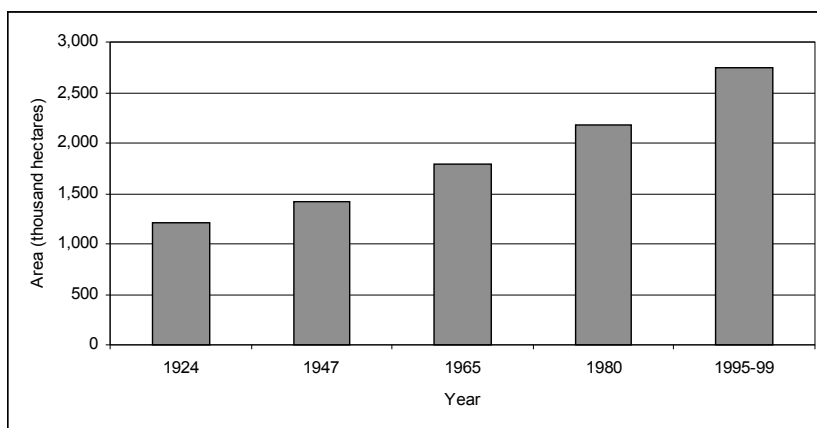


Figure 1: UK Woodland Area

Source: UK Indicators of Sustainable Forestry (Forestry Commission, 2002).

### Timber & trade

Our published UK statistics include:

- wood production (or harvesting),
- deliveries of roundwood to primary wood processors and
- imports and exports.

These timber and trade statistics come from a variety of sources, including administrative systems, statistical surveys and expert estimates. Published figures indicate that softwood production

has generally increased in recent years, resulting in increasing levels of softwood delivered to sawmills and in softwood which is exported without processing. At the same time, hardwood production has fallen. In 2005, a total of 8.8 million green tonnes (8.6 million m<sup>3</sup> underbark) of UK roundwood were delivered to primary wood processors or were exported without processing.

The UK is the 4<sup>th</sup> largest net importer of forest products in the world, behind the USA, China and Japan. In 2005, the UK imported the wood raw material equivalent (wrme) of 52.5 million m<sup>3</sup> underbark. This compares with just 16.5 million m<sup>3</sup> wrme underbark of exports. However, exports have been increasing in recent years, mainly as a result of an increase in recovered paper exports and, to a lesser extent, an increase in softwood exports. In 2005, the UK's imports of wood and wood products were valued at £8.7 billion sterling (US \$15.8 billion) and exports were valued at £2.7 billion sterling (US \$5.0 billion).

### Recreation

Recreational use of forests is an important aspect of forest management and visitor monitoring allows the associated benefits to be measured. Current Forestry Commission monitoring methods involve both on-site and household surveys.

### On-Site Surveys

From 1995 until 2002 a GB wide programme of on-site visitor surveys was conducted, complemented by estimations of visitor volumes obtained from vehicle and people counters installed at busier sites. Since 2002, ad-hoc on-site visitor surveys continue to be undertaken, generally at key sites to meet local forest management needs.

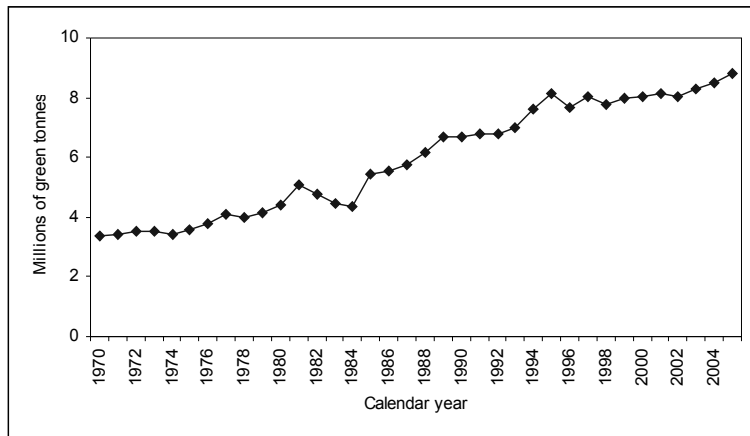


Figure 2: UK Timber Deliveries, 1970-2005

Source: Forestry Facts & Figures 2006 (Forestry Commission, 2006).

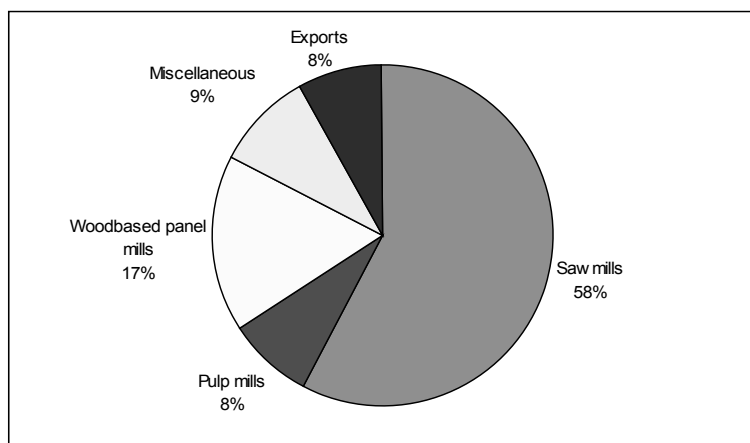


Figure 3: UK Timber Deliveries by Destination, 2005

Source: Forestry Statistics 2006 (Forestry Commission, 2006).



Visitors at Queen Elizabeth Forest Park, Scotland  
 Photograph provided courtesy of the Forestry Commission

It was recognised that some visitors were not recorded by these methods and that little or no information was collected about visitors to the less busy sites. The 'All Forests' survey, which ran in Wales in 2004 and is currently underway in Scotland, has been designed to obtain a more accurate estimate of visitor numbers and visitor profiles. The Welsh survey estimated there are around 4.3 million annual visits to Welsh Assembly Government (state owned) woodlands.

A different 'Quality of experience' approach to visitor monitoring has been used in England since 2003 and in Wales since 2006. Surveys which aim to monitor the quality of visitor experiences, to investigate the motivations and expectations of visitors, and to identify differences between user groups, take place at a handful of sites each year, including one survey at an 'urban' or local community forest.

### Household Surveys

The Forestry Commission participates in other general visitor monitoring surveys. A key aspect of these surveys is their ability to obtain information on those who do not visit forests (something that cannot be done by on-site surveys).

The Public Opinion of Forestry survey, which includes questions on recreation, is run biennially and measures the opinions of the public on forestry and forestry-related issues. In 2005, around two-thirds of GB respondents (65%) said that they had visited woodland for recreation in the last few years.

GB Day Visits Surveys (carried out in 1994, 1996, 1998 and 2002-03) provide estimates of the total number of leisure day visits from home to a variety of locations, including woodland. It is estimated that 252 million day visits were made to GB woodland in 2002-

03. In addition, these surveys also provide the demographic profile of visitors and attributes of visits such as duration and distance.

The 2005 Day Visits Survey took place in England only, however plans for a separate Welsh day visits survey are being considered. Initial estimates from the Scottish Recreation Survey which began in 2003 (and will run for ten years)

indicate that around 50 million recreational visits are made to Scottish woodland each year.

**Simon Gillam, Neil Grant & Sheila Ward**  
Economics and Statistics, Forestry Commission, UK  
[www.forestry.gov.uk/statistics](http://www.forestry.gov.uk/statistics)

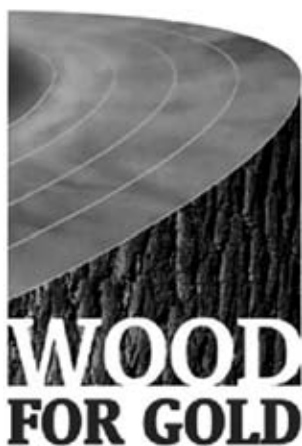
## Gold, silver and wood – London looks forward to the 2012 Olympics

The Wood for Gold campaign is building momentum and continues to be successful in communicating the advantages of wood for construction of the London 2012 Olympic stadiums, village and other facilities.

James Paice, UK Shadow Minister for Agriculture, is supporting the campaign. He points out that “The wood industry is at the forefront of developing sustainable materials and constructions methods, the London 2012 Games provides an excellent opportunity for them to demonstrate this.”

The campaign was successfully launched at the House of Commons in London in November 2006 when politicians from both Houses and all three main parties came to be briefed by members of the wood industry. Wood for Gold’s steering committee was on hand to ensure that those present understood the economic and environmental arguments for making wood the building material of choice for the Games. MPs were particularly impressed by wood’s sustainable credentials which can deliver the aspirations of all parties as they seek answers to the challenges of the environment and climate change.

Early Day Motion 180, supporting the use of wood in the 2012 Olympic Games, has gained much support from MPs. Andrew Abbott, speaking for the campaign, said: “I am delighted that the motion tabled by Paddy Tipping MP has been so well supported, and particularly by MPs such as James Paice, Brian Jenkins, Simon Hughes and Charles Kennedy.” EDM 180 calls on the House of Commons to recognise the benefits of wood as a sustainable construction material and specifically congratulates the Wood for Gold campaign for our work in promoting the Olympics as an ideal opportunity for the wood industry to showcase their talents.



