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Around the world

The African Model Forest Network: operation and expansion strategies



Bagyeli children crossing the bridge leading to their village. Photo: Marie-Claude Simard

Brief overview of Model Forests

Model Forests are a local governance and sustainable forest management process, the success of which is based on local participation by all groups of stakeholders. It is a long-term collaborative institutional force that works to create a shared local vision of development and implement it for the benefit of all stakeholders (IMFNS, 2003: 2).¹

The creation of Model Forests dates back to the early 1990s, with

¹ IMFN, 2003. Frequently Asked Questions. Model Forest Development Guide, Ottawa, Canada

the implementation of ten sites across Canada. Since the inception of the International Model Forest Network (IMFN) in 1995, more than 50 Model Forests have been created in some 20 countries on five continents.

Creation of Cameroonian pilot sites

In the Congo Basin, Cameroon is the base for the development and expansion of Model Forests. Two pilot sites were created in the country in August 2005: Campo Ma'an in the south and Dja and Mpomo in the east. This initiative was facilitated by a consortium including the Ministry of Forestry and Wildlife of Cameroon, the Secretariat of the International Model Forest Network, the

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necessarily those of the CFA.

Central Africa Forest Commission, the Canadian International Development Agency, the International Union for the Conservation of Nature (IUCN/CEFDHAC), the Food and Agriculture Organization (FAO) and the Center for International Forestry Research (CIFOR).

The two sites encompass the territories of eleven municipalities. The need to improve the living conditions of local populations, to overcome conflicts and to put in place programs focused on the creation of socioeconomic and ecological values provided the impetus for stakeholders in the territory's sustainable development to come together. This participatory approach based on voluntary partnership, networking and knowledge sharing, promotes the recognition of pluralism and competing forms of legitimacy within a territory. The approach has therefore served as a practical framework for local implementation, beginning with local communities, of a national forest policy to benefit all actors.

Innovative projects

African Model Forests are built on the pillars or key principles of participatory governance, sustainable economic development, conservation, good management, knowledge generation and sharing, science and best practices. In cooperation with a group of partners (the University of Yaoundé I, Université Laval, the University of British Columbia, the Lac-Saint-Jean Model Forest, FP Innovations and AFRICAD in Canada, Prym Partners and the Centre Technique de la Forêt Communale in Cameroon, the Ibero-American Model Forest Network and others), the Secretariat of the African Model Forest Network (AMFN) is exploring, in cooperation with Model Forest stakeholders, including the populations, the forest and agro-forest industries and rural communes, the possibilities for stimulating and creating innovative activities that transmit viable local ecological, economic and socio-cultural values:

- The transformation and promotion of non-timber forest products (NTFP) through their domestication, popularization, transformation and commercialization;
- The promotion of agriculture and eco-agriculture through capacity-building and technical training in pastoral livestock production, agriculture, fish farming, silviculture, bee production and pork production;
- The promotion of rural entrepreneurship by promoting wood processing by-products; with the implementation of a prototyping centre and the creation of wood drying platforms;
- The development of heritage, rural products and ecotourism; for an assessment of ecotourism potential and for tourism employment training;
- Innovation in hydraulics and rural energy to address challenges of accessibility and viability related to the promotion of organic residue and the local production of water and energy.

These initiatives, designed in 2008 and 2009 following a series of workshops and meetings between Model Forest partners and stakeholders, are still in their infancy. Now, more than ever, developing African Model Forests will need to exchange resources and rely on solid partnerships in order to demonstrate the feasibility of a viable local development model based on partnership and innovation.

Outlook

Since July 2009, the Secretariat of the AMFN's mandate has been to facilitate the establishment, development and operation of a pan-African network of Model Forests, representative of the continent's wealth and diversity, that is properly governed and equipped with the human, material and scientific means necessary for the sustainable development of forest territories and the economic and social promotion of their biological, human and cultural diversity. Its objective for the next three years (2010-2013) is to facilitate the extension and creation of new African Model Forests, particularly in Congo Basin countries.

Work is already moving ahead quickly in the Democratic Republic of Congo, following the decision made by a representative group of some ten local stakeholders gathered in Kizu (Tshela) to launch the process for the creation of the Mayombe Model Forest in the province of Bas Congo. A similar group gathered at Goma (in the province of Nord Kivu) and has started discussing the establishment of a second Congolese Model Forest in partnership with the AMFN, the IUCN, the ITTO and the Global Partnership on Forest Landscape Restoration. These new initiatives were facilitated by a series of exploratory studies and meetings with senior management from the Ministry of the Environment and by information and exchange workshops. The first, held in April 2010 in Kinshasa, resulted in the creation of a consortium of 15 members, including senior executives from the Ministry, the CARPE program, the IUCN and national and international NGOs, with the objective of facilitating the national process and capitalizing on lessons learned from it.

A similar process is underway in the Republic of Congo, and preliminary contacts were made in the Central African Republic, Gabon and Equatorial Guinea. Meetings were also held on different occasions by the AMFN with a variety of stakeholders in Western Africa and public, parliamentary and NGO authorities from Ghana, Sierra Leone and Senegal. The consolidation phase of pilot Model Forests in Cameroon and extending lessons learned by the African Model Forest Network to other countries on the continent is well under way.

**Julie Gagoe Tchoko
and Mariteuw Chimere Diaw**
International Model Forest Network Secretariat

Association news

CFA welcomes PEFC - the world's largest forest certification scheme

We are pleased to announce that the Programme for the Endorsement of Forest Certification schemes (PEFC) has joined the CFA. Founded in 1999, PEFC is an international non-profit, nongovernmental organisation dedicated to promoting Sustainable Forest Management (SFM) through independent third-party certification. It works throughout the forest supply chain to promote good practice in the forest and to ensure that timber and non-timber forest products are sourced with respect for the highest ecological, social and ethical standards.

PEFC is an umbrella organisation. It operates by endorsing national forest certification systems developed collaboratively by all interested stakeholders and tailored to local priorities and conditions. Each national forest certification system undergoes rigorous third party assessment against PEFC's unique Sustainability Benchmarks. These are based on globally recognised principles, guidelines and criteria developed by international and inter-governmental bodies such as MCPFE, ITTO/IUCN and ITTO/ATO.

These ongoing processes enjoy broad stakeholder consensus and are supported by 149 governments in the world. Although many of the world's forests are sustainably managed, the best proof of this is through independent, impartial and credible third-party certification. PEFC promotes this independent certification and provides assurance mechanisms to demonstrate to consumers that the wood used in their products comes from sustainably managed forests.

The Benchmark criteria are regularly revised through multi-stakeholder processes to take account of new scientific knowledge, societal



*Peter Latham, Chairman PEFC
UK Board of Directors and
member of the CFA Governing
Council*

change, evolving expectations and to incorporate the most up-to-date best practices.

Today, PEFC has recognised certification systems in around 30 countries. Together these account for over 225 million hectares of certified forests, making PEFC the world's largest forest certification system. It is the certification system of choice for small forest owners including family and community-owned forests with about half a million forest owners certified to its Sustainability Benchmarks.

Last year was a special year for PEFC as the organisation celebrated its 10th anniversary. Within this relatively short time-frame, PEFC has established itself as the world's largest forest certification system and it has worked hard to live up to its early promise. In addition, PEFC certified materials are now accepted by numerous public and private procurement policies worldwide.

Yet half a million forest owners and 225 million hectares of certified forests are only the tip of the iceberg when the total global certified forest area remains less than ten per cent. mainstreaming sustainable forest management certification is therefore at the top of PEFC's agenda, in terms of both forest certification and expanding acceptance of and demand for PEFC certified products. While 2009 saw the expansion of the certified forest area and the first endorsement of national certification systems in Russia, Africa (Gabon) and Asia (Malaysian forest certification scheme), PEFC recognises that it still has a long way to go and relishes the challenge of extending certification out from its European and North American strongholds.

For more information about the PEFC programme visit – www.pefc.org or e-mail info@pefc.org



CFA-India (Dehra Dun Chapter) arranges lecture

The national unit of CFA in India under the chairmanship of the Director General Forests, Ministry of Environment and Forests, Government of India is based at New Delhi. In view of the fact that Dehra Dun is the seat of forestry in India having a number of forestry institutions (Indian Council of Forestry Research and Education, Indira Gandhi National Forest Academy, Central Academy for State Forest Service, Forest Survey of India, Forest Research Institute, FRI University, Wildlife Institute of India), it was considered appropriate to

establish Dehra Dun Chapter of CFA-India.

Dehra Dun Chapter of CFA-India organizes lectures under CFA Lecture Series by eminent persons on topics considered relevant for forestry sector in India. These lectures are attended by scientists and forest officers serving in Dehra Dun based forestry institutions, Indian Forest Service Probationers and State forest Service Probationers undergoing training and M. Sc. Students of FRI University. In order to ensure that the forest officers serving in different parts of the country may also get benefited, these lectures are published in Indian

Forester which is subscribed by all the serving forest officers. The following lectures have so far been delivered under CFA Lecture Series:

- Biodiversity Conservation in India by Dr. S. John Joseph, Former Principal Chief Conservator of Forests, T. N. and Former Chairman, TN Chapter of WWF
- Agroforestry in India: Problems and Potential by Mr. Piare Lal, Vice President, ITC Bhadrachalam Paper Mills, Andhra Pradesh
- The Role of the Forest Sector in an Era of Global Change – A View on Some Priorities for the 21st Century by Mr. Peter Wood OBE, Former Vice President, CFA
- Indian Forest Service: Challenges and Opportunities

by Dr. R. D. Jakati Director, Indira Gandhi National Forest Academy, Dehra Dun

Most recently, in August the CFA-India Dehra Dun Chapter organised a lecture by Dr. William Jackson, Deputy Director General IUCN entitled 'Shaping a Sustainable Future: a view on Climate Change and Forests' in the auditorium of Indian Council of Forestry Research and Education. Dr Jackson presented a fascinating view of the challenges facing forestry within the context of climate change to about 200 participants and answered a range of questions on the subject.

