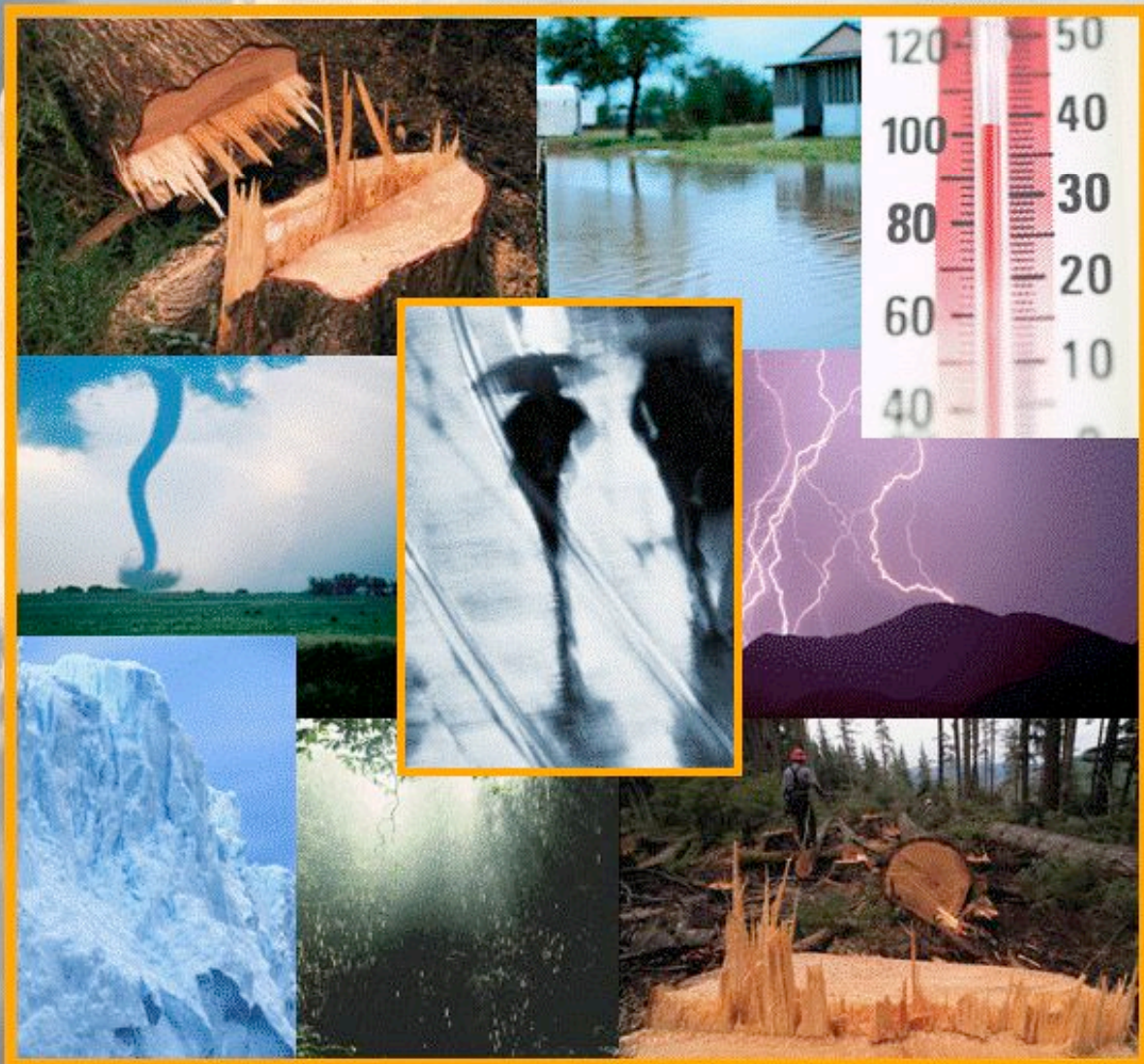


# Executive Director's Briefing on Avoided Deforestation and Carbon Markets



# Briefing on Avoided Deforestation and Carbon

## POLITICAL TIMING IS VERY FAVOURABLE

- Climate Change (CC) is the current “big political” ticket.
- Upcoming events will focus on CC: 2007-G8: Germany, UNFCCC COP13:Bali; 2008 - G8:Japan, CBD COP9:Bonn.
- Stern Review states that improving incentives for forest conservation is “a highly cost effective way of reducing greenhouse gas emissions” and calls for “large scale pilot schemes to explore effective approaches to combining national action and international support”.
- This has created a new focus on forests in the context of climate change which up to now has been dominated by energy interests. The increased receptiveness of governments stimulated by decisions to move from dependence upon fossil fuels to bio-



fuels and other alternative energy sources is helping to create an enabling policy environment to take new action.