Beyond Parliament, the Wood for Gold team has been actively engaging stakeholders within the Olympic Delivery Authority, local councils, Greater London Authority, London Development Agency, and a variety of government departments and advisory groups. Through a combination of briefing meetings and detailed written supporting evidence, the wood agenda is being promoted at the highest levels. Specific submissions on the ODA procurement policy and the ODA sustainability policy have ensured that the wood case is fully considered.

The Wood for Gold website has been live for over a month, providing information on the campaign and its aims, as well as links to other wood industry sites, and an opportunity for supporters to add their names to the site.

A great success of the campaign to date is an active steering group that includes representatives from BWF, TTF, ConFor, TRADA and wood for good, so that when meetings take place, Wood for Gold is viewed as a campaign that represents the whole industry, not just one part of it. A committee, to look at supply chain issues, is now being formed from industry volunteers and this committee will have the opportunity to put practical supporting arguments to demonstrate that the demand for wood can be met.

The campaign continues to seek more support and involvement from the wider industry, and you can still help by asking your local MP to sign the Early Day Motion (No. 180), or by raising the campaign agenda in your local newspapers. If anyone needs more information, the website can be accessed at [www.woodforgold.com](http://www.woodforgold.com) or [www.woodforgold.co.uk](http://www.woodforgold.co.uk).

**Phil Briscoe**  
Director  
Bellenden Public Affairs

## Guyana And The Wider World: Guyana’s Poverty Reduction Strategy Programme (PRSP) and the forestry sector

The Guyana Poverty Reduction Strategy Paper (PRSP), crafted out of nation-wide participatory consultations and published in 2001, set out the parameters of poverty in Guyana, analysed the contributory factors and detailed a road map for poverty alleviation or eradication. President Jagdeo announced late last year that “Guyana will

commence negotiations with the IMF next year, with a view to coming up with a successor programme to the just concluded Poverty Reduction Growth Facility (PRGF)” (Stabroek News, December 24, 2006).

At the turn of the millennium, Guyana was still suffering from a continuing high incidence of poverty: “In 1999, Guyana



completed a Living Conditions Survey [which] indicated a reduction in poverty levels. The proportion of the population living below the poverty line was found to be 35 per cent with 19 per cent living under conditions of extreme poverty” (PRSP, p. 5). While no more recent data on poverty have been published, the Guyana economy has not grown in the ensuing years.

The PRSP set out the causes of poverty thus: “Although no one factor, or group of factors, may be singled out as the cause and effect of poverty, the evidence in Guyana suggests that low and/or negative economic growth accounted for the pervasive and persistent level of poverty in the country. This, in turn, stemmed from (i) poor economic policies; (ii) poor governance; (iii) non-complementing growth-oriented infrastructure; and (iv) deterioration in the quantum and quality of social services” (PRSP, p. 7).

Like all other national policy documents, the PRSP celebrated Guyana’s natural resource endowment. According to the PRSP, most of the poor in Guyana live in the interior Regions, coterminous with Guyana’s forest cover. This article begins to consider the question: *Why is there persistent poverty in the interior alongside the parcelling out of Guyana’s best endowed forests in large-scale forestry concessions? Do the reasons for persistent poverty, as diagnosed by the PRSP, apply to the forestry sector?* This article examines the first two causes of poverty according to the PRSP.

### **Poor economic policies**

During the late 1960s and early 1970s the UN’s Food and Agriculture Organization (FAO) assisted the Guyana Forest Department with reconnaissance inventories of forests. Compared with much of African and Asian tropical rainforests the forests of Guyana have low stocking and a high proportion of hard and heavy timbers.

Almost uniformly the FAO specialists believed that these limitations called for economies of scale, with low intensity, low cost, low impact logging at long intervals, with value added through efficient industries, undertaken by private sector concessionaires and managed with much greater technical understanding and marketing skills than the local timber industry then displayed; what might now be termed ‘a knowledge economy.’ FIDS also suggested provision for small-scale operators having limited capital, but the main emphasis was on economy of scale.

In the middle of these technical developments, in 1970, the then government took control of ‘the commanding heights of the economy’ and civil servants were appointed to run private sector operations.

As the economy faltered, massive and ill-advised ventures such as the Demerara Woods enterprise at Mabura soaked up money. Loans and credits from Canadian CIDA failed to restore profitability to the majority of private logging operations or sawmills that lacked political connections. Spare parts and working credit were so scarce that the forest industry became moribund. The almost unbelievable decision by local sawmillers to install sash gang saws (suitable for perfectly sound conifer logs but entirely inappropriate for defective tropical hardwoods) contributed to loss-making enterprises.

Liberalisation of the economy after 1985 was not accompanied by an understanding of the national safeguards

for foreign direct investments (FDI). OECD guidelines for multinational enterprises and on transfer pricing were apparently overlooked when the give-away arrangement with Barama was negotiated in 1991.

Although they are not in the public domain, the later FDI arrangements for other foreign-owned loggers seem to have been equally incompetent, judging by the way in which the expatriates have been allowed to export unprocessed logs instead of demonstrating best practice in timber processing. The 1997 National Forest Policy (NFP) provides for operation of small mobile in-forest sawmills, but only very recently is this policy being put into practice in any notable way.

### **Poor governance**

The second criticism in the PRSP concerns the weak and inconsistent application of law and policies. Studies for the GFC during 1994-6 showed that resource access taxes had failed to be adjusted for the falling exchange rate and for inflation and were then amongst the lowest in the world. Political lobbying has prevented correct updating of taxes, so the country is receiving only around ten per cent of the volume-based tax revenue from resource access rights compared with Malaysia. It gets worse. Even our low taxes are not actually collected efficiently by the GFC and over US\$ 1 million was owed by the major logging companies up to August 2005. The NFP requires the GFC to pay area-related forest taxes into the Consolidated Fund, but external reviewers confirmed that up until 2001 the GFC had not done this. There is no report on whether the Ministry of Finance has demanded its due or whether it demanded the 20-year backlog of taxes. The 1979 GFC Act requires the Minister of Finance to tell the GFC what to pay into the Consolidated Fund but the NFP requires the GFC to take the initiative.

The 1980 national constitution and four national policies, plus the PPP/C’s own 2006 manifesto, all promote in-country, value-added processing of our natural resources. However, what we see is an increasing proportion of prime hardwood timber logs being exported without processing. Of course this is the most profitable action from the point of view of personal private gain. But national policy requires our natural resources to be used for maximum net social benefit, the public good, not private gain. Until we invest in modern machinery and marketing for furniture and flooring, highest technical efficiency in transformation from timber log to furniture may be achieved by exporting logs to the modern mills in China and the ramshackle but integrated industries in India. But economic theory then requires that we tax the excess rent obtained through log exports, so that it is the nation rather than the foreign logger who benefits most.

This is not happening. The proposal of the Minister of Agriculture for “forming a ministerial committee to look at developing and advising on a log exporting policy for Guyana” in the future does nothing to solve the increasing problems today (‘No evidence so far of forestry transfer pricing -Persaud,’ Stabroek News, Monday, January 29, 2007).

**Janette Bulkan**

CFA Governing Council  
guyaneforestry.blogspot.com

# La Forêt de Tronçais

Graduates in forestry from the University of Edinburgh will remember well the forest of Tronçais in the French Massif Central which generations of students visited as part of their final-year tour of forest management practices in continental Europe. I myself did so in 1962 and, driving back from England to Italy this autumn, persuaded my partner that we should stop and visit this great forest which made such an impression on me 44 years ago.

For those who did not enjoy the benefit of an Edinburgh forestry education it should be explained that this oak forest of 10,500 ha has been under systematic management since 1669, when a Commission appointed by Louis XIV's Minister of Finance and Secretary of State for the Navy, Jean-Baptiste Colbert, drew attention to the then ravaged state of the forest and laid down prescriptions for its protection and the production of timber for shipbuilding. Even with this special status it was still threatened by extensive charcoal burning in the late 18<sup>th</sup> century to supply the nearby iron works, and a number of *étangs*, or small lakes, were made at this time to provide water power to drive the bellows of the furnaces.

When I visited the forest in 1962 the principal object of management was still the production of timber, although no longer for ship building. Instead the magnificent oak – around 73% of the main crop trees are sessile oak, 9% are beech and 8% are pedunculate oak – was mainly grown for veneer logs, and for cooperage. I recall watching the oak being sliced for veneer, and seeing wine barrels being made in the traditional way in workshops in the forest but my notes (which I still have!) state that only a few rights to graze cattle or pannage still existed but that they were little used. I don't remember any other goods or services bar the licensed

hunt for deer.

Our recent visit showed how times have changed. Management is now multi-functional, and while the objective of the existing plan (2001-25) is still the production of oak

with a close grain, it is combined with the improvement both of biological diversity and the attractions of the forest to its numerous users. The main management problem in 1962 was the preponderance of middle-aged classes; a 225 year rotation had been instituted to attempt to move towards a more normal distribution but perhaps even that did not succeed, for now the rotation is 250 years. We noted a number of modern sawmills around the forest, obviously still producing barrel staves among other products – but with no sign of the fabrication of casks in the forest any longer.

