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CFA Newsletter

is the newsletter of the Commonwealth Forestry Association

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The views expressed are not necessarily those of the CFA.

Involved in tree planting in the tropics?

Then you should be interested in a recent publication from Uganda's Sawlog Production Grant Scheme (SPGS). The SPGS (highlighted in a recent

issue of the International Forestry Review – Vol. 11 no. 1) has just completed a successful first phase (2004-09), where it has been the catalyst for attracting substantial investment into timber and pole plantations. Thanks to funding from the European Union (EU), over 10,000 ha of plantations were directly supported – both financially and technically. Planting has been by community groups, small-medium local investors and a few large scale, overseas' investors.

One of the important outputs of the SPGS during the last few years was a series of individual *Plantation Guidelines* made available to interested parties throughout the first Phase of the project. These were very practical, readable publications aimed at helping growers (and others) understand the basics of commercial forestry. Examples included *Growing Commercial Pine Plantations*; *Tree Nurseries*; *Forest Fire Protection* and *Thinning to Maximize Sawlog Production*.

The SPGS has recently attracted over US\$20m (from the EU and Norwegian Government) to expand its support to tree growers throughout Uganda until

2013. In anticipation of a tsunami of interest in more commercial tree growing, all previously published SPGS Guidelines have been updated, many more useful ones written and all then compiled into one book. A big book to be precise:

hitting the scales at nearly 2.5kgs and 287 pages. The focus is on practical advice for growing timber crops, with just a hint of science to explain why they recommend certain practices.

Those who have no experience of commercial forestry shouldn't be worried: the book is aimed largely at non-foresters. One of the publication's undoubted strengths is the use of hundreds of colour photographs to illustrate good

and bad practices from within and beyond Uganda. Free copies are available to all SPGS clients and partners from their Kampala office. To all others, copies are being sold from the office at just UGX 40,000 (US\$20). Alternatively it can be downloaded free of charge (by Chapter) from the project's web site – www.sawlog.ug The SPGS is keen to receive feedback on this work so it can improve for the 2nd edition: email them at info@sawlog.ug



Paul Jacovelli

Chief Technical Adviser, SPGS
Uganda

The expert's view

The guidelines are written in concise, practical, non-technical language, with excellent illustrations and photos to assist commercial plantation planners, growers and managers to understand applications. The scope includes from the planning (social, environmental and economic considerations) site species matching, seed and nursery management, site preparation, establishment, tending, silviculture and protection and there are links to a series of SPGS guidelines. The guidelines do not cover final harvesting, log handling, transporting, wood processing, and marketing, however, these dimensions are considered within the context of tree plantation investment, planning and budgeting, site species matching and silviculture. The guidelines are consistent with the Voluntary Guidelines for Responsible Management of Planted Forests (FAO 2006), with emphasis towards field applications.

Whilst the global and Ugandan national context for tree plantation investment is given (strengths and weaknesses), the guidelines highlight that the purpose and local contexts will determine their interpretation and specific application. However, there is a clearly stated principle that tree plantations should take harvesting pressure off natural forest areas and that natural forests should never be cut to establish tree plantations in their place. Throughout the guidelines there is recognition of the critical roles of good governance, multi-stakeholder planning, clear and consistent policies, strong institutional capacity and capability, sound investment climate, links to the market place, maintenance of social, cultural and environmental values and maintenance of forest health and productivity. The guidelines build upon the basics of the SPGS 14 Step Plan for Successful Tree Plantations.

One dimension that could further strengthen the justification for tree plantations is the critical role that they can play in carbon sequestration, carbon sinks and the carbon stored in long term wood products that mitigate the impacts of climate change. In the future, afforestation and reforestation for carbon emissions offsets will increasingly provide an additional investment and promotional option for the use of wood building material that is renewable, environmentally friendly and energy efficient.

Congratulations to the Sawlog Production Grant Scheme supported by the European Union for the preparation of Tree Planting Guidelines for Uganda as a valuable management tool. They will provide a practical guide to planners, growers and managers, not only Uganda, but in other countries, adapted to suit their unique conditions

Note: In 2005 there was an estimated 270 million hectares of planted forests, (140 million hectares of forest plantations and 130 million hectares of planted semi-natural forests) or 2% of global land area, had the potential to provide 66% of global industrial roundwood production had all mature plantings been harvested (Carle and Holmgren, 2008).

Jim Carle

Chief, FOMR/Forestry Department FAO

Association News

CFA membership rates 2010

The CFA Governing Council has, with regret, recognised the need to increase membership rates for 2010 in order to keep up with increasing costs, particularly of our publications. The new rates are given below. This is the first increase for three years and we hope that we can count on your continued support.

Category	Membership rate for 2010
Student - standard	15
Student - plus	30

Ordinary - standard	Developing country	15
	Developed country	60
Ordinary - plus	Developing country	30
	Developed country	75
	Developing country	190
Institutional member	Developed country	275
	Online only	Developing country 100
		Developed country 200
National Forestry Association	Developing country	30
	Developed country	120

CFA Zambia Chapter distributes Commonwealth Forests books

“We are grateful for these books as they will go a long way in helping out students who frequent our Museum Library for research”, said Ms. Esther Banda, Administrative Assistant at Lusaka National Museum when she received several copies of the CFA publication Commonwealth Forests books for the museum.

On the 17th July 2009, CFA Zambia Chapter launched the distribution of Commonwealth Forests. The distribution is supported by a kind donation made by relatives of a recently deceased CFA member and will enable a copy to be sent to every district in the country. The launch was at the Lusaka National Museum with whom the Zambia Chapter of CFA have a Memorandum of Understanding. The partnership has evolved to become one of the celebrated joint efforts by institutions to demonstrate the plight of forestry and forest issues development in Zambia. Through the partnership, the CFA has been able to help establish



Ms. Esther Banda receives Commonwealth Forests from Victor Kawanga

a nature Reserve with the museum premises. The nature reserve has opened up opportunities for young people to experience the characterisation of forests as reservoirs of various functions. These are children whose lives are limited to urban areas with limited understanding of forest constituents, save for theories they learn from classroom. Alongside this is the plan to establish a Herbarium at the Museum.

Mr. Michael Mwandila, a partner with CFA Zambia Chapter expressed gratitude for having received the publications, as did Ms. Chilufya Kapwepwe (a former Diplomat and now head of Imiti Ikula Empanga Environment and Development Organisation (IIEEDO) based in Chinsali, more than 700 km from Lusaka who said “We feel the contents are enormous to provide policy directions on forestry use, management, education and development”.

Victor Kawanga
Chair, CFA Zambia National Branch

CFA AGM – report

The AGM of the Association was held via the internet on September 3rd. Members from Australia, Africa, the Americas and Europe participated and discussed matters including our financial status, membership and CFA activities. The minutes have

been sent to all members who have provided us with an email address. They are also posted on the Members Only section of the CFA website and can be sent to members through the post upon request.

Would you like to sponsor a new member?

Many young developing country foresters would like to join the CFA but struggle to find the money for an annual membership (£15 from 2010).

Would you like to help? If so, all you need

to do is send £15, or multiples thereof, to the CFA office and let us know if you have a preference for a country from which you would like your recipient to come.

Greetings from our new CFA/IFSA-Liaison Officer

Hi there! I'm Julius Adewopo and I feel elated to serve as the Liaison Officer between CFA and the International Forestry Students' Association – IFSA. I had my Bachelors degree in Nigeria where I pioneered the formation of IFSA at my Alma Mater, and I'm currently studying to obtain my M.Sc. in Forest Resources at University of Arkansas in United States. I've been involved with IFSA for 7 years and I've been a member of CFA since 2005. IFSA and CFA have contributed immensely to my professional development. I have had the opportunity to participate in United Nations Forum on Forests (UNFF-8) as an IFSA delegate, I've published articles in CFA's quarterly newsletter, and I've been privileged to contribute to CFA's publication on Commonwealth Forests. These and other involvements have refined my skills and enhanced my exposure within and beyond the Forestry sector.

IFSA is the global network for students in forest sciences (and related) disciplines. It unites approximately 3000 students in about 69 member associations (called Local Committees) in over 40 countries. Our vision is to foster global cooperation among students of forest sciences in order to broaden knowledge and understanding, to achieve a sustainable future for our forests, and to provide a voice for youth in international forest policy processes. Through scientific debates, forums, exchange programs, regional meetings and the annual IFSS (International Forestry Student Symposium), we enrich formal education, promote cultural understanding, and encourage collaboration with international partner organizations, thereby enabling forestry students across the world to gain practical experiences with a wider global perspective.

In pursuit of the impartial involvement of youths in policy and decision making processes in relation to global forests and environmental management, IFSA is committed to establishing and nurturing relationships with professional organizations such as CFA. The IFSA-CFA partnership, which is based on a signed Memorandum of Understanding, provides forestry students with matchless opportunities to gain first-hand industry-based skills, access scholarships and awards, get published, participate in professional meetings, and access the timely information disseminated in the CFA newsletter and publications.

