



AGRICULTURE IN A CHANGING CLIMATE
3 September 2008, Parliament House, Canberra

Ms Frances Seymour, Director General, CIFOR
**Forests & Climate Change:
Cause, Casualty and the Opportunity to Capture Co-Benefits**

“Over the last two years, the global public has become increasingly aware of the threat of climate change in general, and the role of deforestation in exacerbating that threat in particular. Nevertheless, the linkages between forests and climate change - and the magnitude of the challenges to addressing them - remain underappreciated.”

Frances Seymour, has been at the forefront of international discussions around on forests and climate change, including negotiations with the Conference of the Parties to the Framework Convention on Climate Change, Asia Forestry Week and the upcoming Forest Day 2 - UNFCCC COP 14 Parallel Event.

DEFORESTATION, FOREST DEGRADATION & CLIMATE CHANGE MITIGATION

- Deforestation occurred at a rate of around 13m ha per year globally, between 2000-2005.
- An estimated 1.7 billion tons of carbon is released annually due to land use change (primarily tropical deforestation), which represents 20%–25% of all global carbon emissions. More than the transport sector (IPCC 2001).
- Global carbon stocks in peat are particularly large – as carbon is stored up to 6m deep in the ground - so emissions deriving from the burning and draining of peatlands for land conversion are disproportionately significant.
- It would take more than 840 years to repay the “carbon debt” from converting Indonesia’s carbon-rich peatland forests to oil palm plantations. (Fargione et al., 2008)
- Emissions from Indonesia’s forest fires are also globally significant. For example, the 1997-98 fires in Borneo resulted in half of the global CO₂ annual growth (Herawati et al. 2006).
- *Direct drivers* of deforestation vary by country, but include conversion to commercial or subsistence agriculture, infrastructure development, and unsustainable logging.
- *Underlying causes* of deforestation and degradation revolve around market failures, governance failures and misguided policies.

The Crawford Fund wishes to thank the sponsors for this event, including:

AusAID – the Australian Agency for International Development; Australian Centre for International Agricultural Research; Australian Government Department of Agriculture, Fisheries and Forestry; Australian Government Department of Climate Change; CAB International; Centre for International Forestry Research; International Maize and Wheat Improvement Centre (CIMMYT); Consultative Group on International Agricultural Research; CSIRO Climate Adaptation National Research Flagship; Grains Research and Development Corporation; Industrial Research Limited; Rural Industries Research and Development Corporation; South Australian Research and Development Institute; The World Bank.

WHY FORESTS MATTER

- *Forests matter for biodiversity.* They provide habitats for around two-thirds of all species on earth. For example, the island of Borneo makes up less than 1% of the earth's land area, but contains 6% of the world's flowering plant species, bird species and mammal species.
- *Forest biodiversity matters to local people.* For example, a CIFOR study in East Kalimantan found 15,430 plant records, containing 2,100 species. 1,449 of these species had a total of 3,642 specific uses, 119 of them non-substitutable.
- *Forests matter for local livelihoods.* An estimated 50-60 million people live on forest lands, while 90% of the 1.2 billion people worldwide living in poverty depend on forest resources. In particular, forests provide safety nets for vulnerable individuals and communities. For example, bushmeat provides an important source of protein for AIDS orphans in sub-Saharan Africa.

IMPACT OF CLIMATE CHANGE ON FORESTS

- Forests are vulnerable to increases in temperature and variability, and damaged or degraded forests are especially vulnerable.
- Climate change is likely to bring a higher probability of high intensity rainfall events, which in turn will increase the risk of landslides, as well as a higher likelihood of drought, which will increase the risk and impact of forest fires.
- Climate change impacts on forests may include loss of biodiversity and dominance of invasive species.

CLIMATE CHANGE ADAPTATION

- Climate change adaptation strategies must be mainstreamed into forest management, and forests must be mainstreamed into climate change adaptation strategies.
- Some recommendations include: the use of reduced impact logging to maintain ecosystem integrity; fire prevention and management; silvicultural options aimed at facilitating genetic adaptation; and improved planning and operational practices in concession areas.
- Forests are also important to climate change adaptation across other sectors. For example, the hydrological services provided by forests will be increasingly important to municipal drinking water systems, agricultural water supplies, and the production of hydroelectric power as rainfall patterns change.

REDUCING EMISSIONS FROM DEFORESTATION & FOREST DEGRADATION (REDD)

- The Stern Review found "avoided deforestation" to be among the cheapest options for emissions mitigation
- The potential to fight deforestation by compensating forest stewards for protecting the carbon-storage capacity of forests through what is now a multi-billion dollar global market for carbon credit is very promising.
- If implemented properly, such schemes would have the added benefit of conserving biodiversity, protecting the environmental services of forests, and improving the livelihoods of local, forest-dwelling communities.
- The danger is that policy-makers will fail to appreciate that forest destruction is caused by an incredibly wide variety of political, economic, and other factors that originate outside the forestry sector, and require different solutions.

- For example, the perverse subsidies that provide incentives for clearing forest must be removed and efforts to secure property rights for local forest communities should be encouraged.
- We need to temper the desire for maximum reduction in forest-based carbon emissions with regard for the legitimate rights of forest communities, and at times there will have to be trade-offs between reducing carbon emissions and reducing poverty.
- The Bali Road Map has identified REDD for inclusion in any successor to the Kyoto Protocol, and demonstration activities are ongoing to help inform design and implementation.
- We must also be sure to address the issue of degradation, rather than just deforestation (ie. the second D in REDD), by encouraging mixed agroforestry systems, rather than wholesale conversion of forests to agriculture, and improved logging practices, rather than destructive logging or conversion.

CIFOR & AUSTRALIA

- Australia has had a special relationship with CIFOR from its earliest beginnings, as the Australian Centre for International Agricultural Research (ACIAR) played a key role in CIFOR's establishment in 1993. In the intervening years, ACIAR has provided significant funding for a range of research projects.
- As part of its International Forest Carbon Initiative, the Government of Australia has recently provided CIFOR with \$3 million to fund research on REDD in collaboration with a range of partners around the world. The research will identify:
 - cost efficient methods for determining REDD baselines and for monitoring changes in carbon stocks;
 - improved policies, institutional arrangements and reward mechanisms for pro-poor REDD schemes; and
 - appropriate REDD architecture, including consistent policies linking local contexts to national and global regimes.
- In Indonesia, CIFOR is working with researchers at the Australian National University (ANU) to help facilitate the implementation of REDD at the provincial and district levels, in Riau and Papua. The ACIAR-funded research is focused on the capture and equitable distribution of financial benefits from the prospective international carbon market.

Conference info and media materials at <http://www.crawfordfund.org/events/conference08media.htm> or contact Cathy Reade on 0413 575 934. A range of press releases will be issued for the event and it is possible to prearrange interviews. Keynote speakers include Ms Katherine Sierra, Vice President for Sustainable Development, World Bank; and Prof Ross Garnaut, author of the Garnaut Climate Change Review.