There is a splendid conservation area *La Futaie Colbert* (the Colbert high forest) with oak of up to 350 years of age. A pleasing custom, instituted in 1899, is the naming of remarkable trees after remarkable men (as yet, no women). I recall that the *Chêne Stebbing*, named after a former Professor of Forestry at Edinburgh and the only tree called after a foreigner, died in the early 1960s, but another oak has been chosen and the name of Stebbing lives on in its successor.

For any forester traveling through central France on the A71 south of Bourges a diversion to Tronçais is well worth while. There are

splendid walks in an attractive landscape enhanced by the various *étangs* and a good selection of hotels and restaurants.

For more information see the website of *Les Amis de la forêt de Tronçais*: [www.amis-troncais.org](http://www.amis-troncais.org)

**Jim Ball**  
Chair, CFA



# Community Based Biodiversity Conservation in Nepal

## Background

Nepal has achieved a remarkable conservation success with more than 18% of the country's land area having been set aside within a protected area management system. In Nepal, community managed forests have been seen not just as a tool to improve forest management but also as a means to alleviate poverty and promote equity in communities living in the periphery of the forest areas. Nepal is an agrarian society and from the high land to the low land rural population is highly dependent on the land they cultivate and the forest from which they derive their basic needs. Forests are a source of livelihood, and most particularly for the poorer sections of the population. They are also a source of energy for the women, providing their supply of cooking fuel. Thus, improved management by communities under the Forest User Group system is envisaged as a means to help these groups particularly.

The concept of community forests was introduced in the late 1970's and over the last two decades, it has proliferated over the whole country, with about 25% of the national forest area now under management by Forest User Groups. The programme in Nepal is considered to have been successful over the years and several countries have adopted the general concept. There are many studies, which indicate success in terms of the overall physical improvement of the forest.

## Early challenges of the Baghmara Buffer Zone Community Forest

The Baghmara area came under tremendous pressure in the 1980s both from the locals' need for fodder and fuel wood and also from the growing need of the tourism industry in terms of fuel wood and construction needs. The situation got so bad that during the political turmoil of 1988, the law and order situation worsened and a portion of the forest was registered as private land and land certificates were distributed but the majority of the local people, especially the indigenous Tharu community of Chitwan district were vehemently opposed to the land distribution.

## Establishment of Baghmara Buffer zone Community Forest

In 1989, the Smithsonian Institution handed over its research station in Chitwan National Park to KMTNC who established a Biodiversity Conservation Center (BCC) previously known as the Nepal Conservation Research and Training Center (NCRTC). As its first step, BCC established a tree nursery to provide multipurpose tree seedlings to the public for household farm and community plantations and with the funding support from USAID through WWF- US introduced community plantations in Baghmara, a highly degraded forest land adjacent to the Chitwan National Park.



*Tigers, once hunted in large numbers, now have protection*

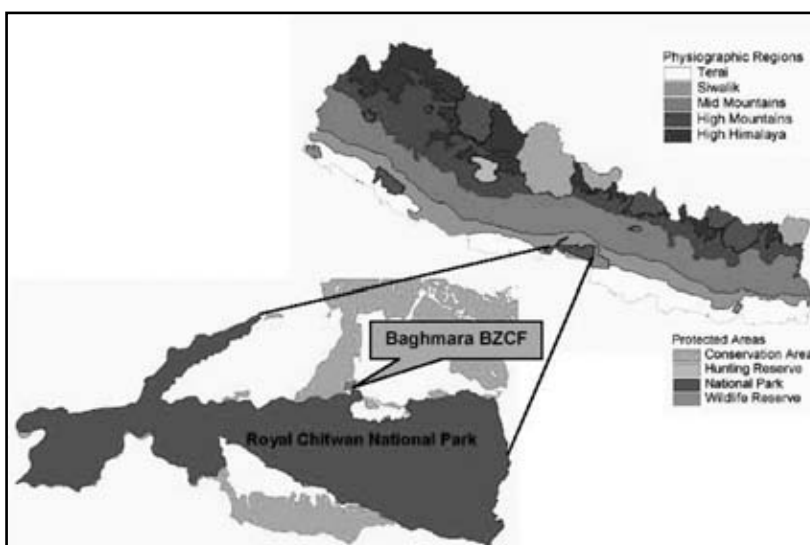
In the initial stage of operation, there was a mixed feeling from local residents, some of them being suspicious of our activities, as they felt that the fenced area would deprive them of their grazing rights. However, 45 days after planting, the local people were allowed to harvest the

under storey grasses which helped to dispel their suspicion. When this exercise was repeated an extra 20 ha was again reforested with local participation and within this a 32 ha plot was set aside for grass production and 20 ha allowed for fodder collection. Having seen the monetary benefits, the locals became motivated towards conservation.

## Management, controlling system and practices

Baghmara Buffer zone Community Forest, whose total area now stands to 215 ha, comprising total, mixed and naturally regenerated forests was officially handed over to the User Group living near the forest area in June 1995. The local User Group Committee prepared and submitted a five-year forest operational plan to the DNPWC which in turn handed over the designated forest to the local Forest User Group for its management.

Baghmara Buffer zone Community Forest operates in accordance to its constitution and annual work plan approved by Department of National Park and Wildlife Conservation (DNPWC). An Executive committee operates with 13 members selected by the users' members. Decisions made by the committee are first put in the general meeting and when two thirds of members agree, it is implemented.



*The Baghmara Buffer Zone Community Forest*

## Biodiversity improvement

Following participatory management the plant diversity has been increased and presently stands at 61 species of trees, 70 species of shrubs including 17 climbers, more than 50 species of herbs, 5 species of orchids, 26 species of grasses, 15 species of pteridophytes, 4 species of mushrooms and many more species of lower plant groups.

Similarly, the success of community forest management has improved the habitat quality. As a result, rare and endangered species of wildlife including the Great One Horned Rhinoceros (*Rhinoceros unicornis*), Royal Bengal Tiger (*Panthera tigris*), more than 200 different species of migratory and residential birds, Jackal, Deer Species ( Sambar, Hog and spotted deer), Crocodiles (Marsh mugger and Gharial) and Python are residing in the community forest area in its grasslands and lakes.

## Distribution of the forest products and other benefits from community forest

Along with the biological success, the Baghmara Buffer zone Community Forest also generates substantial revenue from ecotourism and selling forest products. The wide spectrum of ecotourism activities that can be done at this community forest include Elephant riding, a nature walk, bird watching, canoeing and overnight stay at the Tower for animal watching. The income has been invested in the local infrastructure (Schools, alternative energy such as biogas, husk stove, and road graveling), education (adult literacy training for women empowerment, financial support for poor and disadvantaged schoolchildren for their education), and other various income generating activities such as; bee keeping, mushroom farming, saving and credit, agro-forestry, and tailoring for women.

Forest users are imposed with membership fees and collection fees for forest products. In Baghmara BZCF, the members can harvest for firewood twice annually but for grass and fodder it is open all year round. The Forest Users Group (FUG) is made of heterogeneous caste.

If a poor household cannot afford money to buy the firewood then they will be provided with the wood in exchange for volunteer two days in patrolling the forest management.

## Gradual change in attitudes

The biological and economic benefits created a sense of ownership of the forests previously unknown. People of this community forest now say that they feel very good when they go to the forest and have a meeting under a tree, and they get a profound sense of satisfaction. These changing attitudes are illustrated by one community member who said; "In the

past we were against conservation, this was not because we opposed conservation per se but we did not have any role in the management even though we were so attached to the forest. These days we feel this is our forest and we love it as our child. Now we know that if we save this forest then the forest would also save us our lives by providing alternative livelihood options in a sustainable manner. Therefore, we do not cut down the trees and jungle anymore because if we do we cut down our jungle, and our livelihood options will go away along with the animals and tourists."

## Lesson learned

The lesson learnt from Baghmara Buffer zone Community Forest can be replicated in other South Asian countries which have similar socioeconomic structures such as India, Bangladesh and Burma. The gradual change in people's thinking towards the guardianship of forests can be taken as a positive indication for future conservation initiatives.

Degraded land that was once like a desert can be turned back in to its natural state if the community has strong support in conservation activities. Natural resources can be managed more effectively and utilized more sustainably

through local participation and ownership. Successful biodiversity conservation can be achieved at the grass root community level if the forest is connected with protected area, possesses strong natural regeneration capacity and is cared for by its custodians. The lessons learned in this community forest can be described as follows;

- Community managed project interventions have clearly shown that if severely degraded forests are well protected and managed natural forest can be easily revived.
- Regenerated forests that are adjacent to protected areas are likely to have a high biodiversity value.
- Local communities can turn out to be good conservationist if they have a stake in ownership and benefits.
- Second tier leadership development is a must for any User Group Committee.
- Educational and study tours although expensive have tremendous impact in awareness building.
- A greater level of coordination is necessary between the

Village Development Committee and the User Group Committee.

- Women's involvement in community based conservation programmes is crucial since they are the main players in household affairs.



*Bee-keeping is now a revenue-earning activity*



*Eco-tourism brings substantial income to the area*

**Yogendra Tamang**

lamayogendra@yahoo.com

## Managing forest resources wisely in Zambia... extracting washing soap and ropes from trees

Surprising though it might seem, the tale of deforestation and the environmental threat that it poses does have a positive side to it. Our forefathers had the skills of using the forest as an important source of livelihood without necessarily causing long-term damage to it. For example, detergents and building materials were extracted from the forest without harming it and these skills that have been handed down from generation to generation are still being practised today.