Dr R.V. Singh
CFA Regional Coordinator - South Asia

Roger Mills, Head of Oxford Forestry Library, retires

Roger Mills has retired from his post in the Oxford University Bodleian Library as head of Forestry and Plant Sciences, after 31 memorable years in the post. He came to Oxford in 1981 after ten years in an oil industry library post in OPEC and brought with him skills in information technology that he developed to the highest level, contributing hugely to the use of computers in all aspects of library work and communication.

Roger will be remembered in particular for his devotion to the great forestry library, inherited from generations of forest librarians, in the Oxford Forestry Institute and for his tireless work to ensure its continued public accessibility. For a century, the Institute itself had been the world's leading centre for forest research, education and information and, indeed it held much material that was no longer available in the countries of origin. Roger's active promotion of digitisation, (including that of the *Commonwealth*, later the *International Forestry Review*), was fundamental to ensuring the conservation and freedom of access to these materials. He worked very closely with CAB International, which still abstracts all accessions to the library; he was also among the first to recognise the special role of "grey" literature in forestry.

Roger Mills' international standing was epitomised by his work for IUFRO (the world's oldest international forestry organisation). He led the IUFRO Working Party on Library and Information networks for many years and played an important role in the training activities of the IUFRO Special Programme for Developing countries (SPDC). An excellent example was the course on *Communicating Forest Science* in forest research that he gave at the IUFRO World Congress in Brisbane in 2005, a masterpiece of clarity and erudition.

Although the library's collections are no longer housed in the OFI building, part of Roger's legacy is their safe lodgement in the Science section of the Bodleian Library in South Parks Road, Oxford, where they continue to be accessible.

At his farewell gathering in the Bodleian Library on 28 October many tributes from all over the world were paid to Roger and his staff and their contribution to Oxford forestry and indeed global forest policy, research, management and education. We wish him and his wife, Sue, a long and happy retirement

Peter Wood
CFA Vice-President, with grateful acknowledgements to Prof J Burley and G Pretrokofsky

Forest Scenes

Conflict over forests and land in Asia: New Issues Paper from RECOFTC – The Center for People and Forests

Violent conflict affects three quarters of Asia's forests. In Cambodia, for example, nearly half of the 236 land conflicts recorded in 2009 escalated to violence. With 450 million people living in and round Asia's forests, conflict can play a major role in the protection and conservation of forests, as well as the wellbeing of forest peoples.

Seeking a better understanding of underlying causes,

impacts, and management solutions, RECOFTC initiated a research program examining eight case studies of communities in conflict with 'outsiders,' such as government agencies or land developers, in Cambodia, China, Indonesia, Lao PDR, Thailand, and Vietnam. Going beyond collecting stories, we examined the common impacts, underlying and direct causes, and management strategies for conflict in the Asia-Pacific region.



Case study locations

Key Findings

Impacts

The duration and management of conflicts were key factors in determining the impacts. Negative impacts of conflict included anxiety and fear, disharmony and division among social groups, distrust, high costs, and environmental degradation. Though negative impacts predominated, certain positive impacts emerged. In some cases, stronger collective action developed out of conflict, and in others, communities gained greater awareness about the importance of clarifying tenure arrangements.

Underlying and direct causes

All conflicts involved an overlap between statutory and customary claims and all were indirectly driven by broader societal changes, in particular, by rapid economic development, rising commodity prices, concerns over food security at national and international levels, or conservation policies that view local people as a threat to conservation. Some cases also involved poor coordination between State agencies. The direct causes of conflict were more diverse, but in general, conflict was triggered when a community's culture and deep connection to the land was disrupted.

Management

Various approaches were employed in managing conflict, including avoidance, coercion, negotiation, and mediation. What became clear is that conflict resolution can take years, and a mutual agreement may never be reached. Certain actors may not be interested in solving the conflict at all. Only three of eight conflicts studied were resolved, but all cases shed light on common conditions for successful conflict management.

The conditions included: a flexibility of parties' demands; the involvement of credible and neutral mediators; and sufficient space and time to engage in discussions.

Recommendations

Short-term actions:

- Encourage early consultation with resident local populations prior to making decisions about land-use changes.
- Ensure coordination between Government agencies with overlapping mandates.
- Promote co-management arrangements in which actors agree upon a strategy to fairly share management responsibilities.
- Call upon governments to remain neutral and avoid taking sides in conflicts between local communities and companies.

Long-term actions:

- Clarify tenure arrangements and land-use policies to minimize the likelihood of resource conflict.
- Strengthen mediation skills across Asia to ensure local capacity to manage conflict.
- Respect local resource management and ensure economic development also benefits local communities.
- Integrate local livelihood strategies into conservation policy to balance top-down processes and decrease conflict caused by unilateral enforcement.

RECOFTC's full issues paper, Conflict over Forests and Land in Asia: Impacts, Causes, and Management http://recoftc.org/site/fileadmin/docs/publications/The_Grey_Zone/2010/Issuespaperweb.pdf, elaborates on the contexts of each of the eight cases and offers recommendations about short-term and long-term actions to address similar conflicts.

For further information

- The full issues paper can be found here: YASMI, Y., KELLEY, L and ENTERS, T. 2010. Conflict over Forests and Land in Asia: Impacts, Causes, and Management http://recoftc.org/site/fileadmin/docs/publications/The_Grey_Zone/2010/Issuespaperweb.pdf
- RECOFTC's online and interactive Conflict Bibliography at <http://conflictbiography.recoftc.org/html/index.htm> introduces more than 100 publications relating to conflict, including case studies and toolkits
- Partnering with a number of organizations at national and regional levels, RECOFTC also offers training programs on managing natural resource conflict. For further information, contact info@recoftc.org.

Yurdi Yasmi
RECOFTC

Outcome of the of the Convention on Biological Diversity

The Tenth Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) was held in Nagoya, Japan from 18 to 29 October 2010. There outcome is well summarised by the Earth Negotiations Bulletin at www.iisd.ca/biodiv/cop10 Among the main results concerning forests and forestry were:

- A revised the Strategic Plan 2011-2020 was adopted, with a vision of a world of “living in harmony with nature” where “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”
- There are 20 targets, which include the halving of the rate of loss of all natural habitats (including forests) and degradation and fragmentation significantly reduced; areas under agriculture, aquaculture and forestry are managed sustainably, ensuring the conservation of biological diversity; invasive alien species and pathways are identified and prioritized, with priority species controlled or eradicated.

- Under Sustainable Use the meeting discussed REDD+ and requested the CBD Secretariat to (a) provide advice on the application of safeguards for biological diversity, without pre-empting any decisions which may be taken under the UN Framework Convention on Climate Change; and (b) to support the development of guidance on the creation of synergies between the implementation of national measures related to biological diversity and climate change.
- On Forest Biological Diversity the meeting recommended joint activities with the UN Forum on Forests (UNFF) to streamline forest-related reporting and to organize, with FAO, a meeting of the CPF Task Force on this subject

It is worth reading the positive summary of the overall outcome of this COP or “Nagoya Exorcises the Ghost of Copenhagen” as the ENB puts it.

Jim Ball
CFA President

Non-Wood Forest Products in Iran: opportunities and recommendations

Non-Wood Forest Products (NWFPs) play a major role in rural households' economics and welfare all over the world. Although forests provide a variety of products such as fruits, nuts, honey, fodder, medicinal extracts, construction materials, natural dyes, tannin, gums, resins, latex and other exudates, complete information and statistics are not available about the value of NWFP removals. In 2005, the total reported value of NWFP removals in Iran amounted to about US\$ 551,000. The total derived value of NWFPs was related to plant products. Exudates, raw materials for

medicine and aromatic products and food were identified as the main traded products in Iran. Exudates included Zedu (*A.commonis*, *Amygdalus* sp.) and turpentine (*Pastacia atlantica*). But, the other main species are harvested as NWFPs in forest areas of Iran especially in Arasbaran and Zagros forests. They are as follow; Arasbaran forests (fruit of raspberry, cornelian cherry, hazelnut, trees leaf, honey, bush meat, and oak fruit), Zagros forests fruit (*Quercus libani*), leaf (*Q. brantii*), and types of Gall such as Qolqaf, Mazuj, and Sechka (*Q. infectoria*), Wild pistachio (*Pistacia atlantica*), almond (*Amygdalus* sp.), Zedu (*A.commonis*, *Amygdalus* sp.),



Cornelian cherry (Cornus mas) in the local market, Kalibar, Iran

turpentine (*Pastacia atlantica*), wild pear (*Pyrus glabra*), walnut (*Juglans regia*), myrtle (*Myrtus communis*), and somaq (*Rbus coriaria*)). These products have high value, but because of low processing industries and appropriate markets for these products have resulted in their export at a low price. After processing, countries such as Iran re-import them at a much higher price. The reported value of NWFP removals in Iran is very low. All the forest zones except hyrcanian forests are considered as conserved-protected areas and it is probable that the harvest of timber will not be considered legally or ecologically feasible in the near future. Therefore, the harvesting of NWFPs can play

an important role in the household economy. These effects can be optimized through the use of these products by operating plans, determining sustainable harvest levels, identifying usable species in all forest areas, improving harvest methods, post-harvesting technologies, increasing participation of local communities and marketing.