- The next 18 months are crucial and will provide a unique opportunity to raise forests high on the political agenda and develop action plans globally in the context of CC. UNEP can play a strong facilitating role in this new focus. It is likely that this new focus will be received positively by both developed as well as developing countries.

## FORESTS AND PEATLANDS IN THE CLIMATE CHANGE DEBATE

- 18-20% of global GHG emissions are from deforestation. Unless mitigated, these carbon emissions, mainly from poor countries, could negate much of the CO<sub>2</sub> savings planned under the first commitment period of the Kyoto protocol.
- 80-90% of the earth's above ground carbon biomass is in forests. Tropical forests store 150 - 350 tonnes of carbon/ha. Burning them contributes huge quantities of CO<sub>2</sub> emissions (400 million tonnes/yr from Brazil and 350 million tonnes/yr. from Indonesia).
- Peatlands cover just 3% of the world land area. Tropical peat forests store carbon at 3000 - 5000 tonnes/ha. Clearance and drainage of these peat swamps is releasing enormous quantities of CO<sub>2</sub> from oxidation (632 million tonnes from SE Asia/year). If this and CO<sub>2</sub> from forest burning continues to be released to the atmosphere through unsustainable land management practices, it will greatly accelerate global climate change.
- By contrast, aircraft emissions are just 2-3% of global GHG emissions. Without prompt action emissions from



deforestation between 2008-2012 are expected to be greater than the total of aviation emissions from the invention of the flying machine until at least 2025. (Accumulative total 40 GT of CO<sub>2</sub>, which will raise atmospheric levels of CO<sub>2</sub> by ~2ppm).

- Under Kyoto CDM, less than 1% of carbon market investments are in reforestation projects. Kyoto CDM has not been effective in stimulating the sequestration of carbon by new plantations, (reforestation) because of the high transaction costs and highly complicated procedures towards certification which can be as much as \$250,000 per project. Conservation of

carbon in old growth tropical forests is excluded from the Kyoto CDM and the European ETS but not the voluntary carbon trading market.

- A 2007 McKinsey report costing alternative strategies that deliver sufficient "abatement" to keep CO2 levels below 450 ppm at a cost of no more than 40 euros per tonne - states that the largest single category to achieve this is forestry ( 35% ) split between conservation and new

planting; manufacturing industry is 28%; power is 25%, transport 6% .

- This backs up the Stern Report statement that it may be cheaper and more efficient to reduce emissions from forests, than from other sources of energy based mitigation. Governments must broaden their focus from industrial and energy sourced emissions reductions to include forests.

## THIS NOT JUST ABOUT CARBON!

- Forests are like giant utilities providing ecosystem services to the world which we all benefit from but we don't pay for. These services are not yet accounted for in the markets.
- These services are of great value and include water storage, rainfall generation, climate buffering, biodiversity, soil stabilization, eco-tourism, etc.
- Tropical forest canopies contain 40% of terrestrial biodiversity and are a primary interface between life and the

atmosphere. Evapo-transpiration cools the air which stabilizes regional and local climate; chemicals (volatile organic compounds) released by canopies to the air generate rainfall; Amazonian forests store 3 trillion tons of water; 70% of Brazil's electricity depends on rain for its hydropower.

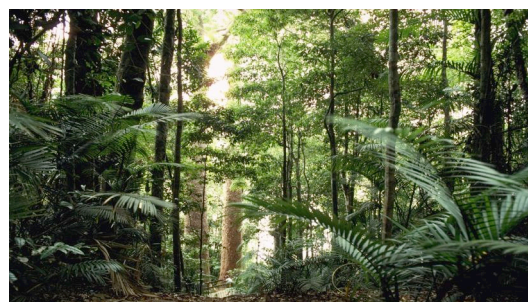
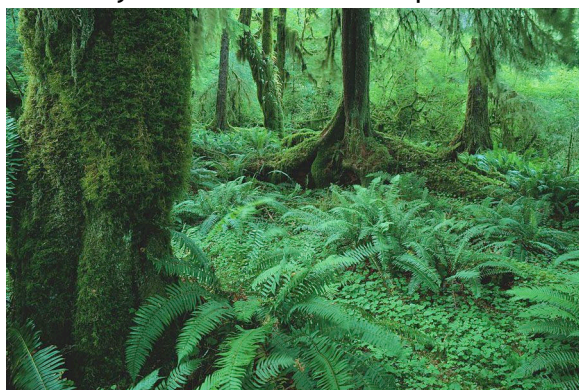
- If deforestation is not curbed, these services will be lost to humanity with severe impacts on food security, energy security and environmental security - at local to global scales.