“Because there are so many detergents and soaps on the market nowadays most people don’t use the Ndale (*Swartzia madagascariensis*, a small semi-deciduous tree, with a light rounded crown, which can reach a height of 10 m on rich soils, also known as Snake bean) tree anymore” said Thomas Chibulu, a teacher at Danger Hill Community School in Mulenga Kasomo village of Chief Chikwanda’s area in Mpika rural district of Zambia. While demonstrating the simple production of washing soap from a tree Chibulu said that it is mostly in the very remote areas that the detergent from this tree is used where the Bembas (a local tribal grouping in northern Zambia) have washed their imibinde (loincloths) long before the colonialists came to Zambia.

“If you are washing white clothes, you are better off using some pieces of the bark. Although it takes longer to produce bubbles (foam), it has a stronger effect than the soap that is made from the tree’s fruits.” says Chibulu.

The tree can provide the detergent from its bark and fruit without being cut down. Crushing thin strips or slices of the bark or pods of fruit produces the detergent. This is then vigorously rinsed in water, and left to settle for about 5 to 10 minutes. The pieces of crushed

bark or fruit are then removed from the water solution leaving rich white foam. Clothing or fabrics can then be immersed in the water for washing.



*Thomas Chibulu demonstrates production of washing soap from Ndale*

And Victor Kawanga, the National Branch Coordinator for the Commonwealth Forestry Association says that the ndale tree has a grey black bark with a lattice-work of deep furrows and ridges from which a crimson-black liquid exudes when the tree is damaged. The bark serves to distinguish *swartzia* from the otherwise similar *Dalbergia nitidula*.

Another handy product that comes out of the forest without causing long-term damage is fibre rope, which in Bemba, the language most widely spoken in Northern Province, is called *ulushishi*. *Ulushishi* is mainly used for building, although it has other purposes such as making beds or weaving mats. The fibre rope can be extracted from various species of trees in thin strips. If done expertly the tree may be fully healed within a year. But CFA’s Victor Kawanga says that lack of proper technical know-how on the mechanics of extracting the rope fibre can leave the trees vulnerable.

“Trees are living organisms. A wound that is left on a tree at the mercy of nature to heal could be harmful, these wounds or openings become the

entry point for diseases,” he says “Eventually the wound doesn’t heal appropriately with the end result of the vigour of the tree being reduced, fruitification being reduced and eventually death of the tree.”

Nevertheless, it remains clear that if the forest resources are used wisely, they may continue to benefit future generations.



*Fibre rope from trees has to be extracted with care*

**Victor Kawanga and  
Andrew Mulenga**  
CFA Zambia  
kawangavik@yahoo.co.uk

# All change in forestry at Bangor University

Organisational changes have recently occurred within the University of Wales, Bangor, which are designed to further build on the proven record of excellence in teaching and research in unique and flagship areas, such as forestry and wood science.

On 1<sup>st</sup> August 2006, the top-rated School of Agricultural and Forest Sciences (SAFS) re-launched as the School of the Environment and Natural Resources (SENR), a name which better reflects the full range of activities carried out in this vibrant academic unit. SENR, together with the

innovations from 2007.

The well-established full-time Masters' courses in *Environmental Forestry* (having passed its 25<sup>th</sup> anniversary) and *Agroforestry* are now complemented by the *Erasmus Mundus MSc in Sustainable Tropical Forestry* (SUTROFOR) which is run in conjunction with partner European Universities (see [www.sutrofor.net](http://www.sutrofor.net)). There are also increased postgraduate distance-learning opportunities within the newly named School (see [distance.bangor.ac.uk](http://distance.bangor.ac.uk)). As well as the proven MSc Forest Industries Technology by distance-learning, the University has



*Some of Bangor's current intake of MSc Environmental Forestry students*

University's School of Biological Sciences (SBS), the School of Ocean Sciences (SOS), and research-led units including the Biocomposites Centre and CAZS Natural Resources comprise the University's newly-formed College of Natural Sciences, which has been established specifically to encourage and simplify the opportunities for interdisciplinary co-operation of the highest possible calibre.

Forestry and wood science are still very much at the forefront within SENR and these subjects have also been chosen in order to pioneer initiatives within the University which are intended to broaden access to a first-class University education whilst minimising the financial and other impacts for students.

As well as running undergraduate degrees in Forestry and *Conservation and Forest Ecosystems*, the School of the Environment and Natural Resources has been actively building on the strengths of its existing and successful full-time taught postgraduate programmes with the launch, in 2006, of three new forestry-related MSc courses and further planned

just launched two further innovative distance-learning courses - MSc Forestry and MSc Forestry and Forest Products, both of which now have their first cohort of enthusiastic students. 2007 will be the inaugural year for the new Erasmus Mundus MSc in Sustainable Forest and Nature Management (SUFONAMA - see [www.sufonama.net](http://www.sufonama.net)) as well as hopefully seeing the fruition of other collaborative ventures closer to home.

So, all change in forestry at Bangor University...? Yes, absolutely! Changes which further strengthen both learning and research opportunities in forestry and related disciplines at this forward-looking, go-ahead institution...

For more information, contact [senr@bangor.ac.uk](mailto:senr@bangor.ac.uk) or visit the website at [www.senr.bangor.ac.uk](http://www.senr.bangor.ac.uk)

**Tom Jenkins**

Distance Learning Programme Director  
University of Wales, Bangor  
School of the Environment and Natural Resources

---

# Around the world

---

## Amazon rainforest relies on African dust

A single spot in the Sahara desert is responsible for over half the Amazon basin's annual supply of minerals, researchers say. In a study published in *Environmental Research Letters*, scientists show that dust winds arising from the Bodélé depression - northeast of Lake Chad - are the main mineral source fertilising the Amazon rainforest in Latin America.

Using recent advances in satellite instrumentation, researchers produced the first quantitative estimate of the dust emission: 56 per cent of the Amazon's total annual mineral supply. It was known that West African dust winds played an essential role in the Amazon mineral supply. But the rate of emission from the Bodélé depression has not been measured until now.

According to the study, the soil of the Amazon rainforest is shallow, poor in nutrients and almost without soluble minerals. The health and productivity of the Amazon basin depends on

nearly 50 million tons of mineral-containing dust transported annually across the Atlantic ocean from the Sahara. The Bodélé is known to be the biggest source of dust in the world. This has been attributed to its shape and geography. Wedged in a narrow path between two mountain chains, the depression directs and accelerates surface winds.

Lead researcher Dr Ilan Koren, of the Weizmann Institute in Israel, told SciDev.Net the research posed more questions than it answered. Key questions remain, such as for how long the area has emitted such a huge amount of dust, and how long it will continue. "We are now studying how long the Bodélé - and all Sahara regions - have contributed to the Amazon, and what the forest was like before," he said.

The full article can be found at [http://www.iop.org/EJ/article/1748-9326/1/1/014005/erl6\\_1\\_014005.html](http://www.iop.org/EJ/article/1748-9326/1/1/014005/erl6_1_014005.html)

[www.scidev.net](http://www.scidev.net)

## Scholarship fund to commemorate scientist committed to tropical forest communities

A permanent Scholarship endowment fund is to be established by the Tropical Agricultural Research and Higher Education Centre (CATIE) Costa Rica and the University of Wales, Bangor, to commemorate Vanessa Sequeira, a remarkable young woman who was committed to finding sustainable solutions for tropical forest communities, and who was tragically killed while conducting field work in a community in the Brazilian Amazon on September 3<sup>rd</sup> 2006.

The commemorative Scholarship to be awarded at CATIE and supporting the Bangor/CATIE joint programme, will finance qualified professional women with research and academic interests in the socioeconomics of rural sustainable development, especially in relation to people and forests. The Scholarship is intended to reflect Vanessa Sequeira's commitment to seeking alternatives that encourage the responsible use and conservation of forest resources, while enhancing the well-being of people whose livelihood is in some way tied to forest resources.

The Scholarship to be awarded every four years will cover academic costs and some research and living expenses for each four-year Doctorate Scholarship student.

Vanessa Sequeira was a dynamic, intelligent, enthusiastic woman who was totally dedicated to her field. At 36 years, she had an impressive field experience in Latin America. She came to the UK to study from Portugal. She gained her first degree from the University of East Anglia and graduated with a Masters degree in Environmental Forestry from the University of Wales, Bangor in 1995. At the time of her tragic death,

she was studying a Doctorate under the CATIE/Bangor joint doctorate programme.

She had, during her career, worked as a forest information officer for the Worldwide Fund for Nature and as a project assistant on a multi-disciplinary Brazil-UK research project on the economic botany of Northeast Brazil for the Royal Botanical Gardens, Kew. In Ecuador, she investigated tree species composition of two Andean cloud forest sites as part of a six-month multi-disciplinary graduate expedition coordinated by the University of East Anglia.

"She was held in high regard by staff and her fellow students alike, for her commitment to and enthusiasm for her research. She had a real get up and go approach to making a difference in the world," said Dr Fergus Sinclair, Senior Lecturer University of Wales, Bangor.

The Scholarship announcement was made at a commemorative tree planting ceremony at the University of Wales, Bangor on December 3, 2006. A Golden Ash tree (also known as the Queen of the Forest) was planted at the University's Henfaes Research Centre at the opening of the Aber valley, one of Vanessa's favourite spots in Wales.