Sajad Ghanbari
CFA member Dept.of Forestry & Forest EconomicsFaculty of Natural Resources
Tehran University, Iran

International Year of Forests 2011

FAO's Committee on Forestry meeting in October 2010 was the occasion to take stock of what is planned for International Year of Forests (IYF) in 2011 by the UN Forum on Forests (UNFF), the focal point for the implementation of the Year. FAO, as the Chair of the Collaborative Partnership on Forests (CPF), was also invited to support the implementation of the Year.

IYF follows immediately on from the International Year of Biodiversity in 2010; it should be seen within the context of the five years remaining for the implementation of the Millennium Development Goals (MDG) as the as the 2012 UN Conference on Sustainable Development – 'Rio+20'. The original Conference in Rio in 1992 greatly raised the profile of forests and forestry, but forestry momentum was lost with the Earth Summit in 2000 and the formulation of the MDG where forests were not specifically mentioned but were included under MDG 7 – "achieve environmental sustainability" – which is directly related to forests, although the others are also linked to differing degrees.

A logo has been developed, which conveys the Year's theme of "Forests for People", celebrating the central role of people in the sustainable management, conservation and sustainable development of the world's forests. The design illustrates some of the multiple values of forests and the need

for a 360-degree perspective: forests provide shelter to people and habitat to biodiversity; are a source of food, medicine and clean water; and play a vital role in maintaining a stable global climate and environment. All of these elements taken together reinforce the message that forests are vital to the survival and well-being of people everywhere.

Some of the key events and activities planned for IYF2011 include a Ministerial segment of the UNFF's 9th Session in New York in February 2011, when the IYF will be officially launched. The Ramsar Convention has selected "Wetlands and Forests" as the theme for World Wetlands Day, 2011 (2nd February) in recognition of the International Year of Forests. There will be art, film and photo competitions and a film festival will be held. A UN Commemorative stamp series will be issued, and World Forest Day will be celebrated on 21st March. This Day, which was created in 1971 by the European Confederation of Agriculture, has so far not fulfilled its potential influence on peoples or the governments, and the IYF may offer the opportunity to improve this situation. In general, countries are encouraged to participate actively in IYF. You can find out more at www.un.org/forests

Jim Ball
CFA President

Meetings

Global Expert Workshop on Biodiversity - Benefits of Reducing Emissions from Deforestation and Forest Degradation in Developing Countries Nairobi, 20-23 September 2010

Outcomes

1. If REDD-plus¹ is successful at reducing deforestation and forest degradation, and promoting forest conservation, it will have significant and unprecedented benefits for biodiversity.
2. A well designed REDD-plus mechanism also has the potential to deliver significant benefits to indigenous peoples and local communities.
3. Both biodiversity and the full and effective participation of indigenous peoples and local communities are necessary for the success of REDD-plus. The permanent storage of carbon depends on well-functioning and resilient forest ecosystems, and on indigenous and local community participation and ownership.
4. Multiple benefits of REDD-plus, such as biodiversity benefits and benefits for indigenous peoples and local

- communities, are already being realized in many countries that are taking REDD-plus activities forward, e.g. through mapping exercises and through developing integrated REDD-plus national plans.
5. At this stage, the biggest risk to biodiversity and indigenous peoples and local communities from REDD-plus is that a well-designed REDD-plus mechanism is not agreed upon and successfully implemented.
6. Other specific risks for biodiversity identified by the meeting include:
 - (a).The conversion of natural forests to plantations and other land uses of low biodiversity value and low resilience; and the introduction of growing of biofuel crops;
 - (b).Displacement of deforestation and forest degradation to areas of lower carbon value and high biodiversity value;
 - (c).Increased pressure on non-forest ecosystems with high biodiversity value;
 - (d) Afforestation in areas of high biodiversity value.
7. Other specific risks of REDD-plus for indigenous peoples

¹ In this report, REDD-plus refers to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

and local communities include:

- (a).The loss of traditional territories and restriction of land and natural resource rights;
 - (b).Lack of tangible livelihood benefits to indigenous peoples and local communities and lack of equitable benefit sharing;
 - (c).Exclusion from designing and implementation of policies and measures;
 - (d).Loss of traditional ecological knowledge.
8. Safeguards, if designed and implemented appropriately, will reduce the risks and enhance the potential benefits of REDD-plus, for example by ensuring that conversion of natural forests is avoided, and ensuring full and effective participation of indigenous peoples and local communities based on the United Nations Declaration on the Rights of Indigenous Peoples, in particular the principle of free, prior and informed consent.
 9. Action for multiple benefits needs to be taken at several levels. National governments play the key role in ensuring multiple benefits through the implementation of REDD-plus. National plans and national approaches benefit from the integration of climate change, biodiversity, and development objectives and strategies. This requires effective cross-sectoral coordination and harmonization of relevant policies and laws (agriculture, energy, environment, forests, biodiversity, and others), and integrated land use planning at the national scale.
 10. Successful implementation of REDD-plus is dependent on transparent and effective national governance structures.
 11. The CBD can support the implementation of REDD-plus through its programmes of work and its biodiversity monitoring efforts, including by:
 - (a).Encouraging the Parties to maximize the benefits for biodiversity, for example through prioritizing the conservation of natural forests;
 - (b).Supporting the work of the UNFCCC to operationalize safeguards²;
 - (c).Developing a framework for monitoring the impacts of REDD-plus on biodiversity.
 12. Capacity building efforts across all levels founded on comprehensive national self-capacity needs assessments, as well as information sharing, are needed in order to achieve multiple benefits of REDD-plus, including through coordinated efforts of the members of the Collaborative Partnership on Forests and other relevant organizations.
 13. Identifying and realizing multiple benefits can be supported through the application of:
 - (a).Spatially explicit tools, such as maps and ecological gap analyses, to identify synergies and tradeoffs among climate change, biodiversity, and social issues;
 - (b).The results of the The Economics of Ecosystems and Biodiversity (TEEB) process;
 - (c).Social and environmental standards for REDD-plus;
 - (d).The recommendations of the CBD second Ad Hoc Technical Expert Group on Biodiversity and Climate Change.³
 14. Key research and development needs in the context of REDD-plus multiple benefits include:
 - (a).Analysis of key drivers of biodiversity loss due to deforestation and forest degradation at the national and local level;
 - (b).The conditions for effective and equitable distribution mechanisms;
 - (c).Criteria and indicators for monitoring multiple benefits and safeguards;
 - (d).Spatially explicit support tools/maps, including information on ecosystem services;
 - (e).Socio-economic analyses of implementing REDD-plus considering the full value of forests and multiple benefits, recognizing that there are intrinsic values that cannot be monetarized;
 - (f) Reviewing and improving national biodiversity strategies and action plans (NBSAPs) to reflect climate change issues;
 - (g) Further collaborative work on the definitions on forests and forest types.
 15. The workshop participants requested the Secretariat to make the workshop results available to the national focal points for the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change. To further advance the results of this meeting, the experts recommended that the CBD could explore possibilities for a technical workshop organized jointly by the CBD and UNFCCC Secretariat on how the CBD can support REDD-plus safeguards, without prejudice to the negotiations.

The full report can be downloaded from <http://www.cbd.int/doc/meeting=EWREDD-01>

³ CBD Technical Series 41: Connecting Biodiversity and Climate Change Mitigation and Adaptation, available at www.cbd.int/ts

² Without prejudging ongoing or future negotiations.

Meeting on the Implementation of the Mauritius Strategy for SIDS

The High-level Review Meeting on the Implementation of the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (MSI+5) was held from 24-25 September at UN HQs in New York. It took place as part of the 65th UN General Assembly, following the Summit on the Millennium Development Goals and thus was attended by over 40 heads of state and ministers. A full report is available from the Earth Negotiations Bulletin (ENB) at www.iisd.ca/sids/msi+5

There is in fact no internationally accepted definition of

Small Island Developing State (SIDS). Indeed, some are not small, others are not islands and a few are not developing economies. They were, however, given an international political identity with the establishment in 1991 of the Alliance of Small Island States (AOSIS); and 27 of the 39 AOSIS countries are members of the Commonwealth – see box.