My passion as the Liaison Officer is to sustain the existing opportunities and explore more possible opportunities towards enabling the attainment of the set objectives for IFSA-CFA collaboration. Having benefited from being a member of CFA, it'd be my utmost pleasure to motivate IFSA



Julius Adewopo

members (both current students and Alumni) to explore the priceless membership benefits and opportunities, by becoming CFA members. Your comments and suggestions are quite invaluable to IFSA and CFA team, and I'd personally be glad to answer any of your questions.

Julius Adewopo

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The 37th International Forestry Students' Symposium – Indonesia 2009

From the 27th of July to the 9th of August, around 90 students of the International Forestry Students' Association (IFSA) met in Indonesia for their annual symposium. Travelling across the island of Java, students participated in IFSA's 20th General Assembly and attended various lectures, workshop discussions

and field trips to learn about and explore key issues in Indonesian and international forestry, whilst appreciating the natural and cultural beauty of the host country.

Under the theme "*Forest Conservation: Youth's Roles in Abbreviating the Long Process*" the programme provided by the local organising committee focussed on some of the big



Participants planting mangroves as part of restoration efforts at Bedul Segoro Anak, Alas Purwo National Park

challenges facing current and future foresters. Lecture and workshop topics included the role of forests in climate change, forest governance and forestry education, and diverse field trips ranged from tours of a large pulp and paper mill, to small-scale, family-owned woodlots part of a village community forestry project. Other highlights included kopal and resin harvesting demonstrations at Gunung Walad Educational Forest and assisting locals with the restoration of mangrove forest at Bedul Segoro Anak, in Alas Purwo National Park.

Within the General Assembly, chaired by former IFSA President Frauke Thorade (Germany), the representatives of 31 Local Committees of forestry students from nearly as many countries discussed and made decisions on the running of the association to ensure its continual development and success. Such decisions included the election of a new team of officials for the next year. Of particular note was Florent Kaiser's

(Germany) appointment as President, and **Julius Adewopo's (Nigeria) appointment as CFA Liaison Officer.**

All in all, the 37th IFSS provided a great experience for everyone involved. New knowledge was gained, cultural understanding improved, and many new friendships and networks made. Thanks must go to the forestry students of Institut Pertanian Bogor and Universitas Gadjah Mada for their two years of hard work in organising the meeting, all of the symposium's sponsors, and to CFA for their continual support of IFSA, which enabled students with less opportunities attend this successful event.

For more information on IFSA, please see www.ifsa.net

Darren Brown

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Destructive mindset on forests 'must be defeated': Commonwealth Chief backs forest restoration to tackle climate change

The self-destructive mindset that can attach a greater value to a dead forest than a live one has to be defeated if efforts to combat climate change are to succeed, Kamalesh Sharma, Secretary-General of the Commonwealth, said recently. Mr Sharma made this comment when accepting an invitation to speak at the opening of the Commonwealth Forestry Conference in Edinburgh, Scotland, in 2010. It will be themed "Restoring the Commonwealth's Forests: Tackling Climate Change".

Healthy forests act as a huge "carbon sink" (store). Their removal and destruction (deforestation) and degradation - usually for conversion to other land uses - is the second-biggest cause of the greenhouse gas emissions that are warming the Earth's atmosphere and causing climate change.

The 18th Commonwealth Forestry Conference provides a unique chance to address the challenges and ways in which the Commonwealth's commitment to contribute to global efforts on climate change can be fulfilled.

"Forests and forest lands play a pivotal, life-supporting role in the lives of Commonwealth citizens across the globe," said Mr Sharma. "They provide us all with many benefits, including our livelihoods, vital ecosystem services, raw materials, fuel, and goods for trading."

"Yet these benefits are being seriously eroded by the mounting momentum of deforestation. If we are to restore the Commonwealth's forests, and preserve and expand their role in sustainable development and tackling climate change, we need to share hard-won practical knowledge, of the type that we have learned over the past 20 years in the ground-breaking Commonwealth reforestation project in Iwokrama, Guyana. This can open up opportunities for the full and enthusiastic involvement of local populations in our endeavour."

The conference is expected to attract influential scientists, foresters, policy-makers, civil leaders and others with a professional interest in forestry from many Commonwealth and other countries.

It will be hosted by the British Forestry Commission at Edinburgh's International Conference Centre from 28 June to 2 July 2010. Tim Rollinson, the Commission's Director-General, added, "Forests are crucial to our very existence on this planet - without them we don't have a future. However, we're still losing more forest area than we're gaining, so we must put a halt to forest losses and restore forests that have been lost or degraded."

"Forests can be restored, as we've demonstrated here in the United Kingdom, and whole regions, habitats and communities can be improved as a result."

"Forest restoration is about rebuilding lost resources and putting forest goods and services back into their landscape. It can also directly help communities, organisations and even countries respond to the challenges of climate change."

"Next year's conference will pull together some of the most influential and dynamic people who are already doing this work. They will explore how Commonwealth countries can work together to tackle damaging climate change by restoring lost and degraded forests, and focus on practical measures for achieving this."

"It will also look at the role of forests in helping Commonwealth citizens adapt to a changing climate."

"It will not be a one-off event, but part of an on-going effort to influence the thinking of political, civil and business leaders on the importance of the role that forests can play in tackling climate change."

An on-line registration form and further information, including a call for abstracts and a sponsorship opportunities brochure, are available

on the conference website, www.cfc2010.org. The conference organisers are keen to encourage the submission of papers on successful restoration case studies; sharing this hard won-knowledge will be a vital part of the conference.

Information is also available from the conference organisers at 18th Commonwealth Forestry Conference, c/o In Conference Ltd, 4-6 Oak Lane, Edinburgh EH12 6XH, Scotland, United Kingdom; tel: +44 131 339 9235; fax: +44 131 339 9798; e-mail: cfcc@in-conference.org.uk.



Kamallesh Sharma, Secretary-General of the Commonwealth

Letter

Dear Mr Openshaw:

Your "REDD and the Elephants in the Room etc." in the CFA Newsletter (June 2009) rightly emphasizes that the world will not have the forests that humanity wills but rather the forests that humanity can spare. This view, which I share, led me to entitle a publication *How much land can ten billion people spare for Nature?*

The publication is Report 121. Council for Agricultural Science and Technology, Ames Iowa. 64 pages, and the Report is on line at <http://www-formal.stanford.edu/jmc/nature/nature.html>

Using understatement, I would say that the race among population, affluence, intensity of consumption and agricultural productivity is earnest. My colleague Jesse Ausubel of Rockefeller University and I have since tackled the analysis of these forces, which can be encompassed by the ImPACT identity. Although the race is in earnest Nature need not lose. An article that provides some support for that hope is Waggoner, P. E., and J. H. Ausubel. 2001. How much

will feeding more and wealthier people encroach on forests? Population and Development Review 27:239-257. <http://phe.rockefeller.edu/encroach/>

Figures 1 and 4 of a more recent publication shows the continuing decrease of the intensity of crop consumption and acres to produce a unit of crop. The recent publication: Ausubel, JH, and Waggoner PE. 2008. Dematerialization: Variety, caution and persistence. Proc Natl Acad Sci (USA) 105:12774-12779. Online at <http://www.pnas.org/content/early/2008/08/25/0806099105.full.pdf>.

In the end, I introduce myself by reference to International Forestry Review 10:689-94 and the website <http://www.ct.gov/caes/cwp/view.asp?a=2812&q=345086>

Please accept this message, not as an immodest citation of our work, but as an encouragement for your continued view that we shall not have the forests that we will, but rather the forests that we can spare.

Paul E Waggoner

Forest scenes

A haze-obstructed ground and window-seat view of tropical rainforests

The international symposium “Close to Nature Forestry – Practices for Asia-Pacific towards the Millennium Development Goal Challenges” in December, 2008, (CFA Newsletter No. 44, March 2009, p. 6-7) ended on a note of certainty that Close-to-Nature-Forestry (CNF) in tropical forests is all-round feasible, on a note of hope that CNF in future will still find forest lands on which to play a role, on a note of doubt and uncertainty that this may happen within the present generation of foresters. Failure of society and its “elites” to act and adapt may enable the feared Global Ecological Change to a point of cultural collapse of humanity. A more detailed treatment of the substance of the CNF conference and critical comment on the framework conditions for tropical forestry will be published in German in AFZ-Der Wald, Nr. 19, 2009 which will be released on 5th October, 2009”

Weather changes to more frequent extremes verify warnings by scientists since the seventies of the 20th century, global warming of the atmosphere, land and sea surfaces at the core of Global Climate Change (GCC) and related forest pests, diseases, die-back and fires in all biome progress faster than feared. The rapid sea-ice and glacier melt-down are further evidence of the realism of previous warnings which were rejected, unheeded or ridiculed by society as well as political and financial leaders in most countries until it now begins to dawn on more informed people that it may be too late to stop or reverse the process of Global Climate Change (GCC).