Donations to the Scholarship fund should be addressed to the School of Environment & Natural Resources, University of Wales, Bangor (UK) or the Tropics Foundation P.O.Box 210 Atlanta, GA30301-2210 [www.tropicsfoundation.org](http://www.tropicsfoundation.org)

**Elinor Elis-Williams**

Press Officer, University of Wales, Bangor  
[press@bangor.ac.uk](mailto:press@bangor.ac.uk)

## Forest fires cool northern climates

**F**orest fires in northern countries may cause regional cooling and not warming, as was previously thought. Researchers say their new findings could mean that on a global scale, forest fires will not affect climate change one way or the other.

Unusually large fires have blazed across Canada, Alaska, Russia, Norway, Sweden and other northern countries over the past decade. Researchers have said that warmer climates, longer summers and generally drier conditions may be increasing their frequency.

It was thought releasing the large amounts of carbon dioxide stored in trees would mean that forest fires would contribute to the greenhouse effect and start a fiery feedback loop. Not so, says a team of 17 US and Australian researchers in *Science*.

The team took an overall look at the effects of a forest fire that burned about 6.7 hectares (16.5 acres) of the Donnelly Flats in central Alaska in June 1999. Some researchers looked at changes in how the area reflected radiation from the sun, while others looked at greenhouse gas emissions and changes in vegetation.

They then plugged all their data into a computer model and projected it 80 years forward to see how a single fire would affect climate in the short and medium term.

They found that while temperatures did warm for about one year after the fire, this was reversed within 10 to 15 years. Averaged over 80 years, the overall effect was a cooling of temperatures.

One of the biggest reasons for the cooling effect is that while the dark spruce trees absorb the warmth of the Sun, the snow reflects it back. After the forest fire had removed the trees, only snow was left on the ground.

However, black soot resting on the snow immediately after the fires darkens the ground, which accounts for the initial

warming. The soot disappeared with the snow melt in the spring and the following winter pure snow covered the area, and started the cooling trend.

"This cooling effect cancels the impact of the greenhouse gases, so the net effect of fire is close to neutral when averaged globally, and in northern regions may lead to slightly colder temperatures," explains James Randerson of the University of California at Irvine, who led the study.

Eventually, new grasses, shrubs and trees grow back. But researchers at the University of Florida who participated in the study found that the first trees to replace the burnt conifers were aspen, birch and other deciduous trees.

Their large, light-green leaves reflected more of the Sun's energy than their pine-needled predecessors, further contributing to the cooling trend. And the new trees are deciduous not evergreen, meaning they lost their leaves in the winter exposing the reflective snow.

It will take decades for the black spruce to grow back at Donnelly Flats, say the researchers (see image below right). In northern countries, forest fires typically recur in the same area every 80 to 150 years.

Climate researchers predict this interval will shorten as global temperatures rise due to greenhouse gas emissions. This means that returning conifers would soon be burned again, once more causing a long-term drop in Northern temperatures.

But the study does not suggest that cutting down trees is a good option to tackle global warming in northern latitudes, cautions Randerson: "There are many, many reasons for maintaining northern forest ecosystems. They have tremendous value from the perspective of water resources, wildlife, timber, and recreation."

[www.environment.newscientist.com](http://www.environment.newscientist.com)

## Brazil makes unprecedented conservation announcement - seven new protected areas created in Pará State

**T**he governor of the Brazilian state of Pará announced on 4th December 2006 the creation of seven new protected areas in Amazonia covering an area roughly the size of Illinois. The announcement is an enormous step in Brazil's world-leading efforts to protect Earth's remaining tropical rain forests.

Stretching from the border of Guyana and Suriname in the north to areas south of the Amazon River, these new protected areas encompass an unprecedented 37 million acres. "I cannot remember any single announcement like this," says José Maria Cardoso da Silva, vice president of science for Conservation International (CI)-Brazil. "This is one of the major conservation announcements of the last decades." For Brazil's species, people, and climate, these protected regions will play a valuable role.

Two of the seven new areas are designated as strictly protected areas, one of which is the world's largest strictly protected area ever created in a tropical forest. According to CI's Amazonia program manager Enrico Bernard, these two areas alone could be home to as many as 54 percent of all animal and plant species found in Amazonia.

With the addition of the protected areas named today, the region now boasts a mosaic of connected protected areas, which create a biodiversity conservation corridor that allows species

to roam vast landscapes. Connecting various populations of species allows these groups to intermingle, strengthen their gene pool, and thereby increase their chances for long-term survival.

The people living in Amazonia also benefit from the contiguous protected ecosystem. For example, local people can be assured of their water supply by maintaining the health of these areas because almost 20 percent of the world's water runs through the region. The protected areas sit atop the Guayana Shield, a massive underlying rock formation containing the most significant freshwater reserves in the American tropics. Five of the newly protected areas also allow for sustainable use and limited production.

On a larger scale, healthy ecosystems will also contribute to efforts to stabilize the world's climate. Since 1970, an area of Amazon rain forest larger than France has been destroyed. As forests are cut, the carbon they store naturally is released as CO<sub>2</sub>, further contributing to greenhouse gas emissions. By protecting these forests from continued destruction, additional emissions are avoided.

[www.conservation.org](http://www.conservation.org)



# Fragmented rainforests at risk

“In just two decades - a wink of time for a thousand-year-old tree - the ecosystem has been seriously degraded.” So says William Laurance, an ecologist at the Smithsonian Tropical Research Institute in Balboa, Panama. It's a familiar tale of ecological woe, but with a twist. After loggers and ranchers have cleared parts of the tropical rainforest, even those forest fragments that remain change far more rapidly than expected.

The finding comes from the longest-ever study of forest fragmentation, which has been running in central Brazil since the early 1980s. Researchers have been conducting censuses of tree species in 40 1-hectare rainforest plots, each within fragments ranging in size from 1 to 100 hectares.

Laurance and colleagues combed through these surveys to compare plots near forest edges against those in mature forest

far from edges. The edge plots, they found, were more likely to lose their original tree species because of wind damage and drought, and were also more likely to gain fast-growing colonising species (*Proceedings of the National Academy of Sciences*, DOI: 10.1073/pnas.0609048103).

These changes make the forest more liable to degradation than undisturbed forest, even though the total number of tree species on each plot remains about the same. Moreover, the new trees tend to be smaller and have less dense wood than those they replace, so the change represents a net loss of carbon storage - an ominous trend for forests' ability to buffer global warming.

[environment.newscientist.com](http://environment.newscientist.com)

## Liberian forestry sector emerges after 14 years of conflict and mismanagement - First-ever forestry policy for Liberia

Liberia passed a new forestry law in late 2006, opening a new era for the Liberian forestry sector after a long period of mismanagement and exploitation of forest resources to fuel conflict. The new legislation will allow the implementation of Liberia's first-ever forestry policy, which FAO helped develop with numerous international partners through the Liberia Forest Initiative.

Between 1989 and 2003, revenue from forests was used to fund armed conflict in Liberia, forcing the United Nations Security Council to impose sanctions on Liberian timber exports in July 2003 for three years. When international support to better forest management began in June 2004, the sector was in complete disarray. There was no experienced leadership, a weak understanding of the importance of good governance and no ability to enforce rules and regulations. A distorted concession system that had led to massive fraud also plagued the sector. Tasked with the challenges of reform and rehabilitation, FAO helped draft a forest policy in Liberia together with the World Bank.

“The new forestry policy aims to maximize the benefits from the forestry sector to the Liberian people and put an end to the use of forest resources to fund conflict,” said Adrian Whiteman, an FAO forestry officer who worked on the project. “The Liberian Forestry Development Authority is now in a position to regain authority and control over the forest resources.”

Forest resources in Liberia are important to its economy and amount to 47 percent of its land. In the late 1990s, their contribution to the gross domestic product amounted to about 20 percent and accounted for over 50 percent of the country's export earnings.

### Strengths of the new policy

During the civil war years, forest resources and all forest infrastructure were destroyed through indiscriminate logging and widespread illegal trade of forest products, carried out

under the protection of private armed militias. The Liberian Forestry Development Authority, the agency overseeing the management of the country's forest resources, was looted and damaged and lacked the authority to enforce rules and laws.

The new forestry policy should address these problems and bring the Liberian forestry sector back in line with international commitments and standards.

The policy balances the community, conservation and commercial uses of Liberia's forests to produce a range of goods and services for the benefit of all Liberians. It recognizes the importance of community involvement in forestry, which did not exist before. It emphasizes the importance of good governance. Its objective is to give more equitable access to forest resources to reduce the potential for future conflict. The policy is expected to maximize forestry's contribution to income, employment, trade and the national development of Liberia.

### Rebuilding Liberia's forestry sector

Together with numerous international partners, FAO is successfully working to develop legitimate Liberian authorities equipped with the staff, skills and means to regain control over forest resources in order to manage them sustainably.

FAO is supporting the collection, analysis and dissemination of information to assist with policy-making and good governance. It will also train future forest operators in good forest harvesting practices together with the US Forest Service and finalize a Liberian forest harvesting code, the first ever in Liberia based on the FAO model code for Africa.

“We plan to continue supporting the Liberian forestry authorities so that their forests may again be used to benefit all Liberians and to alleviate poverty,” Whiteman said.