The Mauritius Strategy for the Further Implementation of the Programme of Action on the Sustainable Development of SIDS was originally adopted in January 2005, and the need for the MSI+5 Review was agreed at the 63rd UN General Assembly in 2009. The Review was preceded by regional meetings in the Pacific Region (February 2010, Vanuatu), the African Indian

Commonwealth countries which are members of AOSIS

Africa - Mauritius, Seychelles

Americas - Antigua & Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St Kitts & Nevis, St Lucia, St Vincent & Grenadine, Trinidad & Tobago

South-east Asia & Pacific - Fiji, Kiribati, Maldives, Nauru, Papua New Guinea, Samoa, Singapore, Solomon Islands, Tonga, Tuvalu, Vanuatu

Europe - Cyprus, Malta

Source: *Commonwealth Forests 2010*, at www.cfa-international.org/CommonwealthForests2010

Ocean, Mediterranean and South China Sea (AIMS) Region (March 2010, Maldives) and the Caribbean Region (March 2010, Grenada).

Reading the ENB account of the Review Meeting it is noticeable that there is no mention of trees or forests, although plenty of discussion of related fields such as climate change, protection from natural disasters, loss of biological diversity, energy and tourism. Trees are important to SIDS for the provision of products, coastal protection and in support of tourism and most

Commonwealth SIDS are quite well forested; only two have less than 10% forest cover (Maldives and Nauru). But forests on SIDS are especially vulnerable to damage and destruction by hurricanes and typhoons, or tidal surges. Climate change threatens unique island tree species and ecosystems, which may have developed in isolation. All Commonwealth SIDS import oil as a fuel, which accounts for a high proportion of national expenditure; alternative and affordable renewable energy sources, such as wood, are required to reduce vulnerability to price rises. Isolation from markets also limits

their commercial opportunities.

During the meeting many delegates drew attention to the progress that has been made by SIDS in the establishment of protected conservation areas and the development of alternative energy sources. But there are continuing challenges, including the recent global financial crisis, and the high cost of imported energy and foodstuffs which continue to contribute to economic hardship for the people and to growing public debt. There were calls for recognition by donors that there are great differences between the economies of the islands and of their potential to withstand external shocks. In addition, several have now moved up to “middle income” status, especially some of the Caribbean islands, and are thus no longer eligible for concessional finance which is available to developing countries, yet they remain highly indebted. For example, Barbados, Grenada, St Kitts & Nevis and the Seychelles are all now officially middle-income economies but have debt:GDP ratios of over 100% and at the same time remain extremely vulnerable to external environmental or economic shocks. The granting of special status to SIDS within the UN was proposed. After the failure to obtain a post-Kyoto agreement at Copenhagen, and with the continuing low expectations of the follow-up at Cancun, the accounts of the Review Meeting read increasingly downbeat. SIDS have recently been calling for “1.5 to stay alive” (or restricting the global rise in temperature to 1.5°C) while the ENB drew attention to the fact that all countries are affected by negative effects of global warming, quoting from John Donne’s 17th century poem: *No man is an island entire of itself...any man’s death diminishes me, because I am involved in mankind; And therefore never send to know for whom the bell tolls; It tolls for thee.*

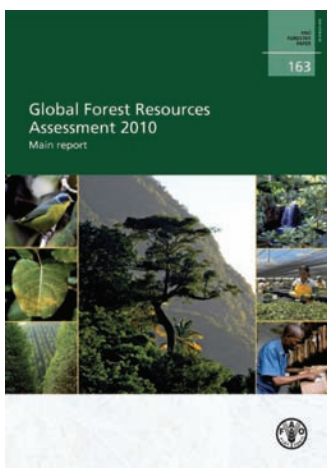
Jim Ball
CFA President

Publications

Global Forest Resources Assessment 2010

The UN Food and Agriculture Organization (FAO) has carried out assessments of the world’s forest resources on eleven occasions since 1946, as part of its mandate to “collect, analyse, interpret and disseminate information” relating to the agricultural sector (which includes forestry). They have been at 5-yearly intervals in recent years – 1990, 1995, 2000 and 2005. The key finding of the latest Global Forest Resources Assessment 2010 (FRA2010) were released in March this year while the report was published to coincide with FAO’s Committee on Forestry (COFO) in October.

It is an impressive document, presenting information on more than 90 variables from 233 countries and areas. It cost an estimated \$US25 million over a five-year period and involved over 900 specialists including 178 national correspondents. Some of the findings include:



- Global forest cover is 31% of the land area, or 0.6 ha per head. The five most forested countries (the Russian Federation, Brazil, Canada, the USA and China) account for more than half the total of 4 billion ha. Ten countries have no forest, while 54 countries have less than 10% forest cover.

- The rate of forest loss, mainly due to the conversion of tropical forests to agriculture, has decreased slightly from 16 million ha yearly in the 1990s to around 13 million ha yearly. Brazil and Indonesia, which had the highest rate of net forest loss in the 1990s have significantly reduced this, but Australia, which recently suffered severe drought combined with forest fires, has one of the highest rates of loss.

- Primary forest (forest of native species with no clear sign of human activity) accounts for 36% of the global forest area, but has decreased by more than 40 million ha since 2005.

- Planted trees, which are defined as forest cover in the Global FRA, as well as natural colonisation of forest, has been responsible for reducing the net change in forest area from -8.3 million ha yearly in 1990-2000 to -5.2 ha yearly in 2000-2010.
- The area of planted forest has increased at about 5 million ha yearly between 2005-10, mainly in Asia, and now accounts for 7% of the total forest area. Three quarters of the planted forest is of native species.
- Nearly one third (30%) of the world's forests are managed primarily for the production of wood and non-wood products; 13% for legally established protected areas (national parks, game reserves, wilderness areas etc); 12% is managed mainly for the conservation of biodiversity and 8% with the primary objective of world and water conservation. The balance is not designated.
- Eighty per cent of the global forests are publicly-owned, but private ownership is increasing.
- Other information is available on forest fires, which are much under-reported; pests and diseases, natural disasters and invasive species, all of which are causing significant damage to forests in some countries; the socio-economic functions of forests such as employment, and the value of wood and non-wood removals.

Lawyers may believe that “the devil is in the detail” but for many of us reviewing the global forest cover figures over the past decades it may be said that “the devil is in the definition”. Some of the loss of primary forest reported above, for example, arises from its reclassification because there has been of selective logging or other signs of human intervention. The definition of forest, which was revised for the 2000-05 FRA, has remained the same, as has the concept of planted forest, which in the 2005 assessment aggregated plantations and enriched natural forest. Changes in definition have meant that the FRA team have had to revise data at each assessment to make them comparable with what has gone before, setting

a trap for the unwary who may attempt to make comparisons between surveys by using the figures from past assessments. Finally, the all-encompassing definition of “forest”¹[1] includes planted forest as well as natural forests which themselves may be more-or-less disturbed and may not represent a true forest ecosystem.

In 2011 a number of other studies complementary to FRA2010 will be published, on forest degradation, trees outside forests, the relationship between forests, poverty and livelihoods, forest genetic resources, and on forests and forestry on small islands. A global remote sensing survey, providing additional and more consistent information on deforestation, afforestation and the natural expansion of forests, will be published at the end of 2011. Access to the imagery for the 13,689 sample areas of the remote sensing survey is at www.fao.org/forestry/fra/remotesensing/portal

The next survey, FRA2015, will concentrate on improving the quality and reliability of information, including deforestation, forest carbon stocks, trees outside forests, the roles of forests in the protection of soil and water resources and in the provision of livelihoods. Such data may be used in the determination of emission levels and in the monitoring of future trends for the implementation of the REDD-plus scheme. Since the basis of the FRA estimates is information provided by individual countries more effort must also be put into capacity-building for national staff.

The results are available on-line at www.fao.org/forestry/fra and hard copies can be obtained from FAO.

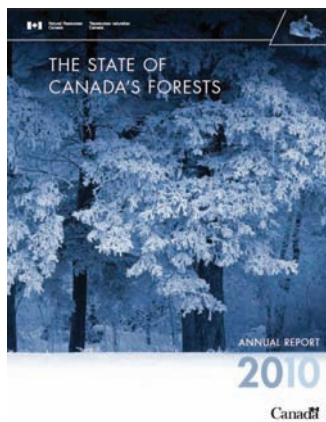
Jim Ball
CFA President

¹ The definition of forest in FRA2010 is: *Land spanning more than 0.5 ha with trees higher than 5 m and a canopy cover of more than 10%, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.*

The State of Canada's Forests – 2010

Natural Resources Canada. Available for free download at <http://canadaforests.nrcan.gc.ca/rpt>

The 2010 45 page report on the State of Canada's Forests produced by the Natural Resources Canada is not just statistics about the condition that the forests are in. The report also attempts to report on the state of forestry in Canada. Wikipedia says that :” Forestry is the art and science of managing forests, tree plantations, and related natural resources. The main goal of forestry is to create and implement systems that allow forests to continue a sustainable continuation of environmental supplies and services”. Historically federal reports were mainly about the physical state of the forest and its economic benefits. Today biofuels, carbon accounting, certification, and green technologies have to be considered along with the severe economic and social impacts of massive mill closures, declines in harvest levels and reduced forest management expenditures due to the economic crisis and the decline in US demand for Canadian forest products. The statistical profiles



by Province make grim reading. The section on mill curtailments, investments and acquisitions in the Canadian Forest Industry is especially grim.

Naturally there has been a request for federal help and support and leadership to tackle the “challenges” of helping forest workers and communities adjust to the economic downturn. The responses: one billion dollars in the each of the Community Development Trust, Community Adjustment Fund, in the Federal Economic Action Plan and one billion for a Pulp and Paper Green Transformation Program and funding for The Transformative Technologies Pilot Scale Demonstration Program. The grand aim is “create prosperity, jobs and green products in an emerging bioeconomy.