Recent re-assessments of the global forests show that their richness and stock of plant and animal biomass continue to dwindle, particularly in the tropical and boreal biomes. The consequent increasing emission of greenhouse gases is not compensated by possibly pollution-linked increases of tree growth rates in some regions, such as Central Europe and the Amazon basin. Less informed people still believe that the tropical rainforests are and will be effectively protected and sustainably managed to remain a reliable depository of carbon and pollutants and to supply multiple environmental benefits, such as oxygen (quoted in the announcement of the annual meeting 2008 of the Rainforest Club, London), high-quality timber acting as long-term carbon sink and replacing less benign, but fashionable and more profitable materials, and as safe habitat for wildlife and plant species. The state of the world environment would suggest that such views, except the “tropical rainforest, the lung of the world” delusion, are rational and should lead to supportive actions in the political and commercial sectors. This is, however and as foresters know too well, generally not so. The haze, smoke and smog calamities of the 1997/8 and again this year cause doubt. The FAO State of the Forests of the World assessments speaks a clear language.

View from the ground: from early May to end of August, 2009, East and West Malaysia, Kalimantan and Sumatra experienced very low rainfall, a weak El Nino, and much burning. Smog and smoke totally obscured the view from my home on Bukit

Kajang (Kajang Hill) of the very beautiful landscape towards the Central Range and of the less beautiful but sparkling Kuala Lumpur city. The Southern Cross was rarely seen from May to August. In early August, I took a window seat on Malaysian Airline MH 2510, Kuching/Sarawak to Kota Kinabalu/Sabah to have a good look at the peat swamp forests in the Sarawak and Rejang river deltas. By 1962, the Peat swamp forests in PFE were fully covered by Working Plans for sustainable management (Sarawak Forest Department, Annual Report 1962). Areas outside the Permanent Forest Estate (PFE) were covered by Harvesting Plans for eventual conversion of suitable sites.

Five minutes after take-off, dense haze obscured the peat swamp forests in the Sarawak and Batang Lupar river deltas, only the coastline could be recognised, just enough for orientation. Single smoke plumes of burning fires penetrated the haze above Pulau Bruit (Bruit island) of the Rejang Delta. This geo-morphologically youngest addition to the delta carried very rich Ramin Mixed Peat swamp forests on shallow peat. It was here that soon after World War II Australian war veterans began sustainable peat swamp management with orderly planned and executed low impact harvesting of Ramin and Jongkong for export to Australia. There should certainly not be any forest burning in this area. But it got worse further east. Nothing could be seen but billowing smoke rising to at least half the flying altitude. These Peat swamp forests are peripheral Ramin Mixed forest with some central Alan Peat swamp forest. It was in the timber concession areas east of Pulau Bruit that I detected on new aerial photographs the chaotic pattern of the customary wasteful logging by local logging companies. In response I designed and tested with the industry a scheme of improved timber harvesting planning and execution. By reducing damage, waste and accidents we aimed at a system of low impact harvesting regulated by sustainable working plans and controlled by pre- and post-harvesting inspection of logging blocks. Obviously, these and probably also the schemes of integrated sustainable forest management and conservation integrated in sustainable regional development further north-east in the peat swamps of the Balingian-Kemena-Baram coastal plains were going up in smoke. The politically more correct media blamed illegal squatters and planters (The Star, 16th August), others indicated that larger forces were behind the widespread burning. At that time, there were 240 “hot-spot” forest fires recorded by satellites in Sarawak (The Borneo Post 6.8.2009). Also, large-scale logging and burning of hill forests were reported to be planned and already starting in the extensive hydroelectric development projects of Sarawak Hidro Bhd. This situation in Sarawak is not unique. It is symptomatic for the whole rainforest biome.

The notorious 17-18% contribution of tropical forest to the global balance of atmospheric greenhouse gas has yet to show tendencies to decline. The more positive impressions produced in many of the different assessments of the long-term potential of tropical rainforests to trap and store carbon appear somewhat divorced from reality. Doubts that the

variety of international schemes and instruments will lead to effective action on the ground and create substantial and secure carbon sinks which help to mitigate GCC are justified. The small number of 27 (0.7%) afforestation and reforestation projects in about 4,000 projects under the Clean Development Mechanism (CDM) may express these doubts. Doubts may also be one of the reasons for the slow progress of related programmes. National REDD strategies are easily and readily formulated, but funding is a tedious problem; implementation is difficult and opposition by powerful groups interested in “business as usual” is strong. Even more difficult are to assess states correctly, monitor developments reliably and certify compliance credibly and objectively.

The much debated answer to the million euro question “Is a global eco-collapse still preventable?” is open. Fantastic schemes, such as atmospheric engineering to lower warming, are no answer. REDD and CDM have still to prove their feasibility for forestry and GCC mitigation in the tropics. We

may come to the conclusion that the major contribution of the world's forests and world forestry to GCC mitigation is by securing sustainable supply of high-quality speciality and general commodity timbers to replace environmentally less benign materials. Mitigation of GCC is more promising by means of emission reduction in traffic, industry and homes, by supplying energy from wind and solar power and perhaps eventually fusion techniques. Finally, mitigation needs more than political declarations of intent. It needs the will, power and freedom of responsible politicians and motivation of educated citizens to act. Yet, there are few countries in the world where this has been achieved and, according to the UN-ICCP, time is running out.

Eberhard F. Bruenig

Emeritus Professor of World Forestry
Hamburg University

Carbon in the forests of Guyana

Many developing countries are hoping for new, large and annual income from donor governments and commercial enterprises related to trading in carbon. The Reduced Emissions from Deforestation and forest Degradation (REDD) is an incentive scheme whose architecture is under discussion by the UN Framework Convention on Climate Change. REDD could provide a stimulus to countries to reduce deforestation (a long-term change in land use from forest to farms or mines, etc.) and forest degradation (due to poorly controlled logging). It is apparently in the interests of the countries now emitting forest carbon to exaggerate their emissions in order to maximize their income from subsequent reductions.

Guyana is not directly engaged with the European Union's forest law enforcement, governance and trade process (FLEGT) to reduce illegal logging and associated international trade. However, it is in the first group of countries which are negotiating with the World Bank's Forest Carbon Partnership Facility (FCPF). Guyana's readiness preparation plan (R-PLAN) focuses on capacity building and data gathering, but disappointingly it overlooks the previous projects on building human capacity and the already substantial data sets. Current work is supported by tranches of Bank funding directed exclusively to the Guyana Forestry Commission.

In parallel with the FCPF/REDD negotiations, the President of Guyana is promoting strongly his own scheme for income from Avoided Deforestation. The President's Low Carbon Development Strategy (LCDS) is based on a fantastical valuation of 90 per cent of Guyana's natural tropical rain forest (a country total of ~18.5 million ha). In the scenario devised by McKinsey consultants (USA) for the President, 15.1 million ha are to be destructively logged and mined and then cleared for commercial agricultural plantations, at an average rate of ~630,000 ha per year for 25 years. The basic data for this scenario are not in the public domain, but the President is promoting an income as an annual 10 per cent annuity equal to about US\$ 580 million, to be derived from the putative capitalized projected income from the logging, mining and subsequent plantations; that is, the Presidential anticipated income is for not carrying out this deforestation. No evidence

has been produced of any serious commercial interest in such plantations on the ancient and naturally infertile hinterland soils of Guyana, nor of the possibility of ecologically sustainable agriculture on that scale.

In order to bring some sense of scale to Guyana, I have published a series of 10 articles on “Carbon in the forests of Guyana” in the local Press, based mostly on the sparse data released by the Government. Making generous estimate of the carbon in the standing forest, the emissions from deforestation and forest degradation which could be traded in a REDD scheme appear not to exceed 11.4 million tonnes of carbon per year. If that carbon is worth US\$ 5/tonne, the carbon-based income from stopping all mining and all logging would be less than the probably under-declared export values (free on board) of tangible forest exports in 2008; these were US\$ 57 million. Moreover, the gold mined and sold to the Guyana Gold Board in 2008 was valued at US\$ 215 million. On the government's own data, it appears that the REDD income from total stoppage of mining and logging would not compensate for the loss of those activities. At the time of writing (mid-August 2009), medium-risk Carbon Emission Reduction certificates were trading at Euros 8 per tonne of CO₂ (US\$ 3.10 per tonne of carbon) in the EU-ETS, making the trade even less worthwhile for Guyana.

The URLs for these ten articles are:

Stabroek News, Feature column, Monday 27 July 2009. “Carbon in the forests of Guyana.” <http://www.stabroeknews.com/2009/features/daily/07/27/carbon-in-the-forests-of-guyana/>.

