

# **Biodiversity Summit 2009: Biodiversity for Climate Protection**

Saturday 8 August in Canberra.  
Organised by Lawyers for Forests and the Green Institute

Around 90 people, from overseas and around Australia, attended this important summit. The theme was nature as a climate solution, not a casualty.

## **1. Understanding biodiversity and climate:**

### **a) The global carbon cycle: Professor Brendan Mackey provided a detailed outline, emphasising the importance of terrestrial ecosystems in this cycle, especially the role of natural forests:**

#### **Overall carbon cycle**

- Carbon on earth came from super novas
- The same amount of carbon has stayed on the planet since then
- It is transported around the earth as either a solid, liquid or gas by the carbon cycle
- Carbon is in the atmosphere as carbon dioxide
- On the ground (terrestrial carbon) it is converted to plant tissue biomass which can become fossil fuel in rocks over time
- There are two sub cycles to the carbon cycle
- Uptake and release by terrestrial biomass
- Uptake and release by the ocean

#### **Uptake and release by the ocean**

- Within the ocean there is a mixing of shallow and deep ocean.
- The carbon absorbed by the ocean is stored by ocean biota and it ends up on the ocean bed in the sediments
- Over time (25 -50 years) 60% of this carbon is released back into the atmosphere as carbon dioxide.

#### **Uptake and release by terrestrial biomass**

- terrestrial ecosystems provide major reservoirs of carbon
- There is still 2400 gigatonnes (giga = 9 zeros) of carbon stored in our terrestrial ecosystems that we could put back into the atmosphere
- The effectiveness of terrestrial ecosystems as a carbon sink relies on the transfer of the carbon into a form that has a long residence time ie wood or modified soil organic matter
- There is a large difference in the carbon longevity of ecosystems (100 years plus) and pulp production (1 to 3 years)
- Taking carbon out of the atmosphere for a few years has no effect on climate change
- The logging cycle is down to 20 years
- There are 3 carbon debts from logging
  - the standing stock of carbon is lost
  - the magnitude of carbon stored is less than it was originally
  - we burn fossil fuels to do the logging

### **The solution**

- burning fossil fuels AND removing or degrading terrestrial ecosystems are increasing carbon dioxide emissions into the atmosphere
- avoiding emissions from terrestrial ecosystems and restoring depleted carbon stocks is a necessary part of the climate solution.
- ecological restoration allows depleted carbon stocks to permanently regrow to repay our land use carbon debt.
- protecting and restoring these carbon stocks should be “incentivised” by payments for ecosystem services and land stewardship rather than through the cap and trade scheme

**b) Deforestation and climate: Dr Rachel Warren (University of East Anglia, UK, lead author of the Intergovernmental Panel on Climate change (IPCC) Fourth Report, specialising in long term aspects of mitigation and climate impacts upon natural ecosystems).**

Dr Warren explained how REDD is essential to achieving an acceptable carbon dioxide stabilisation target:

- science shows 2C max rise in global temperature is our best shot
- we have a 67% chance of achieving this
- requires a limit of 450 ppm CO<sub>2</sub> equivalents
- Acting on fossil fuels alone won't achieve this, must avoid deforestation
- Deforestation means we lose not only the carbon stock but the carbon sink as well,
- Copenhagen will focus on REDD for tropical forests in developing countries
- Politicians are aware of the message but none have expressed an intention to act
- Role of natural forests in Australia has been put on hold. It is yet to be worked through

## **2. Counting carbon**

**a) The science of measurement: Dr Heather Keith outlined the methodology use to measure the amount of carbon stored (the carbon stock) in our SE native forests:**

- The correct method of representation of the data needs properly to be selected. This is because large old trees can have a lot of decay and damage in their centres.
- With regards to the national carbon accounting system there are gaps in data relating to the biomass of trees, proportion of decay in trees, wood density of old trees and land use history.
- Implications for carbon accounting include underestimation of the carbon stock in forest biomass, a limited ability to account for human land use activity and undervaluing the mitigation potential of forests