The graphs in the report all seem to going downhill but the report says that “With the diversification of its markets and products well underway, Canada's forest sector can look forward to an increasingly bright future”. While Canada has

made huge progress on the environmental aspects of forestry on the mainly publicly owned forest of 347 710 million ha of “forest land”. The nation is now faced with huge challenges in

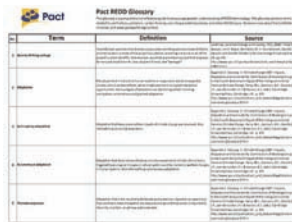
value added forest products to restore market competitiveness.

Gordon Weetman

A Glossary of REDD Terms

PACT - The publication can be accessed at http://pactworld.org/cs/redd_glossary. A PDF version of the glossary is also available for download.

The Glossary is a comprehensive reference guide aimed to provide a greater understanding of REDD terminology. The Glossary contains content related to verification, validation, carbon finance, voluntary market standards, and more. The aim of the document is to provide up-to-



Term	Definition	Source
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date, clear and succinct descriptions of emerging themes and concepts. The glossary is an ideal tool for both those engaged in REDD project and policy development as well as students, novices or those wishing to simply educate themselves on REDD. Pact intends to periodically review and expand the glossary.

Some recent publications from FAO

While attending the Committee on Forestry (COFO) recently I picked up a few new publications from the Food and Agriculture Organization of the UN (FAO). What follows describes some others that caught my personal interest; the list is by no means complete, but you can see others at www.fao.org/forestry or obtain hard copies from FAO Forestry Department, Viale delle Terme di Caracalla, 00153 Roma, Italy.

What woodfuels can do to mitigate climate change FAO Forestry Paper #162, 2010 (not online). Woodfuels, defined as “all types of biofuels derived directly or indirectly from wood biomass”, account for more of the world’s energy consumption than all other forms of renewable energy combined, and most of this consumption is in the form of firewood or charcoal in developing countries. Moreover, it is forecast that woodfuels, mainly firewood and charcoal, will continue to be a major source of domestic energy, especially in sub-Saharan Africa, and their potential to mitigate climate change is apparent. This new publication from FAO looks at the topic from the point of view of the resource, of markets and of future trends in energy developments, and of the interaction between woodfuels and climate change. There are interesting chapters on socio-economic impacts (including the effects on human health of using wood fuels in traditional stoves), environmental impacts, carbon finance for wood fuels and research. The growing production of wood pellets is discussed; Canadian production, for example, has grown from 0.5 million tonnes/year in 2003 to 2.5 million tonnes/year in 2008, much of which was exported.

The report concludes that sustainably produced wood energy “offers significant, cost-effective and perpetual opportunities for greenhouse gas emission reductions”, especially in Africa and South Asia. There remain, however, some issues to be addressed, including:

- Increasing efficiency in the use of woodfuels;
- The need for better data;
- Moving from the development of technologies for using woodfuels to commercialization;
- Policy development to promote the use of woodfuels.

Two related publication are:

- **Criteria and indicators for sustainable woodfuels** FAO Forestry Paper #160, 2010 (available online). This sets out principles, criteria and indicators to guide the sustainable use of woodfuel resources and the sustainable production of charcoal. It aims to help policy- and decision-makers in forestry, energy and environment agencies, civil-society organizations and the private sector ensure that the woodfuel sector reaches its full potential as an agent of sustainable development.
- **Making sustainable biofuels work for smallholder farmers and rural households** FAO, 2009 (available at <ftp://ftp.fao.org/docrep/fao/011/i0891e/i0891e00.pdf>) deals with the rapid global increase in demand for liquid bio-fuels such as bio-ethanol and bio-diesel produced from agricultural or forest products or waste. Large-scale plantations of liquid bio-fuel feedstocks (mainly sugar cane or vegetable oils) are being established largely in developing countries, along with local applications for power generation etc. There are other contributions to improved energy availability and rural development such as employment, but there are risks too, including deforestation, the loss of biological diversity and higher food prices.

Savanna woodland represents a forest type whose management has been neglected so **Guidelines on sustainable forest management in drylands of sub-Saharan Africa** 2010 (FAO Arid Zone Forests and Forestry Working Paper #1) is a welcome step in rectifying the situation. It is a successor to similar Guidelines for the Near East, published in 2009 as **Guidelines on good forestry and range practices in arid and semi-arid zones of the Near East**. The contents are divided into four sections: an Introduction, which points out that nearly 50 per cent of the African continent is covered by drylands and the importance of their forests in contributing to people’s livelihoods as well as to combating desertification and conserving watersheds; a chapter on the Economic significance of dryland forest commodities, focusing on gums (mainly gum Arabic) and resins, well supported with data; a review of the major challenges to forests and the forest sector in sub-Saharan

Africa; and (the main part of the text), the Guiding principles.

Finally, the latest issue of *Unasylva*, the international journal on forestry and forest industries published by FAO's Forestry Department, has as its theme **Forests, People and Wildlife** – see *Unasylva* 61, #236 2010/3, also available at www.fao.org/forestry/unasylva/en/. There are a number of interesting articles exploring aspects of the theme, including photos of some of the world's most dramatic canopy walkways. A related publication is **Human-wildlife conflict in Africa**, 2009, FAO Forestry Paper #157, also available on-line at www.fao.org/docrep/012/i1048e/i1048e00

While *Unasylva* highlights people and wildlife more or less living together (if not in total harmony) the Forestry Paper very much stresses the conflict between the two, describing the issues, the scope for conflict management, and the framework for making decisions on the challenge.

Jim Ball

CFA President

Proceedings of the 2002 Araucariaceae Symposium, Araucaria-Agathis-Wollemia

International Dendrology Society, Auckland New Zealand, 14-17 March 2002. Bialeski R. L., and Wilcox M. D. (Eds), 2002. ISBN 978-0-473-15226-0.

The Araucariaceae comprise some 41 species in three genera – *Araucaria*, *Agathis* and *Wollemia*, with current distribution restricted to the southern hemisphere apart from some eight species of *Agathis*, which penetrate the south east Asia archipelago of Malesia. The Symposium ranged across this wide spectrum of taxa and attracted 106 international participants. These Proceedings comprise 57 full papers plus 15 abstracts prepared by 159 authors, together with two comprehensive reports covering the pre- and post-symposium tours of araucarian forests in Northland New Zealand and New Caledonia respectively. The material is well organised into nine sections covering: fossil history (7 papers); morphology, phylogeny, systematics and ecology (13 papers); reproduction and propagation (8 papers); dendrology and amenity (8 papers); and individual sections on *Araucariaceae* in Malesia – Philippines, Indonesia, Malaysia and Papua New Guinea (5 papers), Australia (9 papers), Oceania – including New Zealand, New Caledonia, Norfolk Island, Vanuatu, Solomon Islands and Fiji (10 papers), and South America – Parana pine (8 papers) and Chilean pine (4 papers).

It is most unfortunate that publication has been excessively delayed until now, some eight years after the Symposium was held. During this time we have seen the publication elsewhere of a number of relevant papers on this important family of conifers. While this delay has compromised the topicality of some of the material, it has not fortunately reduced its utility, because the synoptic approach taken by many of the authors in exploring an extensive though disparate literature has developed a sound baseline upon which current and future workers might build. This will apply particularly to the area of molecular systematics, in order to resolve the many fascinating conundrums still surrounding the phylogenetic relationships among the genera and subgenera within the Araucariaceae.

The depth and breadth of treatment in scientific terms varies greatly across the papers, reflecting the interests and understanding of the authors. Inevitably there are some gaps related to forestry, wood science and utilisation. That said, there is much of interest here for those of scientific as well as more general dendrological bent. Despite the gaps, and one must concede that a Symposium must have practical limits to its scope,

Araucariaceae



Proceedings of the 2002 Araucariaceae Symposium, Araucaria-Agathis-Wollemia

International Dendrology Society

these Proceedings are highly recommended to all those who have been seeking a substantial monograph on the Araucariaceae. Foresters, botanists, dendrologists, ecologists, researchers, naturalists and students will find much here to stimulate their thinking on a wide range of matters. The combined reference lists attached to the papers together provide the most comprehensive bibliography available on this family, at least up to 2002. The detailed treatment of New Caledonian araucarians provides to my knowledge the best and most readable exposition on this epicentre of araucarians. Many readers will be stimulated by the erudite papers on those iconic Australian species kauri, bunya and hoop pines, while the papers on Malesia, PNG, New Zealand, Oceania and South America make readily accessible much information on kauri, klinki, hoop, Parana and Chilean pines that has been somewhat restricted up until now by language barriers or oral tradition.

Physical production of the Proceedings is of a very high standard, with high quality bright paper enhancing the reproduction of the many excellent coloured and black and white photographs, micrographs and text figures. Text printing is clear and text errors are very few. The Contents listing and book layout facilitate ready location and easy reading of material, offsetting to some extent the lack of an index. The only reservation I have is that such a weighty and bulky book would have benefited from a more physically robust cover and binding. While cost will be an issue for some readers, anyone with more than a passing interest in the Araucariaceae will find this book an excellent investment. Certainly it should be a mandatory holding for forestry and botanical libraries.