Stabroek News, Feature column, Tuesday 28 July 2009 - “Carbon in the forests of Guyana (2)” - <http://www.stabroeknews.com/2009/features/07/28/what-is-carbon/>

Stabroek News, Feature column, Friday 31 July 2009 - “When did carbon become tradable and what is actually traded?” - <http://www.stabroeknews.com/2009/features/07/31/53115/>

Stabroek News, Feature column, Tuesday, 4 August 2009. “REDD antecedents, and possible architecture.” <http://www.stabroeknews.com/2009/features/08/04/redd-antecedents-and-possible-architecture/>.

Stabroek News, Feature column, Friday 07 August 2009 -

“Carbon in the forests of Guyana (5)” –Area components of the forest carbon budget. <http://www.stabroeknews.com/2009/features/08/07/area-components-of-the-forest-carbon-budget/>

Stabroek News, Feature column, Saturday 08 August 2009 - “Carbon in the forests of Guyana (6)” - Biomass/weight in the standing forest carbon budget.

<http://www.stabroeknews.com/2009/features/08/08/biomassweight-in-the-standing-forest-carbon-budget/>

Stabroek News, Feature column, Tuesday 11 August 2009 - “Carbon in the forests of Guyana (7)” - Gains and losses in the forest carbon budget. <http://www.stabroeknews.com/2009/features/08/11/gains-and-losses-in-the-forest-carbon-budget/>.

Stabroek News, Feature column, Friday 14 August 2009 -

“Carbon in the forests of Guyana (8)” - Losses in the forest carbon budget (2).

<http://www.stabroeknews.com/2009/features/08/14/losses-in-the-forest-carbon-budget-2/>.

Stabroek News, Feature column, Saturday 15 August 2009 - “Carbon in the forests of Guyana (9)” - Losses in the forest carbon budget (3). <http://www.stabroeknews.com/2009/features/08/15/losses-in-the-forest-carbon-budget-3/>.

Stabroek News, Feature column, Tuesday 18 August 2009 - “Carbon in the forests of Guyana (10)” - Summarising the forest carbon budget. <http://www.stabroeknews.com/2009/features/08/18/summarising-the-forest-carbon-budget/>.

Janette Bulkan

CFA Governing Council

Seeing is believing: contemporary horse logging in the UK

Led by Patron, His Royal Highness The Prince of Wales, “Seeing is Believing” is the British Horse Loggers (BHL) initiative to organise working demonstrations throughout the UK to show the real benefits of working with horses in forestry. This article describes and illustrates examples of recent and significant horse logging contracts to illustrate contemporary horse logging and considers the future of horse logging in Britain.



HRH The Prince of Wales renewing his acquaintance with Ella (Photo: Charles Sainsbury-Plaice)

The UK scene

Penn Wood, Chilterns, had been managed by a horse logging team for some years prior to 2006 but with a change in fiscal policy the contract was put out for competitive tendering. Bidding was highly competitive between a mechanical gang including motor manual felling, a harvester and a forwarder and a horse logging gang including motor manual felling and a one horse forwarder with a two horse forwarder with powered loading using its grapple to load and unload both forwarders.

The horse logging gang won on price. Work was completed on time and within budget. This work won an award in the BHL Woodland Management Award 2007.



John Bunce at Penn Wood with a pair of Clydesdales



‘Crunchie’ Whitby at Aconbury Woods with a pair of cobs

Aconbury Woods, Herefordshire, was offered on a hoppus foot rate in 2007/08 for the 1880 oak saw logs and a tonnage rate for the lop and top as firewood. It was offered to a horse logging

team because of the considerable natural regeneration of the oak which had occurred and the need to free this up whilst avoiding damage to it. The better areas of natural regeneration were rolled with the Heavy Horses Bracken Basher to control the bracken prior to the felling. This contract is planned to be entered in the 2008/9 BHL Woodland management Award.

Wootton Inclosure, New Forest. This was a very delicate riparian clearance job undertaken in 2005 on a Forestry Commission site, felling and extracting large timber over a fragile and wet ecosystem. Encroaching timber was cleared to allow light back into the water including timber that had been felled the previous year and had proved impossible to extract conventionally. The rare grasses, ferns and flowers are secure now and the area will work once again as a flood defence and water meadow. This work was also highly acclaimed in the BHL Woodland Management Award, coming second overall.



Frankie Woodgate in New Forest with an Ardenne

Childer Wood, Herefordshire. This is a small privately-owned wood and is entirely commercial where the incomes derived are from timber sales. This employs a horse logger, a cutter, several part time workers and provides an income for the owner. Value addition is sought at every stage with timber being cleft and milled and timber products made to commission. Students and training courses in horse logging, woodland



Doug Joiner in Childer Wood with a Percheron

management and chain saw use complete the portfolio. The quality of the woodland management earned a third prize in the BHL Woodland Management Award.

International comparisons

British Columbia, Canada. It is reported that the government in British Columbia has reserved a 5% proportion of all state owned forests for horse logging contracts. The government also allows tax incentives for those who farm with horses and particularly for those who log with them. This has had no negative impact on the state forest and has, as one would imagine, led to greater continuity of employment. This has, in turn, led to a four fold increase in horse logging businesses over a period of five years.

France. The situation appears very similar to that in Britain with a small number of dedicated, professional contractors working throughout the year. France has a strong culture of working horses and other draught animals, and there has been a real increase in the numbers worked in forestry, on farms and in the vineyards as well as in the towns.

Germany. A larger culture of working horses but here, as in many Scandinavian countries, the horses are worked in small scale agriculture (30 - 60 ha) during the growing season and in forestry during the winter.

Denmark. Unlike anywhere else there is a real understanding



Keith Lenihan and the new Finnish forwarder pulled by a pair of Ardennes stallions (Photo: Charles Sainsbury-Plaice)

and integration of the horse's ideal working distances. In long gears, 50 to 80 yards, in a timber arch, 100 to 150 yards and in a small forwarder up to 300 yards. Work is often planned so that horses work closest to the rides and stacks with the mechanical forwarders working deeper, to the back of the stand. A truly integrated approach ensuring that the horses are used to their maximum efficiency.

The BHL has been a very active participant in the work of the European Federation for the Promotion of the Use of the Working Horse. It has enabled us to join in with a much larger community of horse workers. With the declines in Britain, this has become vitally important. The opportunity to share experience and knowledge has been most valuable.

The Future

Survival. It is important that a professional horse logger can accurately price a job and plan the correct team and timescale for the successful completion of the contract. Without accuracy at this point, it is doubtful if the business will survive. It will certainly be difficult to ensure continuity of work. 'Continuity of work' is a phrase used elsewhere in small businesses - it is pointless being really busy for three months if you have no more work for the six months after that. It is better to work 3 weeks out of 4 for every month of the year. Inaccuracy in costing, timescale, team requirements etc will lead to a loss of income, loss of confidence of the customer and these together will rule out a repeat contract. This leaves a horse logging contractor constantly searching for new contracts. Successful horse logging businesses rely very heavily on repeat contracts and word of mouth recommendations.

The new recruit - The BHL Charitable Trust Apprenticeship Scheme. Recruitment of new horse loggers is essential for the future of the profession. At the moment there is very little training and support available to new entrants. Five day introductory courses provide a useful introduction, a 'toe in the water' but

little possibility of progression. An informal arrangement has been made with the BHL to allow mentoring and occasional opportunities for assisting with particular contracts.

A new Apprenticeship Scheme is recruiting for entries this autumn and beyond. This has been established by the BHL Charitable Trust, a company limited by guarantee with charitable status. The apprenticeship is accredited to level III by the Open College of the North West and is fully funded for three years. It is not limited by the age of the applicant and will enable successful applicants to become fully functioning professional horse logging contractors upon completion.

Web addresses: for more information.

All contain very useful links pages. Should you wish to create a reciprocal link with your own web site, email doug@heavyhorses.net

British Horse Loggers: www.britishhorseloggers.org. Contains valuable information about the BHL and horse logging in Britain. Gives direct access to contractor teams on the BHL Professional Register.

British Horse Loggers Charitable Trust: www.britishhorseloggerscharitabletrust.org. Contains information about the new Apprenticeship Scheme.

British Festival of the Working Horse: www.britishfestivaloftheworkinghorse.co.uk. Contains information about the first ever major festival in Britain dedicated to the promotion of working horses with an emphasis on horse logging to be held in 2012 at Windsor Great Park.

ECTU: www.ectu.org. Contains information about this European wide umbrella association and its constituent members.

All photos by Doug Joiner except where stated.

Doug Joiner
Heavy Horses Ltd
www.heavyhorses.net

Urban housing made of wood: the future?

Designed in collaboration between architects Waugh Thistleton, structural engineers Techniker, and timber panel manufacturer KLH, Stadthaus, a nine-storey residential building in Hackney, London, is thought to be the tallest timber residential structure in the world.

Stadthaus is the first high density housing building to be built from pre-fabricated cross-laminated timber panels. It is also the first building in the world of this height to construct not only load-bearing walls and floor slabs but also stair and lift cores entirely from timber.

