House of Representatives Standing Committee on Agriculture, Resources, Fisheries and Forestry
Inquiry into the Australian Forestry Industry

Submission from the Department of Sustainability, Environment, Water, Population and Communities

Summary

The Australian Government Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) welcomes the opportunity to make a submission to the House of Representatives Standing Committee on Agriculture, Resources, Fisheries and Forestry inquiry into the Australian Forestry Industry.

DSEWPaC's portfolio interests in native forest management are dealt with principally through Regional Forest Agreements and regulatory provisions under the *Environment Protection and Biodiversity Conservation Act 1999*.

In regard to plantations, DSEWPaC supports multiple benefit outcomes through well designed plantation development and management that provides environmental and social benefits. DSEWPaC considers that regionally appropriate land use planning and decision-making can assist the forestry industry and local communities build and maintain resilient, adaptive and sustainable environments.

In contrast, inappropriately designed plantations have the capacity to exacerbate existing environmental management problems, such as water availability and the clearing of native vegetation. In considering plantation establishment, good land use planning at a regional or ecosystems scale provides an effective mechanism for considering the landscape environmental and community impacts.

DSEWPaC therefore supports a plantation industry that promotes sustainable natural resource management and does not create incentives for investment that conflicts with a resilient, adaptive and sustainable environment.

This submission addresses the following terms of reference:

- Environmental impacts of forestry, including:
  - Impacts of plantations upon land and water availability for agriculture; and
  - The development of win-win outcomes in balancing environmental costs with economic opportunities.
- Potential energy production from the forestry sector, including:
  - biofuels;
  - biomass;
  - biochar;
  - cogeneration; and,
  - carbon sequestration.

Submission

The Australian Government Department of Sustainability, Environment, Water, Population and Communities' (DSEWPaC) role is to assist in the development and implementation of national policy, programs and legislation to protect and conserve Australia's environment and heritage.

With respect to forestry, the role of DSEWPaC is limited to the following portfolio responsibilities: environment protection, including through the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act); conservation of biodiversity; and water policy and resources. Principal responsibility for forestry policy at the Australian Government level rests with the Department of Agriculture, Fisheries and Forestry, with whom DSEWPaC has a close working relationship.

The DSEWPaC submission therefore focuses principally on plantation forestry. Plantation forestry in this submission refers to forest plantings that are grown for the production of timber or non-timber products for commercial purposes, including as carbon sinks.

The *Environment Protection and Biodiversity Conservation Act 1999*

The EPBC Act is the Australian Government's central piece of environmental legislation which, among other things, provides a framework to protect and manage matters of national environmental significance (or matters of NES). There are presently eight matters of NES under the Act including listed threatened species and ecological communities, listed migratory species and national heritage places. Part 3 of the EPBC Act requires that a person proposing to take an action that has, will have or is likely to have a significant impact on a matter of NES must obtain the approval of the Commonwealth Environment Minister under Part 9 or fall within an exemption.

Forestry operations that are taken in accordance with a Regional Forest Agreement (RFA) between the Commonwealth and a state are not subject to the EPBC Act. Specifically, section 38 of the EPBC Act provides, subject to certain requirements, that the requirement to obtain approval for actions that are likely to have a significant impact on a matter of NES does not apply in relation to an RFA forestry operation, as defined under the *Regional Forest Agreements Act 2002*, when undertaken in accordance with an RFA. RFAs have been designed to address the environmental, economic and social impacts of forestry operations and provide an effective level of equivalent protection for environmental matters as would otherwise be afforded by the ordinary referral, assessment and approval regime set out in Chapter 4 of the EPBC Act.

In relation to forestry operations that do not fall within the exemption, for example because they are not covered by an RFA or, because of section 42 of the EPBC Act – they are forestry operations that are in a property on the World Heritage List, in a Ramsar listed wetland or incidental to another action whose primary purpose does not relate to forestry – then the ordinary requirements of the EPBC Act will apply. That is, that any action that is likely to have a significant impact on a matter of NES must be referred to the Minister for a decision on whether further assessment, including approval, is required under the EPBC Act.

Conservation of Biodiversity

Well managed plantations can contribute to maintaining biodiversity and providing ecosystem services. DSEWPaC notes there is potential for the Australian forestry industry to extend environmental benefits through plantation configuration (for example, expanding biodiverse native tree plantings where appropriate), the location of plantations in the landscape (for example, to provide additional ecological connectivity) and their on-going management. Conversely, poorly implemented plantations may have negative impacts on biodiversity, such as native vegetation clearing and ecosystem fragmentation.

To optimise positive benefits and reduce the risk of possible negative impacts, appropriate planning and risk management practices need to be applied to plantation design and implementation. DSEWPaC is implementing and contributing to the development of a number of policies that promote the conservation of biodiversity. The policies provide guidance to the Australian forestry industry in balancing environmental impacts with economic opportunities and maximising biodiversity co-benefits.

Australia's Biodiversity Conservation Strategy 2010–2030

Australia's Biodiversity Conservation Strategy 2010–2030 (the Strategy) is a national policy framework for how all Australians can manage and protect biodiversity over the coming decades. All Australian governments have committed to the Strategy and its implementation is a shared responsibility across all levels of government, the community and the private sector. The following aspects of the Strategy are especially applicable to the forestry industry.

Mainstreaming biodiversity

Mainstreaming biodiversity means integrating biodiversity considerations into decision making so that it is part of every relevant transaction, cost and decision. DSEWPaC considers that the Australian forestry industry has an important opportunity to lead by moving its operations towards a more biodiversity-benign model and positioning itself to take advantage of increasing buyer demand (domestically and offshore) for more biodiversity-benign goods and services.

Ecosystem resilience

Biodiversity is critical to the ecosystem functions that provide supporting, provisioning, regulating and cultural services, for example, oxygen production, pollination services, water cycling and recreational and other amenity opportunities. DSEWPaC supports the Australian forestry industry playing a role in building and maintaining ecosystem resilience in the landscape through well managed and biodiverse plantations.

Markets for ecosystem services

Increasing investment in biodiversity conservation by the private sector and collaboration between government and other sectors will make the most of the financial and practical resources that are available to address biodiversity decline. DSEWPaC considers that the Australian forest industry has an opportunity to position itself to take advantage of emerging markets and market based instruments that value biodiversity.

Australia's biodiversity and climate change

Climate change represents an important challenge for environmental management and the forest industry on multiple fronts, including:

- natural and plantation forests
- the biodiversity and ecosystems within those forests
- the need for ecosystems (and/or their constituent species) to migrate spatially across landscapes and altitudes in order to retain access to their preferred climate envelope or to otherwise self-adapt to climate change.

The Australian Government's *National Wildlife Corridors Plan*, which is currently under development, will support biodiversity, productive landscapes and regional communities in adapting to climate change. The Plan will provide for the creation of functional corridors to increase the resilience of the environment to climate change at different scales. It will help guide future investments made by the government through the range of initiatives, particularly *Caring for our Country*, to support the Australian community in adapting their land management practices in an era of a changing climate. