

Submission to the NSW Legislative Assembly Standing Committee on Natural Resource Management (Climate Change)- Emissions Trading Scheme Inquiry

a) Costs and benefits for natural resource managers of national and international greenhouse gas emission trading schemes

A carbon Emissions Trading Scheme (ETS) offers considerable opportunities for improved natural resource management provided policies are introduced to minimise the risk of perverse outcomes.

Despite some local gains, previous private and government investment has largely failed to achieve meaningful landscape-scale natural resource outcomes. This view is supported by a several major national studies:

- “Despite large investments and some promising responses, biodiversity in Australia continues to decline.”¹
- “There is little evidence as yet that the programs are adequately achieving the anticipated national outcomes or giving sufficient attention to the ‘radically altered and degraded Australian landscape’ highlighted in the 1996 *Australia: State of the Environment Report*.”²
- “Each of the case studies involved millions of dollars of devolved grants or commercial investment in hardwood plantations. At the landscape scale, biodiversity benefits are likely to be modest. These case studies illustrate that even with a commercial driver reconstructing native vegetation is a slow and expensive process. Reconstruction proceeds in bits and pieces - a few shelter belts, riparian strips and portions of remnants are fenced at any one time, by any one landholder. The reality documented by these case studies is also less than ideal for biodiversity. Many wildlife species are declining, native plants are failing to regenerate and ecosystem processes are failing; salinity and soil acidity are simply symptoms of biodiversity loss. Enhancing biodiversity in agricultural landscapes has finally started, but it proceeds in little chunks scattered across broad landscapes.”³

The amount of native vegetation in the landscape is the most significant factor that determines the persistence of biodiversity and landscape function. It is also a significant factor in river health. Coupled with these benefits, native biodiverse plantations have the capacity to sequester and store carbon and thus can play a role as a carbon sink in an ETS.

Biodiverse revegetation has multiple environmental benefits including:

- Improved fauna habitat and connectivity and
- Improved landscape function (nutrient cycling, hydrology, reduced salinity).

An ETS is currently the only funding source that can deliver positive landscape-scale natural resource outcomes.

¹ Theme commentary Steven Cork, Land & Water Australia et al. prepared for the 2006 Australian State of the Environment Committee, 2006

² The Auditor-General Audit Report No.21 2007–08 Performance Audit Regional Delivery Model for the Natural Heritage Trust and the National Action Plan for Salinity and Water Quality

³ Case Study Applications of a Draft Framework for Assessing the Biodiversity Benefits of Vegetation Enhancement Activities A report for: Australian Department of the Environment and Heritage and the Biodiversity Benefits Task Group David Freudenberger and Judith Harvey CSIRO Sustainable Ecosystems.

With current and impending climate change there is a real need to accelerate investment in natural resource management with a focus of building landscape resilience and facilitating adaptation especially in the areas of:

- Core area conservation and management,
- Invasive species management,
- Improved landscape function and
- Improved connectivity between core areas.

Biodiverse revegetation supports the first of these goals and delivers the final three of these four key adaptation/resilience actions.

Greening Australia is looking to the carbon ETS to drive investment in the revegetation of native plant communities in selected locations across Australia and we are currently going through the Greenhouse Friendly accreditation process.

In NSW we are developing programs to expand native vegetation cover in several regions where grassy woodland systems are prevalent including the Southern Highlands, Hunter Valley, Capertee Valley and the Namoi/Brigalow Regions. These regions have been selected for their high biodiversity values and the urgent need for biodiverse revegetation.

Currently the policy settings favour bio-sequestration using single species plantations such as Radiata pine, native forestry species or genetically improved mallee species. This form of bio-sequestration is currently favoured because:

- There are established industries (i.e. forestry) that have processes in place to plant these species,
- These species maximise carbon yield and
- There is considerable data to support carbon yield modelling and measurement for these species.

If single species plantations were rolled out at landscape scale then there would be a range of negative impacts that would need to be considered, especially impacts to hydrology. Dense single species plantations may draw excessive volumes of water and limit runoff which could have a detrimental impact on river flows. This approach would also have limited biodiversity benefits.

To maximise the roll out of biodiverse plantations (i.e. a broad number of local plant species selected from the local ecosystem) Greening Australia recommends the following policies and programs:

- Investment in carbon measurement and modelling of natural woodland and forest systems of NSW.
- A vegetation connectivity analysis of NSW to determine the best places for biodiverse revegetation in light of impending climate change - DECC's 'Terrestrial Fauna of the Greater Southern Sydney Region' is an excellent example of a report that provides report that provides this sort of information and should be replicated across a greater number of regions.
- Investigations into the best locations for biodiverse revegetation in terms of hydrology and salinity - This investigation should seek to find areas where this biodiverse revegetation would provide the highest benefits in this area.
- Research in to genetic provenance issues and climate change - We need to build our knowledge about how to source seeds so that the plants will cope with future rises in

temperature. The research by Professor Lesley Hughes at Macquarie University should be supported.

At the moment there are impediments to deriving income from multiple ecosystem services from a planting. The inability to 'stack ecosystem service credits' (i.e. claim credits for carbon sequestration, biodiversity benefits, salinity remediation) from different markets skews the carbon sequestration market towards single species plantations. Greening Australia will still pursue carbon investment into biodiverse revegetation but the broader market will focus on carbon rich single species plantations to maximise their revenue. The current biodiversity (Biobanking) and carbon (ETS) markets do not allow stacking of credits. For example, if Greening Australia revegetated 1000 hectares with biodiversity AND carbon sequestration benefits then we could only trade either the carbon credits or the biodiversity credits, but not both. The same applies for government investment schemes. Current arrangements do not allow Greening Australia to use carbon investment to install a dozen tree and shrub species (carbon-rich) whilst using government investment to install a further dozen native grass and ground cover species (low-carbon). This severely limits the biodiversity benefits that can be gained from an ETS.

Given the likely vast investment in carbon sequestration the NSW Parliament should be mindful of the likely positive and negative impacts. There is the ability through either the planning process, an extension of the PVP developer tool or amendments to the Plantations Act to build in provisions to shape the outcomes.

A catchment-scale hydrological assessment should set targets for an acceptable level of runoff capture from plantations. This should be science-based to ensure that river health (water quality and water quantity) is maintained. This needs to provide a guide to property scale decisions.

At a property scale an environmental benefits index (as an extension of the PVP process or included as a DA provision) could be applied. This should be carried out to ensure an overall positive environmental benefit and should cover the areas of:

- Biodiversity
- Water quality
- Water quantity
- Salinity
- Soil erosion.

b) Transitional arrangements for participants in the New South Wales emission scheme to a national scheme; and

No comment.

c) Economic and environmental implications for the State of offset activities.

See Part a.

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