Waugh Thistleton are committed to reducing the environmental impact of architecture. In the endeavour to build buildings that reduce our impact on the planet we see it as vital not only to consider the energy usage over the life of the building but also the energy expended in producing the building. For some years we have been researching the use of solid timber structures in housing to replace the accepted route of concrete and steel.

Each cubic metre of timber stores 0.8 tonne of carbon and continues to store that carbon when cut – the fabric of the

Stadthaus stores over 186 tonnes of carbon. In contrast the production of both concrete and steel are one-way energy intensive processes that release large amounts of carbon dioxide into the atmosphere; by not using a reinforced concrete frame, 124 tonnes of carbon have been saved from entering the atmosphere. This is equivalent to 21 years of carbon emissions from a building of this size. The timber panels can also be easily demounted and used as an energy source at the end of the building's life. So the case for timber was made to the client and the local authority both in terms of the environmental consideration and potential economies to cost and programme at the very start of the project.

The building was assembled using a structural cross-laminated timber panel system. The timber panels are produced in Austria by KLH using Spruce planks glued together with a non-toxic adhesive. The waste timber is converted to fuel powering both the factory and local village. Each panel is prefabricated including cutouts for windows and doors and routed service channels. As the panels arrived on site they were immediately craned into position and fixed in place. Four carpenters assembled the eight-storey structure in twenty-

seven days. The speed of the construction in such a densely populated environment is especially relevant, as was the lack of noise and waste, creating far less intrusion on the local community than a traditional concrete frame construction. Designing a building constructed from load bearing panels creates a number of opportunities. Any internal wall can become a party wall and have a significant portion removed from the surface area as openings. This simple flexibility allowed for different plan types up and down the building and an animated façade where windows were placed according to the best advantage.

Typically a new technology in construction provides a reduced volume of building material; lighter weights produce cheaper faster buildings. The impression of solidity once inside this building is evident, the interior spaces and the acoustic they give off affirm a sense of place and home.

Traditional trades and methods followed on once the structure of each floor was complete. The enthusiasm of the work force for the construction and the ease of the build was a benefit beyond those we anticipated. The building was completed in 49 weeks, estimated to be a saving of five months over a notional concrete frame construction and occupied ahead of programme in January 2009.



A nine-storey building in London is the world's tallest wooden residential building (photo Will Pryce).

Concerns associated with timber buildings are predominantly related to acoustics and fire protection. Timber buildings are classified as poor in terms of their acoustic performance due to the light structure as compared to reinforced concrete and masonry. However, cross-laminated solid timber panels have a significantly higher density than timber frame buildings. They provide a solid structural core on which different, independent and separating layers can be added. The layer principal overcomes any acoustic or sound transfer issues. In Stadthaus an economic layering strategy of stud walls, floating floor build-ups and suspended ceilings, gave sound attenuation far in excess of building regulations (58 - 60db).

Regulations in Europe have meant there are no precedents for Stadthaus. However, architectural and engineering methods in timber construction pioneered by Waugh Thistleton and Techniker are now accepted internationally. By gaining

the necessary certificates from both NHBC and BRE, both of which treated Stadthaus as a pilot scheme, we consider that timber panels are the building material of an environmentally conscious future.

Sameera Hanif

Waugh Thistleton Architects Ltd

Publication

Vital Forest Graphics

Published by UNEP, FAO and the UNFF Secretariat, 1999

Available from UNEP and also on-line at http://www.grida.no/res/site/file/publications/vital_forest_graphics.pdf

This attractive publication, sub-titled *Stopping the Downswing?* in the web version, has recently been jointly published by three of the main agencies involved in the global forestry dialogue. It consists of text and well-designed graphics which are intended to *serve as an advocacy tool to promote conservation and sustainable management of the world's forests through a better and wider understanding of the critical values they provide in support of global ecological stability, economic*

development and human well-being.

Text and associated graphics include chapters on expected subjects, such as forest cover, deforestation and forest fires, but also threats to forest animals and emerging topics such as the clearance of forests for bio-fuels. Sometimes chapter titles are a little quirky, such as the chapter on plantations entitled *Is fast-wood like fast-food?* but on the whole the text and graphics are authoritative and informative. Nor do the authors shy away from publishing information critical of individual countries –

for example, the case of Indonesia, where forest clearing and illegal logging is evidently taking place in 37 out of 41 national parks. Other chapters focus on the forests of particular regions (Central Africa, SE Asia) and on the forests of the Amazon or the boreal forests.

The scope of the topics covered and the amount of information provided is necessarily limited in such a slender publication of 69 pages, and one hopes that it will be regularly

revised and updated. It is strongly recommended to all foresters for their information on the forestry issues affecting us all, and also as a source of ideas for ways in which to present information.

Jim Ball
CFA Chair

Around the world

Australia: Agreement with PNG another step forward in fight against illegal logging

Australia and Papua New Guinea have formally agreed to join forces to tackle illegal logging, with an agreement signed at the Australia Papua New Guinea Ministerial Forums in Brisbane. After months of detailed negotiations, Australian Minister for Agriculture Tony Burke and Papua New Guinea (PNG) Minister for Forests Belden Namah signed a Memorandum of Understanding. The decision to develop the agreement was made when the ministers met in Port Moresby in August. It is the second formal agreement on illegal logging between the Rudd Government and a key regional partner. A Memorandum of Understanding was signed with Indonesia in November 2008. Discussions are also continuing with China on the traceability of forest products which have been processed and manufactured in China.

Mr Burke said to successfully fight illegal logging, it was essential to first identify which timber has been logged legally, through agreements with other nations. As part of today's agreement, Australia and Papua New Guinea indicated they would

- work more closely together on sustainable forest management and the certification of forests
- promote improved trade, investment and sustainable development that includes improvements in verifying the legal origins of timber and timber products
- identify ways to support future growth in the forest

industries of both countries

- look at opportunities for closer collaboration on forest research
- consider areas for cooperation through multilateral fora to promote sustainable forest management, certification and combat illegal logging
- identify areas for cooperation on climate change mitigation approaches and adaptation through the improved use of forests.

Mr Burke said the agreement with Papua New Guinea was another step forward in efforts to fight illegal logging and promote sustainable timber products. "I wish the groundwork for this had begun years ago, but in less than two years the Rudd Government has put much of the framework in place to fight illegal logging," he said. "Every forestry worker in Australia knows that illegal logging is a direct threat to local jobs. That's why we're determined to get this right.

"Illegal logging can only be successfully tackled if the nations involved in the processing and manufacturing of timber products also participate in verification and certification. "That's why Australia is continuing to negotiate an agreement with China which would allow the traceability of wood products."

www.maff.gov.au

Canada: North America faces beetle plague

A plague of tree-killing beetles which swept across British Columbia is threatening to spread to the US. The mountain pine beetle has killed more than half of all lodgepole pine in the province and is now active in neighbouring Alberta. Cold winters usually kill off the beetle larvae, but the region has been warmer than usual in recent years. Scientists say the beetle could attack and kill jack pines, which are found throughout North America.

Mountain pine beetles occur naturally in British Columbia

but in the last few years their numbers have reached plague proportions. Staffan Lindgren, professor of entomology at the University of Northern British Columbia, says the beetles have now moved on from British Columbia to neighbouring Alberta. "In places in Alberta there were stories of what they call beetle rain, where under a perfectly blue sky farmers would start hearing what sounded like rain on their tin roofs," said professor Lindgren. "It turned out it was beetles coming out and falling on the roofs, literally billions and billions of beetles."

Without interference from man, mature lodgepole pine would be regularly destroyed by forest fires. But, Professor Lindgren explained, the species has evolved to use fire to aid regeneration. "Lodgepole pine has a cone that's adapted to fire," he said.

"As fire goes through, it kills off all the other species, but actually aids in opening up the cone, and re-establishes pine as the dominant species. "We've kept fire out of the ecosystem and created huge areas of mature lodge pole pine, which are ideal for mountain pine beetle.

Although less valuable than spruce or cedar, lodge pole pine has become a cash crop species, as it grows quickly and is ideally suited for turning into the "sticks" widely used in the US house-building industry. Jim Snetsinger, chief forester with British Columbia's Ministry of Forests and Range, said the beetle could be controlled when it was confined to small areas. But the recent explosion in numbers has meant that the best the forest industry can do is to salvage the trees already killed by the beetle.

"The first phase is to detect and monitor the beetles. Second phase is to harvest affected areas as soon as possible so you can remove the beetles, and the last phase, which is what we're in at the moment, is to salvage as much timber as you can before it loses its economic value. "We hit this perfect storm of warm winters, very warm summers and this large expanse of mature lodge pole pine," he said.

As the beetle burrows under the bark of the tree, it secretes a fungus from its mouthparts which blocks the transport system of the tree. This, combined with the stress of the beetle attack, kills the tree. In the past, cold snaps before or after winter killed off many of the beetle larvae, but these have not occurred for a number of years.