**John Riddle**

Media Relations Officer, FAO  
[john.riddle@fao.org](mailto:john.riddle@fao.org)

# Nairobi talks made progress on forest conservation for global warming emissions credits

**T**ropical deforestation is one of the largest sources of human-produced greenhouse gases yet it has no place in existing climate agreements. This has been a point of contention in negotiations as the United States has objected to some developing countries -- notably Brazil and Indonesia -- getting an apparent "free ride" on deforestation-related emissions in addition to emissions from fossil fuel sources.

Recent negotiations have looked at this issue from a different perspective, one where developing countries would be paid by industrialized countries for reducing their deforestation rates. Globally the payoff could be immense, extending well beyond helping mitigate global warming emissions to safeguard biodiversity and important ecological services. Leading scientists have called such plans a "win-win" scenario for all parties and even the World Bank and U.N. have voiced support for the concept.

## So how would it work?

Tropical forests play an important role in the global carbon cycle, locking up atmospheric carbon in their vegetation via photosynthesis. The vegetation and soils of the world's forests contain about 125 percent of the carbon found in the atmosphere. When forests are burned, degraded, or cleared, the opposite effect occurs: large amounts of carbon are released into the atmosphere as carbon dioxide along with other greenhouse gases (nitrous oxide, methane, and other nitrogen oxides). The burning and conversion of some 13 million hectares of forests per year releases more than two billion metric tons of carbon dioxide into the atmosphere, or about 20 percent of anthropogenic emissions of carbon dioxide and 25 percent of total greenhouse gas emissions. Reducing this source of heat-trapping gas emissions could do a lot in the fight against climate change.

Under a proposal put forth by a coalition of developing countries last year, tropical forest countries would agree to set aside forest land that would otherwise be cleared in exchange for payment from industrialized countries looking to reduce their carbon emissions in order to meet targets set under international agreements like the Kyoto Protocol.

"Avoided deforestation funds could be used for all policies and measures aimed at lowering deforestation rates, including the establishment of protected areas, controlling illegal logging and land-use conversions, poverty alleviation initiatives and improvements in governance while at the same time reducing the overall cost of mitigating climate change," said Johannes Ebeling, a Masters of Environmental Science student at Oxford University who just completed an analysis of the potential of carbon finance to reduce emissions and preserve forests. In his working paper "Tropical deforestation and climate change: Towards an international mitigation strategy" Ebeling argues that incorporating "avoided deforestation" into an international climate agreement would "lower global mitigation costs" and "allow countries to reach more ambitious reduction targets at little or no extra cost." Ebeling says that avoided deforestation might "also pave the way for including more countries and stakeholders into international mitigation efforts," something which has been a sticking point in climate negotiations.

## What's avoided deforestation worth?

In his paper, Ebeling calculates the potential value of avoided deforestation under various scenarios for ten tropical forest countries -- Bolivia, Brazil, Democratic Republic of Congo, Gabon, Indonesia, Mexico, Papua New Guinea, Peru, Sudan, and Thailand -- that hold, and are responsible for the deforestation of, roughly sixty percent of the world's remaining tropical forests. Assuming a 10 percent reduction of deforestation, avoided deforestation compensation could be \$2-12.1 billion (1.5-9.1 billion Euros) depending on the market rate of carbon (5-30 euro per ton of carbon dioxide). Under more ambitious cuts, under which deforestation rates would be halved, the sample of ten tropical countries could see their fortunes rise from \$10.1-60.7 billion (7.6-45.5 billion euros) per year. Globally, the dollar value of halving tropical deforestation could top \$103 billion per year in compensation for qualifying countries. The plan would offer further ancillary benefits from forest conservation says Ebeling, who attended the November 2006 United Nations Framework Convention on Climate Change (UNFCCC) in Nairobi.

"Considering the enormous co-benefits of reducing tropical deforestation -- protecting global biodiversity, conserving soil and water resources, and improving rural livelihoods -- providing carbon finance for avoided deforestation seems like an excellent investment for the international community," he said.

While Ebeling concedes there are still some hurdles to overcome, such as concerns over sovereignty and establishing a baseline of historical deforestation against which to measure reduction in deforestation rates, he is optimistic avoided deforestation could well become part of an international climate agreement by 2012. He says that political as well as popular momentum are driving interest in the proposal and that even Brazil, which somewhat counter-intuitively had resisted such proposals, is pushing elements of the tropical forest conservation compensation idea.

"The political debate gained new momentum in late 2005 when a proposal submitted to the UNFCCC by Papua New Guinea and Costa Rica on behalf of the recently formed "Coalition for Rainforest Nations" called for the inclusion of [avoided deforestation] into future climate regimes," wrote Ebeling. "The proposal suggests creating a mechanism of compensation for countries which reduce their deforestation rates and thus their GHG emissions. It differs from previous approaches in that it recommends measuring deforestation prevention on a national level against a historical baseline, rather than focusing on individual forest conservation projects."

"I am actually quite optimistic with respect to negotiations on climate change and other environmental agreements. Climate change and especially the role of deforestation are relatively recent issues on most countries' political agenda and they are linked to difficult questions and decisions about economic development and national sovereignty," he said. "But no matter how sensitive these questions are, they need to be addressed and I sincerely hope that the discussion about avoided deforestation can re-invigorate the global debate about a truly sustainable development."

Including avoided deforestation into international climate change mitigation strategies by providing carbon financing to tropical countries provides a unique opportunity to bridge the notorious gap between global (climate) benefits and

local (opportunity) costs.”

[www.news.mongabay.com](http://www.news.mongabay.com)

## Southern African Forestry Journal becomes Southern Hemisphere Forestry Journal

In late 2006 the South African Institute of Foresters Council resolved to publish a new journal as a replacement for the Southern African Forestry Journal. The new publication will be named the ***Southern Hemisphere Forestry Journal*** (SHFJ) The Mission of which is:

To publish scientific papers in forest science and management of planted and natural forests in the southern Hemisphere and the tropics. Papers will also be encouraged on related disciplines such as wood processing, forest engineering, environmental aspects of forestry, social forestry, agro-forestry, plant science, non-wood forest products and other goods and services that are derived from forests in the broadest sense. Papers should clearly indicate the value of the research for fellow scientists, foresters, resource managers and society at

large. The Journal particularly encourages contributions from scientists in South America, Africa and tropical/sub-tropical Australasia and Asia’

With the exception of the widening of focus through the new Journal, the publishing procedures will be very similar to those of the past, but there will be an even stronger stress in reviewing of draft manuscripts on scientific excellence and presentation.

**Dennis Owen**

Editor: SA Forestry Journal

Editor Elect : SH Forestry Journal  
[denfor@iafrica.com](mailto:denfor@iafrica.com)

## Tall trees once topped Tibet

The roof of the world should be covered in trees. Today, Tibet is mainly covered by desert pasture, but it was likely once adorned with cypress forest, which was destroyed by local inhabitants over the past 4600 years.

Georg Miehe of the University of Marburg in Germany and colleagues analysed climate data, pollen records and ancient soil samples from around Lhasa.

They suggest that not only is the climate, with plenty of rainfall, little permanent frost or snow and good mean temperatures through the growing season, most suited to forest growth, but that people burnt down trees to make way for barley cultivation and grazing animals.

[www.environment.newscientist.com](http://www.environment.newscientist.com)

## Forestry firmly rooted in the British economy

Britain’s forest industry generates £7.2 billion a year for the economy a new report has revealed. The study also shows that 167,000 people are directly employed in growing, harvesting and processing trees across the UK. Other important benefits including leisure activities, education, biodiversity, social inclusion, improved health, also grow out of Britain’s 2.74million hectares of woodlands and forests contributing just over £1 billion to the economy.

The detailed investigation of the industry’s effect on the wider economy underlines how important it is in generating wealth and supporting jobs in other sectors. Jointly commissioned by the Confederation of Forest Industries (ConFor) and the Forestry Commission the report shows that on top of the £7.2 billion and 167,000 jobs, forestry indirectly:

- Helps generate an additional £19.2 billion of wealth among customers, suppliers and through the spending power of its own employees

- Supports an additional 560,000 jobs in the wider economy

The analysis was carried out by the centre for economic and business research (cebr) and is the first serious review in recent times to quantify the value of the industry. Importantly the report also confirms there are significant opportunities for growth in the forestry sector through combating climate change and the reduction of carbon dioxide emissions. Generating energy from wood and other plant material would have a powerful effect on job creation across the UK.

The review estimates that almost 59,000 new jobs will flow from the growth of the biomass sector. It shows that 16,723 jobs would be created within the forestry industry and another 42,000 in downstream industries as their demand for bio-energy increases.

A full copy of the report can be viewed at  
[www.confor.org.uk](http://www.confor.org.uk)

# Forestry education upgrade in Australia

**D**r Peter Volker, National President of the Institute of Foresters of Australia (IFA), has welcomed the announcement by Federal Education Minister Julie Bishop for funding of a graduate masters programme for forestry training.

Dr Volker says that despite high demand for professional foresters from industry and governments, it has been difficult to attract high school graduates into undergraduate degree programmes. Dr Volker believes that this has been because of a number of factors including the general decline in enrolment in science based degrees, difficulties in students relocating from their homes for tertiary study and lack of awareness of the opportunities for careers for forestry graduates.