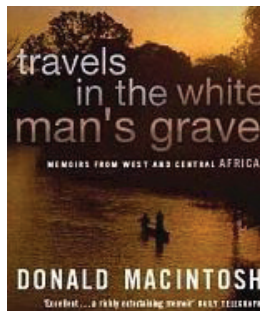
A4 soft colour cover, 545 pages, 1.85 kg, approx. 300 colour and black and white photographs plus numerous tables, figures and maps. No index. Published by the International Dendrology Society, Dunedin; printed by Jago Print & Graphics Ltd New Plymouth; distributed by Touchwood Books PO Box 610 Hastings 4156 New Zealand. Website www.touchwoodbooks.co.nz. Recommended price NZD 178 plus freight.

Ian Bevege

Travels in the White Man's Grave

Donald Macintosh, Neil Wilson Publishing, Glasgow, ISBN 1-897784-83X. 192 pages, £7.69

The author of this book, Donald Macintosh, studied forestry in Argyll and then spent 30 years from the early 1950s working as a tree prospector/surveyor in the rainforests of Nigeria, Cameroon, Ivory Coast and Liberia. This book deals with his experiences there. It describes how trees were felled before the advent of the chainsaw and how logs were hauled before the advent of the tractor; it deals with timber species and their uses, plant medicine, the flora, the fauna, the religions



of the people, and especially with the life in and the characters of the bush.

Mikael Grut

Around the world

Brazil: Staggering Tree Loss from 2005 Amazon Storm

A single, huge, violent storm that swept across the whole Amazon forest in 2005 killed half a billion trees, a new study shows. While storms have long been recognized as a cause of Amazon tree loss, this study is the first to produce an actual body count. And, the losses are much greater than previously suspected, the study's authors say. This suggests that storms may play a larger role in the dynamics of Amazon forests than previously recognized, they add.

Previous research had attributed a peak in tree mortality in 2005 solely to a severe drought that affected parts of the forest. The new study says that a single squall line (a long line of severe thunderstorms, the kind associated with lightning and heavy rainfall) had an important role in the tree demise. This type of storm might become more frequent in the future in the Amazon due to climate change, killing a higher number of trees and releasing more carbon to the atmosphere.

From January 16 to January 18, 2005, a squall line 1,000 kilometers (620 miles) long and 200 kilometers (124 miles) wide crossed the whole Amazon basin from southwest to northeast, causing several human deaths in the cities of Manaus, Manacapuru and Santarem. The storm's associated

strong vertical winds, with speeds of up to 145 km/hour (90 mi/hour), uprooted or snapped in half trees that were in their path. In many cases, the stricken trees took down some of their neighbors when they fell.

Looking at satellite images for the area of Manaus from before and after the storm, researchers detected changes in the reflectivity of the forest that they suspected are indicative of tree losses. In the most affected plots, near the centers of large blowdowns (contiguous patches of wind-toppled trees), up to 80 percent of the trees had been killed by the storm.

By comparing their field data and the satellite observations, researchers determined that the storm had killed between 300,000 and 500,000 trees in the area of Manaus. The number of trees killed by the 2005 storm is equivalent to 30 percent of the annual deforestation in that same year for the Manaus region, which experiences relatively low rates of deforestation. The researchers estimate that between 441 and 663 million trees were destroyed across the whole basin. This represents a loss equivalent to 23 percent of the estimated mean annual carbon accumulation of the Amazon forest.

www.sciencedaily.com

World's forests can adapt to climate change, study says

Water shortages as a result of rising temperatures will not do as much damage as feared, evidence from ancient trees suggests. It is generally acknowledged that a warming world will harm the world's forests. Higher temperatures mean water becomes more scarce, spelling death for plants – or perhaps not always.

According to a study of ancient rainforests, trees may be hardier than previously thought. Carlos Jaramillo, a scientist at

the Smithsonian Tropical Research Institute (STRI), examined pollen from ancient plants trapped in rocks in Colombia and Venezuela. "There are many climactic models today suggesting that ... if the temperature increases in the tropics by a couple of degrees, most of the forest is going to be extinct," he said. "What we found was the opposite to what we were expecting: we didn't find any extinction event [in plants] associated with the increase in temperature, we didn't find that the precipitation decreased." In a study published today in Science, Jaramillo and

his team studied pollen grains and other biological indicators of plant life embedded in rocks formed around 56m years ago, during an abrupt period of warming called the Paleocene-Eocene Thermal Maximum. CO2 levels had doubled in 10,000 years and the world was warmer by 3C-5C for 200,000 years. Contrary to expectations, he found that forests bloomed with diversity. New species of plants, including those from the passionflower and chocolate families, evolved quicker as others became extinct. The study also shows moisture levels did not decrease significantly during the warm period. "It was totally unexpected," Jaramillo said of the findings.

Klaus Winter of the STRI added: "It is remarkable that there is so much concern about the effects of greenhouse conditions on tropical forests. However, these horror scenarios probably have some validity if increased temperatures lead to more frequent or severe drought as some of the current predictions suggest."

Last year, researchers at the Met Office Hadley Centre

reported that a 2C rise above pre-industrial levels, widely considered the best-case scenario, would still see 20-40% of the Amazon die off within 100 years. A 3C rise would see 75% of the forest destroyed by drought in the next century, while a 4C rise would kill 85%. Jaramillo found that the plants he studied seemed to become more efficient with their water use when it became more scarce. But he also cautioned that future risks for the world's plant species did not end with climate change. Human action would continue to determine the fate of the world's forests, he said.

"What the fossil record is showing is that plants have already the genetic variability to cope with high temperature and high levels of CO2. Rather than global warming, the [trouble] for tropical plants is deforestation. The fossil record shows that, when you don't have humans around, the plants can deal with high temperatures and CO2."

www.guardian.co.uk

Brazil to meet deforestation reduction goals 4 years earlier: president

Brazilian President Luiz Inacio Lula da Silva said that Brazil would fulfill its deforestation reduction commitment four years earlier than expected. "We will reduce the deforestation by 80 percent by 2016. No country will give such a large contribution to the planet as Brazil," Lula said. Brazil committed itself to reducing deforestation in the Amazon rainforest region by 80 percent by 2020 at the Copenhagen Climate Change Conference last year.

Lula participated in the Brazilian Forum on Climate Change, at which the government defined the proposals to

be presented at the 2010 UN Climate Change Conference in Cancun, Mexico, in November.

The president said he didn't expect much to be accomplished at the upcoming conference. Many leaders might not attend the meeting due to lack of a global agreement, but he would be there, Lula said. Lula also recalled that even though the Copenhagen Conference failed in achieving a global deal on the reduction of carbon emissions, Brazil was committed to reducing its emissions by 38 to 42 percent by 2020.

english.peopledaily.com.cn

Brazil: Tropical forests thrived in ancient global warming

South America's tropical forests flourished when temperatures skyrocketed 56 million years ago. Could this mean that climate change will spare the Amazon? Carlos Jaramillo of the Smithsonian Tropical Research Institute in Balboa, Panama, and colleagues excavated pollen and other plant remains from three sites in Colombia and Venezuela. Their samples span the Palaeocene-Eocene Thermal Maximum (PETM), when soaring levels of greenhouse gases caused global temperatures to rise by 5 °C in about 10,000 years.

The tropical forests then faced average temperatures up to 34 °C, compared with 27 °C today, yet contrary to expectations the pollens suggest plant diversity increased. The trends are puzzling because models predict that the Amazon will burn and be reduced to savannah with future climate change.

The difference between what happened then and what is forecast to happen in future may be down to rainfall. Jaramillo found evidence that there was no less precipitation during the PETM than before – for instance, he found pollen from species that prefer wet environments. In contrast, the combination

of climate change and deforestation is expected to dry out the Amazon in future. Deforestation may be a key factor for modern forests, as cleared land dries out quickly. "If we didn't have humans deforesting the tropics, they would probably cope quite well with climate change," he says.

Matthew Huber of Purdue University in West Lafayette, Indiana, points out that Jaramillo's results may not apply to the entire tropics: the sample sites were in the north of South America. "The models suggest that further south, like in the centre of Brazil, would be where it got really hot," he says. "I'm not too surprised that they find life was diverse at their sites, but others might well be barren." Nevertheless, he says the work is a "big accomplishment", especially given the conditions under which Jaramillo had to work – under threat from local drug trafficking, his team had to be protected at times by the Colombian armed forces. "We have a window into a world we've never seen before," says Huber.

www.newscientist.com

UK: Minister confirms forest sell-off plans

The coalition Government has confirmed reports that large tranches of publicly owned forestry will be sold off. The Department for Environment, Food and Rural Affairs said it intended to fundamentally reform the public forestry estate, with private owners and 'civil society partners' taking over much of the Forestry Commission's land.

The confirmation of the widely leaked plans came in a letter sent by Defra Secretary of State Caroline Spelman to MPs. In the letter, she said: "We are committed to shifting the balance of power from 'Big Government' to 'Big Society' by giving individuals, businesses, civil society organisations and local authorities a much bigger role in protecting and enhancing the natural environment and a much bigger say about our priorities for it. "We envisage a managed programme of reform to further develop a competitive, thriving and resilient forestry sector that includes many sustainably managed woods operating as parts of viable land-based businesses."