Dezene Huber at the University of Northern British Columbia is investigating how the beetle larvae keep themselves alive

during the sub-zero winters. "The insect is generally able to survive at temperatures as low as minus 37C, minus 40C starts to push it," said Dr Huber. "My lab is looking at some of the genes involved in making glycerol, a particular component of the antifreeze that these larvae use. We're looking at the larvae in the autumn and the spring to see which genes are turned on and off in relation to glycerol production. The question is, are they going to be able to exploit jack pine to the same degree that they exploited lodgepole pine?"

The damage caused by the beetle, combined with the downturn in the demand for wood due to the global recession, has brought about a rethink on forest policy in British Columbia. Mixed forests, rather than monocultures, are now seen as healthier both for the trees and other plant and animal life - even though a lack of uniformity makes them more difficult to harvest.

Jim Burrows, forest stewardship officer with British Columbia's ministry of forests and range said: "There's a balance to find in terms of what we do - whether we should rehabilitate them and just be concerned about that future crop of merchantable timber, or whether we look at some of the other values like wildlife habitat."

However the threat from the beetle is by no means over. Dr Huber believes it could spread across North America. "In Alberta, the neighbouring province just to the east, you have lodgepole pine which they're attacking now, and then after that you have jack pine all the way across the continent, down through Ontario and even into places like New Jersey," he said. "We know mountain pine beetles can survive and reproduce in jack pine, but we don't know how well they can do that. The question now is are they going to be able to exploit jack pine to the same degree that they exploited lodgepole pine?"

news.bbc.co.uk

From Norway, an eco-alternative to teak

The sleek, dark wood has all the characteristics of endangered mahogany from Peru's Amazon rainforest. In reality, it was manufactured in Norway, in a five-day process that instils all the qualities of rare, tropical hardwood into sustainable softwood. The company that makes it, Kebony, says it comes with none of the environmental cost. "This is a mega turn, people have to act," Kebony CEO Christian Jebsen told CNN. "We have a green solution for the tropical wood market and we are there to take that market or at least be part of it."

The global market for wood products from tropical forests is estimated to be worth some \$20 billion each year, according to the International Tropical Timber Organization. Most of the wood on the world market now comes from Southeast Asia and Africa, according to the Rainforest Foundation Norway. Tighter controls on logging in Brazil have reduced the amount of hardwood being shipped out of the Amazon, once a popular source for the finest quality mahogany, teak and cedar.

"Each tree is worth maybe \$25,000-\$40,000 on the international market. And there are lots of trees being taken out [worldwide] -- so this is a large business, a huge business," said Lars Løvold, director of the Rainforest Foundation Norway.

The United Nations estimates some 13 million hectares of forest are lost worldwide each year, equivalent to an area the size of Greece or Nicaragua. Their absence is said to contribute

more carbon emissions each year than the global transport sector. Demand for luxury hardwood is by no means the main cause of deforestation. Clearing land for agriculture and the collection of wood for fuel are the main drivers, but Løvold said the lucrative market for hardwood provides a compelling incentive for loggers to move into previously untouched areas.

"Almost all deforestation starts with the logging," Løvold told CNN. "The logging doesn't necessarily end up in the total clearance of an area, it just opens up the area, it takes out all the valuable trees and makes it much easier."

Kebony's move into the global wood market follows more than a decade of research started in the late 1990s by Canadian scientist Marc Schneider of the University of New Brunswick. Rigorous testing took place before the first trial production in 2004. Strong demand for the product convinced the company to build a new plant with ten times the production capacity, which opened in January.

"What we are doing with our technology is to permanently transform the wood so it doesn't change. Our process is 100 percent environmentally friendly," Jebsen told CNN. The process involves injecting softwood with a patented formula which includes Furfuryl alcohol, a waste by-product of sugar cane production. The wood is then subjected to pressure, heated and dried before being cured at high temperatures to create a product that the company says is stronger, more stable

than untreated softwood and weather-proof.

Kebony's environmental credentials have been endorsed with the receipt of the Nordic region's eco-label, the Swan. It's also received Norway's national environmental prize, the "Glass Bear."

On a cost basis, the company says it can compete with the price of authentic teak on the European market. "You can buy a cubic meter of teak in Europe for anything between 3,000 euros (\$4,000) up to 10,000 euros (\$14,000), depending on the quality. I would say we are competitive with that," Jebsen said. Kebony is "slightly more expensive" when compared to pressure-treated wood, but it doesn't contain any of the potentially harmful metals or pesticides that are commonly used to improve the wood's durability.

Jebsen sees some of the company's best opportunities in the boat-building industry, where rare teak from Myanmar is being used at the luxury end of the market. "We believe multiple boat manufacturers will start to use Kebony very soon -- some have already started," he said.

The company is also planning a move into the U.S. decking market where it's scouting for clients and recruiting distributors. "The U.S. decking market, which is using toxic impregnated, metal-based wood modification methods, together with tropical wood, is [worth] about five billion dollars, so the market is obviously enormous," Jebsen said.

edition.cnn.com

Australia: Fighting illegal logging in the Asia-Pacific and reducing carbon emissions

The Rudd Government will invest more than \$12.1 million in new projects to improve forest management and reduce emissions from deforestation and forest degradation in Indonesia and Papua New Guinea. Applications are open for projects to improve forest management which reduces emissions from deforestation and forest degradation, under the second phase of the Asia-Pacific Forestry Skills and Capacity Building Program.

The first round of funding announced in August last year supported 15 projects in Papua New Guinea, Indonesia, Vietnam, Fiji and the Solomon Islands. The government has also signed agreements with Papua New Guinea (June 2009) and Indonesia (November 2008) to work more closely with Australia on sustainable forest management and fighting illegal logging. The funding is part of the government's \$200 million International Forest Carbon Initiative aiming to show that reducing emissions from deforestation and forest degradation in developing countries can be an equitable and effective part

of a post-2012 global climate change agreement.

Global deforestation, affecting around 13 million hectares per year, accounts for around 18 per cent of the world's greenhouse gas emissions.

Minister for Agriculture, Fisheries and Forestry Tony Burke said the world's forests were an important resource for providing sustainable timber products and for storing carbon. "We are working closely with our regional neighbours to make real progress on sustainable forest management and reducing illegal logging," Mr Burke said.

"This will be in the interest of Australian workers – currently there are more than 76,000 people employed directly in the forestry sector and they know better than anyone that illegal logging is a direct threat to local jobs. This funding will help organisations work together to improve the certification of legally-sourced timber, forest management, law enforcement and regulation."

maff.gov.au

Singapore: Tree DNA to fight illegal logging

One would not usually associate DNA tests with forests but in Singapore such a test has been developed for trees. The aim is to help stamp out illegal logging, by proving where wooden furniture has come from. "Our approach is scientific," said Kevin Hill from Double Helix Tracking Technologies, which tracks where wood comes from. "We extract DNA samples in the forest and build databases," he explained.

Until recently, the emphasis of DNA testing has been on human and animals. But advancements in technology has made it viable to extract DNA out of trees, he explains. "The tree DNA strand or 'genome' is 60-100 times longer than a human one. Within this genome, we can identify genetic differences between individual trees, even of the same species, and map out these changes according to their geographic location in a database. We can use this technique to do a spot check

on wooden furniture to prove that it has come from certain forests."

He said it would even be possible to match degraded DNA found in processed wood products against the database to determine its true origin.

Illegal logging first drew global attention in 1965, when Brazil implemented its first law against the crime. The level of illegal timber harvesting in the Amazon has since fallen from over 80% to below half, according to the World Bank. The issue is obviously not solved but at least the government has been trying to address it. But it remains extremely high in Asia. The World Bank estimates that up to 80% of Indonesian timber comes from illegal sources. The figure is even worse in Cambodia.

Over \$10bn (£6bn) of assets and revenue are estimated to have been lost worldwide each year because of illegal logging. "It is very profitable," said Julian Newman of the

Environmental Investigation Agency (EIA). Loggers do not pay the usual royalties and fees to governments. They do not compensate local communities. "But they can still sell the timber at market price and make huge profits," Mr Newman added. Yet the risk of getting caught is very low. "Despite the magnitude of the problem, there are few instances of prosecution and punishment," the World Bank said in its recent report. Therefore the growing appetite for wooden products is being met by timber from illegal sources.

But such activities harm the livelihoods of 1 billion poor people, who depend on forests to survive. Violations of protected areas also "threaten the conservation of forest resources and biodiversity", according to the World Bank report.

Since the Bali Declaration was adopted at the East Asia Ministerial Conference in September 2001, governments around the world have been working together to tackle the crime. But there has been no law - until now. "Americans led on this last year, by passing a law called Lacey Act Amendments," explained Mr Newman of EIA. "For the first time, it is an

offence in America to import any wood products which were made of illegal timber." The European Union is due to debate similar legislation later this year.

But proving the country of origin is an expensive process. "The supply chains involved in the timber industry are very complex," said Mr Hill. "The current audit-paper based approach is very time consuming and costly." That is partly why only 7.3% of the world's production forests are certified. Only 1.2% in Asia, according to the UK Timber Trade Federation.