Dr Volker says that the image of forestry being a profession that is only involved in logging could not be further from the truth. "Foresters are well trained to undertake a number of roles in management of our forests including harvesting, building and designing roads and bridges, regeneration, fires

management and conservation. In fact, some of the most senior people in world conservation organisation such as IUCN and WWF are professional foresters trained at Australian universities. "Foresters are also serving in senior roles combating the current bushfires across the country.

The CASR funded Masters Programme will enable graduates, who may have become more aware of the opportunities specialised forestry training can give them, further training and knowledge specific to forestry. In addition it will enable the four universities to work together closely to offer a high quality package of courses. Dr Volker says the IFA will be encouraging industry and governments to support the program.

For further information contact Dr Peter Volker, National President, Institute of Foresters of Australia. Mob 0418 125 319

**Press release IFA**

## Issues with tissues

**“S**top flushing our forests down the toilet” says WWF. Europe’s five top manufactures of toilet tissue are still using unsustainably sourced timber. That’s the headline finding of the latest WWF report on the industry.

The campaign group has been checking on the industry annually, and does credit two of the big five with showing improvement – SCA Tissue (the only manufacturing giant with a working commitment to forest management) and Metsa Tissue. Procter & Gamble and Georgia Pacific, however, are still slated for poor environmental performance. So is Kimberly-Clark, which has its work cut out to meet its pledge to phase out controversial, or even illegal, suppliers.

WWF suggests that consumers can make a difference by choosing recycled paper over non-recycled. Many supermarkets stock own-brand 100% recycled toilet paper, which is often cheaper than the non-recycled options.

Neither Kimberly-Clark nor Procter & Gamble, the two top UK industry players, report the recycled content of their products. Their quilted, aloe vera scented offerings are best avoided. The two big UK brand names for 100% recycled are SCA’s Naturelle, and Nouvelle from Georgia Pacific – but WWF says the latter needs to “substantially improve” the unsustainable sourcing that blights its other products.

**Green Futures**

## Scotland and northern England wood forecast outlines challenges and opportunities

**A**n independent study shows that demand for wood is increasing, but that future supplies may fail to keep pace, resulting in a missed opportunity to tackle climate change and secure greater investment and new jobs in Scotland and Northern England.

The research was commissioned by 21 leading wood processors and woodland management companies to provide a clearer forward picture of the potential wood supply and demand balance in Scotland and Northern England for the period to 2016. A total of 60 companies and individuals from wood processing and wood-fired energy plants supplied confidential information on their supply and demand for coniferous roundwood and sawmill co-products. The study also had input from the Forestry Commission, the Confederation of Forest Industries (ConFor) and the Wood Panel Industry Federation.

The report found that demand for wood – which includes logs, sawdust, chips, bark and other biomass – may outstrip

supply from 2007 if all of the potential plans of the wood processing and wood energy sectors were to proceed as forecast.

Alan Bloomfield, convenor of the study steering group, acknowledges the challenge of matching future wood supply and demand but believes that the forecast identifies important opportunities for the commercial production and utilisation of wood in Scotland and Northern England.

He said: “Scotland and Northern England have the potential to increase the supply of wood from their forests because there are forests that are currently not sustainably and optimally managed, have difficult access, and would benefit from active management to promote biodiversity and public access.”

“It would also be sensible to produce and utilise more wood of all types, including wood from sources other than coniferous roundwood and sawmill co-products.”

He insists that such a policy would provide additional wood for future generations whilst securing greater investment

and new jobs in Scotland and Northern England.

ConFor Chief Executive, David Crichton, believes it is vital that the opportunity to make a significant contribution to mitigating climate change is not lost and said: "Climate change is a major challenge for us all, and it is clear that wood from Scotland and Northern England's sustainably managed forests can help combat global warming by locking up carbon."

"Wood is also being used to generate renewable energy, which is recognised as an important component of the government's strategy to mitigate climate change." He added: "Ensuring appropriate restocking after final felling, and increasing the area of woodland planting, particularly of coniferous woodlands, would also provide a growing volume of wood in the longer term." He stated that it was also essential that robust data on the supply, demand and consumption of all forms of wood be available and updated regularly.

Mr. Crichton continued: "It's now time for the UK forest industry and the Government, at all levels, to begin widespread discussion on a number of very important strategic development issues for the wood processing and wood energy sectors, and to identify the options that will bring the greatest and most sustainable long-term benefits to Scotland and Northern England, and indeed the UK as a whole."

Forestry Commission Director-General, Tim Rollinson, welcomed the report, saying: "It's important to have an overview of the wood supply-and-demand position to help guide strategic investment decisions and the development of forestry policy. We therefore welcome this report, which provides a useful snapshot of the current position."

"The report paints a picture of a lively and forward-looking sector where new and existing businesses are producing investment proposals which will ensure that the increasing supplies of wood are utilised to produce economic growth and the delivery of other public policy priorities such as renewable energy production."

"This is a dynamic situation which will benefit from regular re-appraisal and which is likely to change as the economics of the market place and the realities of the supply position combine to limit the number of new investments which can be supported."

"It is important that all parts of the sector continue to help develop a secure and predictable wood supply chain which will underpin new investment in a range of wood-based businesses."

[www.confor.org.uk](http://www.confor.org.uk)

## Wood smoke damages health

Smoke from fuelwood and forest fires causes significant human respiratory problems. Smoke from simple biomass fuels may account for 1 million to 2 million premature deaths annually, mainly women and small children in developing countries. Smoke plumes from forest fires can travel hundreds of kilometres, posing a great health

risk; the extensive 1997 Indonesian forest fires caused an estimated 16 400 infant and foetal deaths.

Unasylva 57 224 Forests and Human Health  
<http://www.fao.org/docrep/009/a0789e/a0789e00.htm>

## Wallenberg Prize awarded for regulation of flowering

The Marcus Wallenberg Prize for 2007 will be awarded to **Professor Ove Nilsson**, Sweden, for his path-breaking discovery on the regulation of flowering in trees and its translation into tree growth and development. His scientific accomplishments have revealed fundamental molecular mechanisms of regulation of flowering time and indicated how molecular signals help trees to adapt to the changing seasons. The use of these advances could substantially accelerate the breeding of trees via rapid induction of flowering with environmental safeguards. This in turn offers the potential for more rapid and enhanced yields of forest raw materials and thus increased forest production worldwide.

The traditional tree breeding process is hampered by the fact that it takes a long time before many trees flower for the first time, e.g. for Scots pine and Norway spruce it takes 15-20 years. Genetic improvement of agricultural crops has been immense compared to that for forest trees because most agricultural crops flower within a year or less.

Ove Nilsson found that the same control system for flowering seems to act in a variety of plants, from small herbs to large trees. Ove Nilsson and his colleagues have identified a messenger molecule "florigen", which is produced in the leaves and transported to the buds, triggered by long days and short nights, as occur in spring. Without this messenger

molecule the bud would develop into a leaf but, with it, flowers will be formed. The same substance also controls the budset which occurs when day length decreases in autumn. The FT messenger molecule can make poplars flower precociously when they are only a few weeks old.

The FT messenger molecule will be transferred at the earliest stage of the breeding program but, after flowering, breeding will follow the traditional path. It will also be possible to remove the gene before the seeds or seedlings reach the forest. The ability to control the cessation of flowering will decrease the risk of spreading unwanted genes to surrounding forests.

The discoveries by Ove Nilsson and his co-workers will allow the whole breeding program to be shortened substantially and trees with the desired properties will be produced at a much more rapid rate. This implies a higher yield from the forest and also the possibility to design trees for specific site conditions and uses in a quicker way with greater annual gain per year.

It will also be of vital importance for potential new businesses based on renewable raw materials such as chemicals, energy and fuels, composites or other materials.

[www.mwp.org](http://www.mwp.org)

## Bunnings shifts from certifying timber to focus on legal origin

**B**unnings has dropped its ambition of sourcing only certified timber by 2007 and has adopted as “an interim measure” a commitment to timber independently verified as being legally sourced, the latest Wesfarmers social responsibility report reveals. “A shortfall in supply of certified timber product globally, the slow take-up of certification schemes in South East Asia and the complexity of identifying and monitoring supply sources has affected our original goal of achieving full certification of our supply chain in 2007,” it says. The company has instead adopted a “risk-focused approach to our supply chains, seeking a higher level of assurance on product that originates from tropical areas, in particular South East Asia”, the report

says. “We have adopted an interim measure for these supply chains to achieve independent verification of legality of origin as a step towards full certification.”

The company is scoping requirements for a timber legality and traceability verification system through three sample supply chain audits in Indonesia. “This will form the basis for other suppliers of tropical timbers to demonstrate legal verification of their products,” the report says. “We are also concentrating on whole-timber products at this stage, rather than trying to include the huge range of wood-containing items that will eventually be considered under the policy.”

[www.a3p.asn.au](http://www.a3p.asn.au)

## Agreement in Indonesia

**I**ndonesia, the latest country to start negotiations with the EU for a voluntary partnership agreement (VPA), is now one step ahead of Ghana and Malaysia. It has agreed a definition of timber legality following discussions between NGOs, indigenous peoples organisations, the timber industry and government representatives. Although there will be many obstacles on the route to implementation, the agreed consensus is a huge step forward in the process of forest law reform, increased transparency and recognition of indigenous

peoples’ rights. The definition is already publically available in Bahasa and is currently being translated into English. Details of the process leading to the definition are available on [www.loggingoff.info](http://www.loggingoff.info) and will hopefully be an inspiration to other countries working towards a legality definition as part of the VPA process.