The Public Bodies Bill, which was published by the Cabinet Office today, contains sweeping powers to abolish or reform public bodies beyond those detailed earlier this month in the Government's 'bonfire of the quangos', will clear the way for the privatisation of much of the Forestry Commission's land in England. The Cabinet Office said: "Where proposed changes have implications for the devolved administrations in Scotland, Wales and Northern Ireland, the Government will continue to

work closely with them to develop and implement changes."

Defra's plans have caused consternation among walkers, mountain bikers and other outdoor enthusiasts, who fear recreational access will be curtailed by private owners of woodland and forest. An online petition by pressure group 38 Degrees had, at the time of writing, attracted almost 27,000 signatures against the sell-off. However, Ms Spelman said: "Full measures will remain in place to preserve the public benefits of woods and forests under any new ownership arrangements. Tree felling is controlled through the licensing system managed by the Forestry Commission; public rights of way and access will be unaffected; statutory protection for wildlife will remain in force and there will be grant incentives for new planting that can be applied for."

When the plans were first revealed, Green MP Caroline Lucas said: "If Government plans mean vast areas of valuable forest being sold to private developers, it will be unforgivable act of environmental vandalism." And Allan MacKenzie, secretary of the Forestry Commission Trade Unions, said: "We will oppose any land sale. Once we've sold it, it never comes back. "Once it is sold restrictions are placed on the land which means the public don't get the same access to the land and facilities that are provided by the public forest estate."

www.grough.co.uk

Madagascar: Million-dollar beds fuel Madagascar timber crisis

Soaring demand in China and political unrest in Madagascar are fuelling illegal logging for hardwoods in the African nation, a report concludes. Global Witness and the Environmental Investigation Agency (EIA) talked to loggers, government agencies and traders to compile their report. In China, they discovered beds on sale for \$1m, made from Madagascan wood. The report was launched at the UN Convention on Biological Diversity (CBD) meeting in Nagoya, Japan.

Madagascan politics is split between factions associated with ex-President Marc Ravalomana and the rival who ousted him in a 2009 coup, Andry Rajoelina. Conservation groups have previously warned that illegal extraction of timber and wildlife could flourish in this milieu, but the EIA/Global Witness is the first investigation to show the scale of the problem. "The pre-existing problem of illegal logging was turned into a flood of tree-cutting in national parks, and a flood of wood out of Madagascar to China and the West," said Alexander von Bismarck, EIA's executive director.

Felling the three species concerned - ebony, rosewood and pallsander - is forbidden, but the government has issued permits cheaply for traders to export stockpiles, which led to further logging. The two organisations were asked by Madagascar's national parks service to conduct the investigation. This official endorsement enabled them to access records in government departments, such as cargo manifests and trade data. But most of the details emerged through contact with the loggers and traders, who appeared - in written accounts and in video produced during the investigations - not at all concerned with

keeping their activities under wraps.

Instead they were keen to take the investigators, posing as buyers, into the heart of the logging zone. "Within one day we had the staff of the top boss in [the town of] Antalaha saying 'we'll take you into the National Park and show you where we cut wood for this German buyer'," Mr von Bismarck recounted. The result was a four-day trek into Masoala National Park, part of a Unesco World Heritage Site - one where logging is seen to have been so serious that it was recently placed on the World Heritage In Danger list.

EIA and Global Witness also went undercover in China and other countries, discussing with people in the furniture trade where the wood came from and how much it was worth. In China, its prime use is as reproduction furniture that can fetch extraordinary prices - such as the \$1m bed.

An estimated 98% of the wood ended up in China, with the remainder going to the US and EU nations. The recently-implemented Lacey Act, which makes an offence of importing illegally-logged timber, has reportedly deterred many buyers in the US. Last year it led to authorities mounting a raid on the world-famous Gibson guitar company over allegedly illegal Madagascan rosewood.

Speaking to BBC News at the CBD meeting here, Madagascar's director-general of forests, Julien Noel Rakotoarisoa, acknowledged the report broadly gave a "pretty accurate account" of the situation as it was. But, he said, things were changing. The last export permit was issued a year ago, and no more would be forthcoming.

A few months ago, he said, a consignment of 300 tonnes

of rosewood that had left Madagascar without going through customs was intercepted in the Comoros Islands nearby - a sign that illegal exports would be tackled. He appealed to China to block the imports. "If only they try to work with the international community [on this]," he said. "If they could... forbid importation, that would be a big step towards improving the situation."

This was a theme taken up by Alexander von Bismarck. "In 2009, China issued a code of conduct for timber companies

overseas," he said. "If there is one example of a code of conduct being broken, it is clearly the companies that are stealing Madagascar's wood." According to EIA's calculations, less than 1% of the wood's final value remains in Madagascar.

The Chinese delegation at the CBD meeting here did not respond to requests for comment.

www.bbc.co.uk

Canada - Don't count on forests to offset carbon emissions, study suggests

The trees and forests long thought to be a key weapon in the fight against rising carbon emissions may not be effective in long-term efforts to combat global warming. A new study from the University of Guelph found rising carbon levels failed to stimulate faster growth in 80 per cent of the world's trees, despite the fact that the gas typically accelerates growth in plants. Only 20 per cent of trees appeared to respond positively to higher carbon levels, prompting researchers to urge countries to rethink their long-term environmental policies.

Ze'ev Gedalof, Associate Professor of Geography at the University of Guelph and co-author of the study, said the results challenge long-held assumptions about forests' role in the fight to curb carbon emissions. Many forecast models are based on the principle that higher carbon levels will allow trees to thrive, he said, adding the findings expose a potential flaw in popular environmental policy. "Our research suggests that in fact is not going to happen, that we can't look to forests to achieve our Kyoto obligations, that we can't look to forests to offset emissions from burning fossil fuels," Gedalof said in a telephone interview. "There might be a very slight increase in the total rate of growth in trees, but they're not going to be

these vacuum cleaners that will magically suck up the CO2 that we're emitting."

Gedalof and study co-author Aaron Berg gathered their data by examining tree rings, or distinctive marks left on individual trees that allow researchers to see how much growth took place from year to year. Despite studying 86 types of trees over more than 2,300 sites on six continents, Gedalof said no clear patterns emerged. Most trees failed to respond to higher carbon dioxide levels regardless of their species or geographical location, he said, adding there were "positive responders" on all continents except Australia.

Some experts questioned the study's conclusions, saying the interplay between forests and carbon emissions is more complex than the data suggests. Werner Kurz, senior research scientist with Natural Resources Canada, said tree growth is not the only way forests absorb carbon from the atmosphere, adding biomass from dead wood and other organic matter also contribute to the process. "You don't need, necessarily, higher growth rates as observed in tree rings to get a bigger carbon sink," Kurz said. "So what I'm saying is that the study in itself is not necessarily conclusive that forests have not increased their sink strength."

news.guelphmercury.com

Papua New Guinea criticised on forest funds call

PAPUA NEW Guinea (PNG) "is in no fit state" to receive international funds under a global deal to stop deforestation and mitigate climate change because of continued logging and corruption, according to a new report by Greenpeace Asia-Pacific. The organisation presented the Asia-Pacific state with a "Golden Chainsaw" award for demanding fast-track funding from donor countries under the UN's Reduce Emissions from Deforestation and Degradation (REDD) programme, even though it continues to destroy rainforests.

Sam Moko, Greenpeace Asia-Pacific's PNG-born forests campaigner, accused his government of being "hungry for international forest protection funds, but [it] has no plans to stop destroying its rainforests or to reduce its greenhouse gas emissions". The report, *PNG Not Ready for REDD*, urges donor countries to put strict preconditions on any funds they give PNG, including a moratorium on all deforestation, the tackling of corruption and illegal logging, as well as the protecting of biodiversity and indigenous peoples. "With only weeks until the UN climate summit in Cancun, efforts to fast-track forest protection funds could come to nothing if PNG continues to use its position as co-chair of the negotiations to undermine

efforts to ensure the funds are spent effectively," it warned.

PNG's climate change envoy, Kevin Conrad, who famously spoke out against the US at the Bali climate summit in December 2007, leads the Coalition of Rainforest Nations. It is seeking a global deal that would give these countries billions of dollars to protect tropical forests. A letter in the current issue of *Nature* from seven leading scientists warns that PNG will lose all of its accessible forests, home to a vast array of species, within 20 years unless swift action is taken against poor governance, corruption and "corporate disregard". "Papua New Guinea has some of the world's most biologically and culturally rich forests, and they're vanishing before our eyes," according to the lead author, William Laurance of James Cook University in Cairns, Australia. "It looks like a tragedy in the making."

The letter says logging in PNG is being driven largely by Malaysian firms, with raw logs shipped to China for processing into finished products, such as plywood, which are eventually exported to feed the demand of rich nations for cheap wood products.

www.irishtimes.com

Europe: Trees may spell trouble for wind power

Could a greener world be bad news for green energy? Wind speeds are falling across much of the northern hemisphere, and this could mean less electricity is available from wind turbines. An increase in the amount of vegetation may be to blame.

Robert Vautard at the Laboratory of Climate and Environmental Sciences (LSCE) in Gif-sur-Yvette, France, and colleagues analysed surface wind speed data from 822 sites around the world, covering the last 30 years. They found that surface wind speeds have declined by 5 to 15 per cent across much of the northern hemisphere over this period. The

slowing has been more marked for winds of over 10 metres per second than for lighter winds.