There is a price for the certified wood products. At the moment, they cost customers an average of another 10 cents in the dollar. "People say they are happy to pay that extra 10%, but when they walk into a store, they often leave with uncertified cheaper products," Mr Hill said.

"Our aim is to make the tracking process more robust to make it very inexpensive." It can reduce the cost of ethical furniture buying by half. That, in turn, could help save Asia's forests.

news.bbc.co.uk

Brazil: Roads are ruining the rainforests

"THE best thing you could do for the Amazon is to bomb all the roads." That might sound like an eco-terrorist's threat, but they're actually the words of Eneas Salati, one of Brazil's most respected scientists. Thomas Lovejoy, a leading American biologist, is equally emphatic: "Roads are the seeds of tropical forest destruction." They are quite right. Roads are rainforest killers. Without rampant road expansion, tropical forests around the world would not be vanishing at a rate of 50 football fields a minute, an assault that imperils myriad species and spews billions of tonnes of greenhouse gases into the atmosphere each year. We will never devise effective strategies to slow rainforest destruction unless we confront this reality.

In our increasingly globalised world, roads are running riot. Brazil has just punched a 1200-kilometre highway (the BR-163) into the heart of the Amazon and is in the process of building another 900-kilometre road (the BR-319) through largely pristine forest. Three new highways are slicing across the Andes, from the Amazon to the Pacific. Road networks in Sumatra are opening up some of the island's last forests to loggers and hunters. A study published in *Science* found that 52,000 kilometres of logging roads had appeared in the Congo basin between 1976 and 2003 (vol 316, p 1451).

Why are roads so bad for rainforests? Tropical forests have a uniquely complex structure and humid, dark microclimate that sustain a huge number of endemic species. Many of these avoid altered habitats near roads and cannot traverse even narrow road clearings. Others run the risk of being hit by vehicles or killed by people hunting near roads. This can result in diminished or fragmented wildlife populations, and can lead to local extinctions.

In remote frontier areas, where law enforcement is often weak, new roads can open a Pandora's box of other problems, such as illegal logging, colonisation and land speculation. In Brazilian Amazonia, 95 per cent of deforestation and fires occur within 50 kilometres of roads. In Suriname, most illegal gold mines are located near roads. In tropical Africa, hunting is significantly more intensive near roads.

Environmental disasters often begin as a narrow slice into the forest. Rainforests are found mostly in developing nations where there are strong economic incentives to provide access to logging, oil and mineral operations and agribusiness. Once the way is open, waves of legal and illegal road expansion follow. For instance, the Belém-Brasília highway, completed in the 1970s, has developed into a 400-kilometre-wide swathe of forest destruction across the eastern Amazon.

Beyond the forest itself, frontier roads imperil many indigenous peoples, especially those trying to live with limited contact with outsiders. As I write, indigenous groups in the Peruvian Amazon are stridently protesting the proliferation of new oil, gas and logging roads into their traditional territories. The roads bring loggers, gold miners and ranchers who often subjugate the indigenous people. Even worse, the invaders can bring in deadly new diseases.

Throughout the tropics, infections such as malaria, dengue fever, enteric pathogens and HIV have all been shown to rise sharply after new roads are built. Some indigenous groups, such as the Surui tribe of Brazilian Amazonia, have been driven to the edge of extinction by roads and the invading loggers, colonists and diseases they bring.

What can we do to slow the onslaught? First, we must vastly improve environmental impact assessments for planned roads. In many developing nations, EIAs focus solely on the roads themselves, completely ignoring the knock-on effects. In Brazil, for instance, EIAs for Amazonian highways focus only on a narrow swathe along the route, often recommending only paltry mitigation measures, such as helping animals to relocate before building begins. EIAs for certain mines, hydroelectric dams and other large developments focus only on the project itself while ignoring the impact of the roads it will invariably spawn. New roads will continue to drive rainforest destruction so long as the EIA process is so fundamentally flawed.

The second thing we have to do is fight to keep the most destructive roads from being built - the ones that penetrate pristine frontier areas. There is no shortage of battles to wage. A proposed highway between Colombia and Panama, for example, would expose one of the world's most biologically

important areas, the Chocó-Darién wilderness, to rampant destruction. Likewise, Brazil's BR-319 highway is threatening to open up the central Amazon like a zipper.

Finally, we need to pressure those promoting these frontier roads. These include timber corporations like Asia Pulp & Paper and Rimbunan Hijau, international lenders such as the Asian, African and Inter-American Development Banks, and massive infrastructure schemes such as Brazil's Programme to Accelerate Growth. In their scramble for tropical timber, minerals, oil and agricultural products, China and its corporations have become

perhaps the biggest drivers of destructive road expansion.

Restricting frontier roads is by far the most realistic and cost-effective approach to conserving rainforests and their amazing biodiversity and climate-stabilising capacity. As Pandora quickly learned, it is far harder to thrust the evils of the world back into the box than to simply keep it closed in the first place.

William Laurance in www.newscientist.com

Bangladesh to get \$19 million for reforestation project

The United States and Germany have agreed to donate \$19 million for the reforestation of a Bangladesh wildlife sanctuary under a global climate change mitigation project, the U.S. embassy has announced.

Low-lying Bangladesh, a country of some 150 million people, is at risk from rising world sea levels caused by climate change, with experts warning of millions of people being forced out of their homes and encroaching into forests. The funds will be used for the reforestation of Chunati Wildlife Sanctuary, a major corridor for the movement of Asian elephants between Myanmar and Bangladesh and home to an important timber species under threat. The sanctuary lies about 350 km (219 miles) southeast of Dhaka.

Under the project, to be implemented over the next four

years, trees will be planted to help restore 2,000 hectares of forest land and to decrease carbon emissions in the region. The project will help restore the severely degraded sanctuary, raise awareness through public education, and create alternative income opportunities for over 125,000 people who live in communities in and around Chunati, a U.S. embassy statement said.

Sea levels rose 17 cm (6 inches) in the 20th century and the U.N. Climate Panel estimated in 2007 they could rise by another 18-59 cm by 2100, and perhaps even more if a thaw of Greenland or Antarctica accelerates. Bangladesh is considered among the most vulnerable countries to climate change with millions living less than a meter above sea level.

www.reuters.com

Brazil: Global forest destruction seen overestimated

The amount of carbon emissions caused by world forest destruction is likely far less than the 20 percent figure being widely used before global climate talks in December, said the head of the Brazilian institute that measures Amazon deforestation. Gilberto Camara, the director of Brazil's respected National Institute for Space Research, said the 20 percent tally was based on poor science but that rich countries had no interest in questioning it because the number put more pressure on developing countries to stem greenhouse gases.

"I'm not in favour of conspiracy theories," Camara told Reuters in a telephone interview on Friday. "But I should only state that the two people who like these figures are developed nations, who would like to overstress the contribution of developing nations to global carbon, and of course environmentalists."

A lower estimate for carbon emissions from deforestation would have an impact on the Copenhagen talks, where preserving forests is a top item on the agenda. The summit will negotiate a follow-up to the Kyoto climate change treaty that could introduce forest credit trade to cut developing nation deforestation.

Camara, who stressed that he thought Brazil's deforestation rates remain too high, said recent calculations by his institute using detailed satellite data showed clearing of the world's biggest forest accounted for about 2.5 percent of annual global carbon emissions. Given that the Amazon accounts for about a quarter of deforestation globally, a figure of about 10 percent

for total emissions caused by forest destruction is likely to be more accurate, Camara said. The 20 percent figure used by the Intergovernmental Panel on Climate Change was based on calculations from sampling of forests by the United Nations Food and Agriculture Organization (FAO), he said.

The FAO method came up with an average annual figure of 31,000 sq km (12,000 sq miles) deforested in the Amazon from 2000-2005. But Brazil's method of using satellite images to measure deforestation "pixel by pixel" was far more accurate and showed a figure of 21,500 sq km for the period, Camara said.

For 2005-2009, the FAO estimate was double the correct figure, Camara said. "The FAO grossly overestimated deforestation in Brazil and there are papers that show that such overestimation is also true for many other countries, including of course Indonesia."

Indonesia is among the world's biggest deforesters. Camara said he was sceptical of any deal involving Brazil being rewarded for "avoided deforestation" because the average rate of destruction remained far too high. "Deforestation in 2004 was 27,000 sq km and let's say in 2009 it is 10,000 sq km. It is not fair to say that we avoided 17,000 sq km of deforestation in as much as our current level is still too much, and 90 percent of that is illegal," he said. "The concept of avoided deforestation is a weak concept. It would not stand up to scrutiny."

Deforestation of the Amazon, which makes Brazil one of the biggest global carbon emitters, is on course to fall sharply in the August-to-July annual period in which it is measured.