**EU Forest Watch**

## Community Based Natural Resource Management – questioning the ‘success stories’

**C**ommunity Based Natural Resource Management (CBNRM) has been popular since the 1980s. Donors, developing country governments and non-governmental organisations have supported this policy and it continues to be popular, despite repeated failures to deliver benefits.

The theory behind CBNRM argues that the best way to manage natural resources is for local people to use their local knowledge and technologies. However, research from the University of East Anglia in the UK argues this theory has not been reflected in practice and most CBNRM schemes fail.

CBNRM aims to achieve both sustainable environmental management and community development. The key arguments for CBNRM are:

- it contributes to poverty reduction by using local labour and investment
- it promotes the use of local knowledge and local technologies, which helps to preserve these
- local management means local people have power and make decisions, creating accountable and democratic local institutions
- the use of resources is enforced locally by people who have a stake in its protection, which is more effective than government enforcement
- it is a better solution to conservation than fencing off natural resources and excluding people from them.

The idea of community management is attractive to policymakers, programme designers and donors. However, because the theory is attractive, policymakers and environmental managers use biased ‘success stories’ to support the theory. In reality, the communities involved are usually disappointed with the process.

There is also often a contradiction between the scientific, ecological principles of natural resource management and the aims of a community. For example, migratory animals or fish do not respect a boundary created for a community-managed area.

CBNRM uses participatory processes and decentralised decision-making to give power to local people. This can also help them to understand the importance of managing local resources, such as a community forest. However, these methods often reinforce existing power structures, such as chiefdoms. If power is not shared equally, CBNRM can also be used to impose the views of outsiders. For example, ecologists can choose to work with local customs and practitioners that support their views.

Whilst policymakers and practitioners tell each other success stories about CBNRM, there appear to be few examples of programmes that have improved environmental management and the well-being of local people. The author suggests several reasons for this, which policymakers should consider before supporting CBNRM:

- There is no comprehensive evaluation of CBNRM

programmes. Monitoring and evaluation is complex and needs to cover environmental issues, poverty reduction and institutional changes.

- Without evaluation, supporters of CBNRM can always find some level of 'success' to justify the use of CBNRM.
- Bureaucracies want models that they can repeat, but communities and their relationship with the environment are too complex for this to work.

- CBNRM depends not only on suitable conditions in the community but also on supportive government and local elites, whose own interests often take over.

Source:

'Is Small Really Beautiful? Community-based Natural Resource Management in Malawi and Botswana.' World Development Vol. 34, No. 11, pp. 1942-1957, by Piers Blaikie, 2006

[www.id21.org](http://www.id21.org)

## New World Bank Report on Indonesia's forests

A new World Bank report released and produced in partnership with six other institutions, including CIFOR, examines the challenges facing Indonesia in optimizing the management of the nation's significant forest resources to better assist economic development, rural livelihoods and environmental protection. Launched on February 20, the report entitled '*Sustaining Economic Growth, Rural Livelihoods & Environmental Benefits: Strategic Options for Forest Assistance in Indonesia*' is aimed at helping both the private and public sectors and civil society implement sustainable and equitable forest governance and management programs.

According to the report, poor governance has led to considerable environmental degradation, a significant loss in rural livelihoods, a poor investment climate and diverted public funds from development activities. World Bank Country Director for Indonesia Andrew Steel called on local governments and forest sector stakeholders to "implement policy actions to save Indonesia's unique forests" and to develop a "comprehensive framework that integrates sustainable forest management

into the global strategy for mitigating climate change and preserving biodiversity".

A major focus of the report is its emphasis on assisting smallholder tree farmers, who already generate billions of dollars for the national economy, and could contribute even more to community livelihoods and poverty reduction with better conditions in such governance areas as land tenure and access.

The report is the synthesis of a wide range of research activities including a CIFOR report commissioned by the World Bank entitled 'Generating Economic Growth, Rural Livelihoods, and Environmental Benefits from Indonesia's Forest: Issues and Policy Options.'

'*Sustaining Economic Growth, Rural Livelihoods & Environmental Benefits: Strategic Options for Forest Assistance in Indonesia*' is also a technical companion to *Sustaining Indonesia's Forests: Strategy for the World Bank 2006-2009*. Both documents are available at [www.worldbank.org/id](http://www.worldbank.org/id)

[www.cifor.cgiar.org](http://www.cifor.cgiar.org)

## NZ's Iwi sign carbon deal for 30,000ha of forest

New Zealand's nation's second-biggest Maori tribe, Ngati Porou, has signed a deal with international company Sustainable Forestry Management Ltd to convert up to 30,000ha of degraded land into "carbon sink" forests. **The Ngati Porou iwi** – on the North Island's East Coast – is also looking at planting exotic species such as eucalyptus, according to Agriculture Minister Jim Anderton. "Ngati Porou signed a deal with UK-based carbon investors to plant up to 30,000ha of marginal and erosion-prone land with slow-rotation forestry under the Government's permanent forest 'sinks' initiative," he said.

Mr Anderton was announcing Government proposals to stop deforestation and get farmers and foresters to change practices to better protect the environment. The Government needs to increase the number of trees planted in order to offset carbon emissions if it is to come close to meeting its obligations under the international Kyoto Protocol treaty on climate change. A "significant" forestry planting programme using thousands of acres was one option, he said.

The Ngati Porou scheme – to be named Iwi Rakau (Forests of the People) – is expected to sequester up to 75 million tonnes of carbon dioxide and in addition provide increased protection against erosion and flooding resulting from sediment carried into waterways.

The forest blocks will earn carbon credits as they revert to native forest over the next three decades, but will have to be maintained for at least 100 years. Once the forest has grown to

a mature, fully-closed canopy, individual trees making up to 20 per cent of the forest will be able to be harvested – as long as the canopy remains continuous.

Mr Anderton said using valuable species such as eucalypts would allow the iwi to generate extra money. After a century, the iwi will be able to clear-fell the forests, as long as they compensate for the carbon emissions involved.

A scientist at Landcare Research, David Whitehead, has separately estimated there is potential for nearly 1.5 million hectares of land, particularly on the east coast of the North Island in the Gisborne area, to be turned into forest qualifying for carbon credits. According to Dr Whitehead, Landcare's research leader on global change processes, about 1.45 million hectares of marginal pastoral land have the potential to store 50 per cent of the carbon dioxide sequestered by the nation's forestry plantations.

"Carbon farming" was likely to be economically viable if international prices paid for carbon reached just \$NZ20/tonne, said Dr Whitehead. But even at a conservative value of \$12/tonne, Landcare Research has estimated 1 million hectares of land could earn \$60 million. The iwi will receive tradable carbon credits the end of the first five-year Kyoto Protocol commitment period in 2012, but will be able to also trade "forward", essentially selling their credits before receiving them.

[www.Stuff.co.nz](http://www.Stuff.co.nz)



# COMMONWEALTH FORESTRY ASSOCIATION

*“To promote the well-being of the world’s forests and those who benefit from them”*

## CFA Membership Application Form

Please note that membership is for a calendar year, not for 12 months from the time of joining (e.g. Someone joining in October would receive the journal and newsletter for March, June and September of that year when they joined. They would then be entitled to receive the December journal and newsletter when they were published). Membership is available to anyone interested in forestry.

Title: ..... Address: .....

First name: .....  
 Family name: .....

Phone no: ..... Postcode/Zipcode: .....

Fax no: ..... Country: .....

E-mail: .....

### Annual subscription rates

Membership category (*circle as appropriate*)

Category	Cost (£)	Membership benefits				
		Membership of CFA	Newsletter (HC)	International Forestry Review (HC)	International Forestry Review online	
Student - standard	10	✓	✓		✓	
Student - plus	25	✓	✓		✓	
Ordinary - standard	Developing country	10	✓	✓		✓
	Developed country	50	✓	✓		✓
Ordinary - plus	Developing country	25	✓	✓	✓	✓
	Developed country	65	✓	✓	✓	✓
Institutional member*	Developing country	180	✓	✓	✓	✓
	Developed country	250	✓	✓	✓	✓
Institutional subscriber*	Developing country	180		✓	✓	✓
	Developed country	250		✓	✓	✓
National Forestry Association	Developing country	25	✓	✓	✓	✓
	Developed country	100	✓	✓	✓	✓

HC = hard copy

\* 15% agency discount if ordered through a subscription agent.

**Payment method** (we would be grateful if you would pay by credit card where possible in order to reduce our bank costs – thank you)

credit card - VISA / MASTERCARD

Name on card: .....

Card Number: .....

Expiry Date: ..... / .....

**Send to** Commonwealth Forestry Association  
 Crib  
 Dinchope  
 Craven Arms  
 Shropshire SY7 9JJ  
 UK

Cheque (payable to “Commonwealth Forestry Association”)

Tel.: +44 (0) 1588 67 28 68  
 Fax: +44 (0) 8700 11 66 45  
 E-mail: [cfa@cfa-international.org](mailto:cfa@cfa-international.org)