When Vautard and his team modelled the effect of vegetation increases across Europe and Asia over the period, they found this could explain most of the drop-off. "Large parts of Earth are becoming greener, partly due to efforts in Europe to maintain forests," says Jean-Noel Thépaut of the European Centre for Medium-Range Weather Forecasts in Reading, UK, who took part in the research.

www.newscientist.com

Malaysia: 50km logjam on the Rajang river

Logs and debris, stretching for 50km on the Rajang river, reached Sibu town leaving many people shocked by the scale of what is turning out to be an environmental disaster. This is unprecedented and beyond imagination. Environment and Public Health Minister Datuk Seri Wong Soon Koh said after assessing the situation at the Express Passenger Boat Terminal in the morning. According to a statement from the Natural Resources and Environment Board, the source of these logs and debris were from the Baleh River and its tributaries above Kapit.

Several days of heavy rain earlier this week in upper Baleh had caused a massive landslide which brought down the logs and debris into the rivers. The high water level and swift current in Baleh River and its tributaries also washed the logs and debris along their banks. Wong said it was a

serious natural disaster which had caught both the public and government off guard. It was estimated by a sawmill manager that the volume of the logs and debris would be more than 300,000m³.

The situation was worse around noon when the whole area at the confluence of the Rajang and Igan rivers was completely logjammed. Most of the logs and debris flowed down the Rajang while some of them flowed to the Igan. The Malay villages which were built on stilts on the right bank of the Igan were fortunate to escape calamity as the logs and debris flowed near the opposite bank. Meanwhile, Land Development Minister Datuk Seri James Masing blamed unscrupulous timber companies for the disaster.

thestar.com.my

Global: \$5,000,000,000,000 is the cost each year of vanishing rainforest

British scientific experts have made a major breakthrough in the fight to save the natural world from destruction, leading to an international effort to safeguard a global system worth at least \$5 trillion a year to mankind. Groundbreaking new research by a former banker, Pavan Sukhdev, to place a price tag on the worldwide network of environmental assets has triggered an international race to halt the destruction of rainforests, wetlands and coral reefs.

With experts warning that the battle to stem the loss of biodiversity is two decades behind the climate change agenda, the United Nations, the World Bank and ministers from almost every government insist no country can afford to believe it will be unaffected by the alarming rate at which

species are disappearing.

The UK Government is championing a new system to identify the financial value of natural resources, and the potential hit to national economies if they are lost. The Economics of Ecosystems and Biodiversity (TeEB) project has begun to calculate the global economic costs of biodiversity loss. Initial results paint a startling picture. The loss of biodiversity through deforestation alone will cost the global economy up to \$4.5trn (£2.8trn) each year – \$650 for every person on the planet, and just a fraction of the total damage being wrought by overdevelopment, intensive farming and climate change.

www.independent.co.uk

Global: Clearing tropical forests is a lose-lose

Clearing tropical forests for farmland is bad for the climate – no surprises there. But now we've learned that it's also an inefficient way to feed people. Paul West of the University of Wisconsin-Madison and colleagues worked out the potential

yields of 175 different crops if they were planted in different parts of the world. Then they estimated how much carbon would be released into the atmosphere by clearing these areas of wild plants.

"In the tropics, clearing a hectare of land releases twice as

much carbon as in the temperate zones, and only produces half as much food," says West. "If we want to balance increasing food production and decreasing carbon emissions, we should emphasise increasing crop production on existing lands."

"Continued expansion of croplands into tropical forests results in a lose-lose situation for growers and our climate system," agrees Gregory Asner of Stanford University in California,

who was not involved in the study. However, he warns that boosting yields on existing lands can cause other problems, such as nitrogen pollution from fertiliser run-off. "We need to take such unintended consequences into consideration as well," he says.

www.newscientist.com

Indonesia: Businesses warm to Indonesia's moratorium on forest clearing

The Indonesian government is imposing a moratorium on forest clearing in return for \$1 billion grant from Norway to fund projects to curtail deforestation and land degradation. Environmental groups and some businesses welcome the freeze. Starting in January, Indonesia will bar companies from clearing native forest and peat lands for two years. Timber, pulp and paper operations, and palm oil plantations will be banned from expanding onto new concessions. The decision initially raised concerns that it would set off a rush of land acquisitions or hurt the economy. But now many business people and environmentalists say timber industries can still develop land for which they already hold licenses, and they will be able to expand into areas that have been degraded by erosion or previous uses. The timber and palm oil industries contribute to the destruction of around two-million hectares of Indonesian forest each year, the leading cause of the country's greenhouse gas emissions. Environmental groups consider the freeze an opportunity for businesses to improve their forest management. Bustar Maitar works with Greenpeace:

"This moratorium also is the opportunity for the industry to improve the productivity of their plantations," said Bustar Maitar. "The yield of production of Indonesian plantations is very low compared with Malaysian plantations." Although Indonesia produces more palm oil than neighboring Malaysia, it yields less per hectare. If companies become more efficient, Maitar says they could expand production without destroying the forest. Some environmental groups, however, say stopping plantations from expanding is unrealistic. They say it is more important to set out clear regulations on forest ownership and land planning. The government says around 40 million hectares of degraded land could be used for palm plantations, but it has not decided on a formal definition of what degraded land is or where it is located.

Indonesia pledged to reduce its carbon emissions by 26 percent by 2020. Much of that reduction can come from protecting its forests and peat land. They lock in carbon, but release it when they are used for planting.

www.voanews.com

Indonesia implements export ban on non-certified timber

Indonesia has begun implementing a ban on exports of illegally harvested timber and wood products, reports *The Jakarta Post*.

The Timber Legality Verification System (SVLK) requires exporters to obtain certification to demonstrate the timber has been sustainably and legally sourced. The move comes after the U.S. and E.U. passed regulations, the Lacey Act and FLEG-T, respectively, prohibiting import and sale of illegally logged wood. China, a major importer of legal and illegal timber, has also indicated it is weighing tighter control on wood.

Hadi Daryanto, director general of forest product

development at the Forestry Ministry, told *The Jakarta Post* that any non-certified timber would be banned from export.

"If a source of timber is untraceable, it will be categorized as illegal and byproducts will be ineligible for export to markets in the EU," Hadi was quoted as saying.

It wasn't immediately clear whether questionably-sourced timber could be sold domestically.

Illegal logging remains a major problem in Indonesia, costing the country hundreds of millions to billions of dollars in lost tax revenue.

mongabay.com

Global: Don't ignore biodiversity when conserving carbon stocks

A focus on conservation of high carbon landscapes via the proposed REDD mechanism could come at a detriment to biodiversity, argues a new paper published in *Carbon Balance and Management*. The research, led by Gary Paoli of Daemeter Consulting in Indonesia, analyzed other studies on biodiversity, vegetation types, and carbon emissions. It found that carbon-dense peat swamps, likely a focal point for REDD programs in Indonesia, "do not coincide with areas supporting the highest concentrations of threatened biodiversity," according to a statement from the University of Kent. "The highest carbon savings are not necessarily located in places with the highest levels of species diversity," said Paoli, in a statement.

Lowland forests, among the most threatened and biodiverse ecosystems in Indonesia, hold only a fraction of the carbon found in peat forests, which store large amounts of carbon in their soils. "Peat swamp forests attract the bulk of REDD funds - they hold around 8 times more carbon than other lowland forests, and provide habitat for high profile species such as orang-utan, tigers and Asian elephants," said Matthew Struebig of the University of Kent. "However, when we look

at overall numbers of plants, mammals and birds, especially species of greatest conservation concern, we find that peat forests typically support lower densities and fewer species than other lowland forest types."

To avoid REDD diverting conservation funds away from endangered species and landscapes, the authors recommend governments set specific ecosystem and biodiversity conservation targets for all native ecosystem types. The authors suggest REDD could provide co-financing to "redefine acceptable land-use practices within priority areas needed to fill biodiversity conservation gaps."

"If such a national planning process were made a prerequisite for multi-lateral and bi-lateral REDD funding, and REDD payments linked not only to verified emission reductions but also biodiversity co-benefits, then net positive impacts on biodiversity would be ensured, and the negative potential impacts we describe would be reduced," the authors conclude.

mongabay.com

Indonesia's volcano eruption triggers forest damage of \$611 mln

Loss value of forest damage due to recent volcano eruption of Mount Merapi in Indonesia's Yogyakarta and Central Java province reached 5.5 trillion rupiah (about 611 million U.S. dollars), consisted of ruined 1.12 million of trees in 2,800 hectares of forest areas, Kompas daily quoted an official. "It looks like the forest areas were just bombed," said Chief of Mount Merapi National Park Tri Prasetyo in Magelang regency of Central Java province. The national park has total forest width of 6,410 hectares spread in Magelang, Sleman, Boyolali and Klaten regencies where the worst damage was occurred

in Sleman with total loss of 3.5 trillion rupiah (388.8 million dollars). The loss was merely calculated from the value of each dead and damaged tree, which was 2 million rupiah (222.2 dollar). However, if the damage on ecosystem as conservation land, water and oxygen supplier and habitat for flora and fauna was calculated, the loss was priceless. "It needs hundreds of year to recover the forest areas as before," he said.

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