Satellite data shows that new, large deforested areas are about half the area they were in the previous year, when total deforestation was 12,000 sq km. "We are hopeful that deforestation will go down. In areas where deforestation had been high in previous years, like Mato Grosso and Rondonia state, it is relatively under control," Camara said.

The government has taken steps to crack down on illegal

deforestation over the past year. Falling deforestation may also be due to the fall in commodity prices over the past year, reducing the incentive for farmers and ranchers to clear land.

www.reuters.com

UK: Forest fears over luxury resort

Concerns have been raised over the effect building a luxury resort in Highland Perthshire could have on ancient woodland and wildlife. The Dall Estate and M James Developments believe hundreds of jobs could be created by their private members club at Loch Rannoch. Facilities including a hotel, two golf courses, a spa and houses are planned.

However, the Woodland Trust Scotland fears part of the ancient Caledonian forest could be destroyed. It is also concerned that populations of capercaillie, black grouse, bats, red squirrels and golden eagles could also be affected. The charity is lodging its objections to the plans with Perth and Kinross Council.

Spokesman Andrew Fairbairn said: "It is disappointing that, in this day and age, with so much more awareness of the importance of protecting the natural environment that a developer can propose something so damaging and ludicrous that would result in thousands of years of evolution being lost forever. Ancient woodland is an irreplaceable habitat. We call on Perth and Kinross council to throw out this planning application, due to the totally unacceptable level of environmental vandalism it will cause, and to allow this fragment of the once great forest to remain."

news.bbc.co.uk

USA: Mapping America's giant trees

Scientists in California have set up a unique experiment to track the life histories of some of the world's oldest and tallest trees. The project is designed to follow up research, in the Yosemite National Park, which suggests that giant trees are perishing as a result of climate change.

An analysis of data collected over 60 years has led scientists from the University of Washington and the Yosemite Field Station of the US Geological Survey, to conclude that the density of large diameter trees fell by 24% between the 1930s and 1990s. "We want to identify the reasons for tree mortality and if those are changing," says Dr James Lutz, a research associate at the university's College of Forest Resources. Little research has been done on a long-term basis to monitor the lives of large trees. Unlike studies with smaller plants and almost all animals, no individual scientist is able to track a forest giant for its entire lifespan - from germination to death. They live for hundreds of years and play a vital role in the ecosystem long after they have died.

Yosemite National Park is a vast area of wilderness covering 3,027 sq km (1,169 square miles), 321km (200 miles) from San Francisco. The park is best known for its breathtaking waterfalls, black bears and ancient giant sequoias, which are part of the redwood family of trees. Large trees play a crucial role in the forest ecosystem. They provide a habitat for birds and insects while they are alive and also when they are dead. Crucially, they are resistant to fire and are seen as pivotal to a forest's ability to recover from a major blaze.

The impact of a vibrant forest is also felt much wider afield. "Forests provide a lot of ecosystem services for us, whether we live in the city or whether we live in the forest," explains Dr Lutz. "Certainly here in California most of the water comes from the snowpack, it comes from the mountainous forests

such as the one that we're in. And were that forest to be converted to a different vegetation type, perhaps there would be less snow - perhaps it would affect the water quality."

Dr Lutz and his team have set up the Yosemite Forest Dynamics Plot to monitor the forest over a period of decades, and possibly centuries. It is a 25-hectare plot of dense woodland, comprising mainly Sugar Pine and White Fir trees. The area has not burned for at least 70 years. The plan is to measure and map almost all of the trees, which are estimated to number about 30,000. The cut-off point is woody stems that are less than 1cm in diameter at chest height. "We plan to come back every year to do a mortality assessment to evaluate all of the trees that have died and hopefully the reason they die," says Dr Lutz. "What we want to do is identify as soon as possible subtle changes in the composition or the structure of the forest."

Traditionally, the funding of long-term experiments that involve monitoring nature has been difficult to secure. The Yosemite project received about \$15,000 (£9,000) from the Smithsonian Institution, although the grant funded only the supplies needed to set up the project.

A typical funding cycle might run two or three years and the sponsoring agency would expect the experiment to be concluded then," explains Dr Lutz. But this project is open-ended and has been made possible only through the co-operation and enthusiasm of unpaid researchers and land surveyors.

"I did not want to pass up the opportunity to get involved in this," says John Knox, a land surveyor from Southern California, who volunteered his services for the project. "It's the paradox that we live with. We love the land, we love nature but we build roads that lead to developments. We lay out the destruction of the environment," he explains. "This is a nice

opportunity to lay out something for conservation and nature studies. The long-term nature of the research means that the management of the project will change hands over the decades. “No one researcher can see the ultimate results of the work,” says Dr Lutz. “I plan on monitoring this plot for the next 25 or 30 years after which I will turn the plot over to someone in the next generation of forest ecology. The value in these long term projects is only realized after 50 or even 100 years.”

Finding answers to why giant trees are dying early will be a slow process. But preserving the forest for centuries to come

may be impossible without long-term projects like this. “It’s a sense of fulfilment,” says James Freund, a researcher on the project. “You know that there’s a bigger picture and that you’re starting something, you’re becoming a really positive part of history. It’s rewarding and fulfilling knowing that people far into the future are going to come back to what we have started here.”

[news.bbc.co.uk](https://www.bbc.com/news/india-56888888)

India: Forest officials blind to satellite images

The forest department, functioning under chief minister Naveen Patnaik, was repeatedly alerted over the years about the illegal mining activities in different parts of Orissa including Keonjhar district, but little was done to stem the rot even as the plunder of precious ores continued unchecked.

The department was sensitized to the extent of how it could take the help of satellite images and global positioning system (GPS) to track what is really going on at a particular place. But officials allegedly turned a deaf ear to all this. “Anyone anywhere in the world can use GPS facility. It is a useful scientific tool widely used for tracking and surveillance. I brought this to the notice of forest department authorities a number of times, but nothing was done,” environment activist Biswajit Mohanty of Wildlife Society of Orissa (WSO) said. “It is not difficult to get satellite images. The state government has under it the Orissa remote sensing application centre (ORSAC), which could have been of lot of use for the purpose,” he added.

Mohanty, who has shot a letter to the principal chief conservator of forests (PCCF) in the backdrop of the vigilance sleuths arresting a host of officials, including forest staff, in connection with the Keonjhar mining scam involving the controversial Ram Bahadur Thakur (RBT) company, has stated that several measures were mooted to “tone up the working of the forest department” as there had been “massive and blatant

violations of forest laws” being reported.

The forest department has been in focus after the recent disclosure that its senior functionaries were using “luxury cars” provided by mine operators and industrial houses in the name of supervising compensatory afforestation. “The mining scam has exposed the dismal state of affairs. It confirms the deep suspicion about the involvement of forest officials in the scam. The forest enforcement machinery is in tatters,” the letter, a copy of which was sent to the Union environment and forest ministry, said. “Had the simple exercise of obtaining the satellite imagery carried out diligently, such scams could have been avoided,” the letter added.

Mohanty expressed surprise over how the Keonjhar divisional forest officer (DFO) could not get an inkling of the illegal mining though it was going on for years. He alleged a “nexus” between mine operators and forest officials and demanded stern action against them. “Not a single forest officer has been held accountable for the total lack of enforcement of forest laws. It is no wonder that Keonjhar has become a haven for illegal mine operators,” the environmentalist said. “Senior officials from the forest department rarely stir out of the head office to visit the field and verify the activities of user agencies,” he alleged.

timesofindia.indiatimes.com

UK: The Forest Footprint Disclosure Project

The Forest Footprint Disclosure Project (FFD Project) is a new UK government-supported initiative, created to help investors identify how an organisation’s activities and supply chains contribute to deforestation, and link this ‘forest footprint’ to their value. Modelled on the successful Carbon Disclosure Project, it aims to create transparency and shed light on a key challenge within investor portfolios, where currently there is little quality information.

Participating companies will be asked to disclose how their operations and supply chains are impacting forests

worldwide, and what is being done to manage those impacts responsibly. They will also gain a better understanding of their own environmental dependencies, and how the changing climate and new regulatory frameworks could affect access to resources and the cost of doing business in the long term.

The disclosure information will be reported annually, enabling investors to identify the sustainable businesses of the future as well possible risks related to a company’s forest footprint.

www.forestdisclosure.com



The CFA

The Commonwealth Forestry Association

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

The CFA supports the professional development of those working with trees and forests by promoting the conservation and sustainable management of the world's forests and the contribution they make to peoples' livelihoods.

The CFA is managed on behalf of the membership by the Governing Council, which is composed of representatives from all countries who have members. It is run on a day-to-day basis by a small UK-based Secretariat consisting of the Chair, Vice-Chair, Technical Director, Membership Secretary and Finance Manager. The Secretariat is advised by committees for Finance and General Purposes, and Publications. The Governing Council appoints one member from each region, the Regional Coordinators, to work closely with the Secretariat in the Executive Committee to implement the plans of the CFA in accordance with the overall objectives.

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