## CHANGING ECONOMIC INCENTIVES TO REDUCE DEFORESTATION THROUGH VOLUNTARY MARKETS

- The simple problem is that the economic incentives to convert forests are greater than the incentives to conserve or wisely manage them. Kyoto mainly targets energy sector interventions. Emissions reductions from green carbon sources and stimulating new markets in ecosystem services needs to get onto the agenda.
- Climate change offers a new opportunity to cut emissions from forests and also increase economic incentives for the storage of carbon, maintenance biodiversity and trading in the ecosystem services forests provide.

- There are three potential mechanisms for this explained below:
  1. **Carbon credits** from avoided deforestation.
  2. **Payments for carbon stocks** in standing forest biomass and soil, including peat.
  3. **Payments for ecosystem services.** All of these are presently outside the Kyoto process and could become tradable commodities in the future.

- **Avoided Deforestation:** The concept of 'avoided deforestation



credits' (also called 'compensated reduction') was presented by PNG at UNFCCC COP 11 Dec 2005 and was later supported by Brazil at COP 12 in Nairobi Nov 2006. This focuses on reducing emissions through trading carbon credits which would be earned by reducing deforestation below an agreed (certified) baseline. Brazil has proposed an international fund to pay for these credits.

- **Carbon Stocks:** It is possible that markets may develop in the future for carbon stocks in forests. These can be of especially high value in peat swamp forests where as much as 3000-6000 tons C / hectare may be stored.
- **Payments for Ecosystem Services:** Markets for ecosystem services are in their infancy due to difficulties of economically evaluating them but also will develop in the future. Voluntary sector markets are already developing

## SUGGESTED GLOBAL PLAN OF ACTION FACILITATED BY GCP WITH UNEP SUPPORT

GCP is moving to expand its role as a facilitator working with Governments, Scientists, United Nations Environment Programme, World Bank, NGOs and other bodies to establish the following activities:

1. **Building awareness of economic advantages and informing policy development agenda** concerning 'living carbon' mitigation mechanisms among Governments and Private sector. Dissemination of best practices. *(VivoCarbon Campaign)*
2. **Scientific evaluation of forest ecosystem services** to humanity and their economic potential, focusing on carbon but also the interactions between forests and the atmosphere. *(GCP/UNEP proposed Whole Forest Observatory network with Brazil, Ghana, Madagascar, India, Malaysia and China)*
3. **Design and testing of new innovative market mechanisms** to sustain the financial support for payment for ecosystem services, including carbon trading. Establishment of global monitoring systems to assess compliance and maintenance of the ecosystem services and progress towards MDG goals. *(Amazonas Initiative with Government of Amazonas State, Brazil)*
4. **Scientific assessment and criteria for sustainable biofuels.** Replacing forests with biofuels makes no sense if the emissions released are greater than those saved. Independent assessments, and best practice advice is needed including models of raised economic incentives for restoring degraded land with biofuels.

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*(Potential joint project with Global Environment Centre and Wetlands International, Malaysia/Indonesia)*

5. **Creating the enabling environment in policy and capacity building** on the mechanisms and technologies to encourage private sector and Governmental investments in the emergence of a new voluntary carbon market now and post 2012, regulated markets. *(Need to engage business in carbon offsets and markets which also protect forests)*
6. **Large scale pilot projects** to demonstrate action that reduces C emissions, maintains biodiversity and improves local livelihoods. Such actions to combine **policy, science, economy and livelihoods** through avoided deforestation carbon credits, carbon credits for land rehabilitation through appropriate reforestation, evaluation and marketing of ecosystem services, plus biofuels on degraded lands. *(If Amazonas Initiative is effective, it will be expanded in Brazil and into SE Asia)*

The United Nations Environment Programme (UNEP) has a comparative advantage in this sector to work towards the above key steps at the international level. The GCP is working with UNEP to combine their technical and organizational strength with a 'One-UNEP' cross-cutting approach to avoided deforestation, scientific assessments, certification and valuation work, as well as policy support which will create the enabling environment for global action.

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