**b) The carbon accounting system: Margaret Blakers outlined the state of play with the Australian system:**

- we need a lot more attention to the way carbon accounting is done in Australia and internationally
- the system needs to be more accurate
- the amount of carbon already stored in our native forests and their potential to continue to store carbon are being underestimated
- we must separate biocarbon from fossil carbon in the accounts
- biocarbon has two strands:
  - green carbon – in natural ecosystems where photosynthesis provides a permanent store if ecosystems are left undisturbed
  - production carbon - in agriculture crops and plantations where the store is temporary
- Australian Bureau of Statistics should compile accurate carbon accounts in place of the poor job done by ABARE. These accounts would be in the portfolio of Treasury

### 3. The legislative framework

**a) The Environment Protection and Biodiversity Conservation Act (EPBC) and the independent review: Andrew Walker** (Lawyers for Forests) made the following points:

- EPBC is the key legislation for biodiversity
- forests are the key habitat for Australian biodiversity
- major problem is that forests subject to Regional Forest Agreements (RFAs) are excluded from protection under the EPBC Act
- it has been shown that RFAs are not ensuring protection of listed threatened species and are therefore not protecting biodiversity
- an independent review of the Act has stopped short of recommending removal of the RFA exemption even though it was decided that:
  - it is not possible to judge the outcomes of the RFAs and whether they are effective
  - compliance and enforcement is difficult
  - there is no provision for adaptive management

**b) MRET biomass and the CPRS: Vanessa Bleyer** (Lawyers for forests) referred to the importance of using the law to protect biodiversity.

- Mandatory Renewable Energy Target Scheme (MRET):
  - native forests can be burned to produce electricity
  - energy production is not part of the Forestry Act
  - burning of native forest waste is considered to be renewable energy source
  - energy production is not part of the EPBC Act
  - there is some legal recourse eg the regulator is able to prosecute fraudulent generators and a judicial review could be requested
- CPRS
  - Gives carbon credits for planting trees but there is no liability for logging forests
  - Burning of native forest waste for electricity production can also be rewarded by a grant of carbon credits
  - Lobbying is important

#### **4. Deforestation, degradation and climate policy: Virginia Young outlined the state of play on the international scene:**

- December 2007 in Bali was the first time Reducing Emissions from Deforestation and Degradation (REDD) was discussed
- The UNFCCC definition of a forest is not adequate to achieve an accurate picture
- The key idea at present is payment to developing countries to offset emissions from developed countries
- The Ecosystem Climate Alliance (ECA) a global campaigner has the following priorities:
  - Protection of primary forests
  - Restoration of disturbed forests
  - Improved management to avoid the degradation of terrestrial carbon stores
- We can act now with natural ecosystems, accurate measurement and accurate carbon accounting

#### **Solutions agreed to by participants:**

- Act now with natural ecosystems
- Protect primary forests
- Restore disturbed forests
- Concentrate on forest management for carbon storage
- Use an accurate carbon accounting system
- Develop a complementary (to the CPRS) measures regime to deal with ecological restoration which should include:
  - Transitioning out of logging native forests
  - Protection of areas for carbon storage and emissions reduction
  - Restoration of cool season burning after the wet for northern savannahs
  - Cessation of tree clearing on private and leasehold land
  - Restoration of degraded ecological systems

#### **Messages to take to the community and decision makers**

- Make people understand that destroying nature (logging forests and clearing bush) is an important part of the problem of climate change as well as burning fossil fuels
- We can't trade one off against the other, we need to use both pathways
- We can achieve immediate and significant cuts in emissions through protecting nature, including our forests and woodlands, and restoring our natural ecosystems
- This would give big industrial polluters time to adjust to a carbon neutral future
- The SAFEST carbon store is in a living ecosystem
- If we don't act NOW it will be too late for future generations to do anything
- Protect ecosystems using methods other than carbon trading
- We should carry out the same actions in Australia that we are prescribing for developing countries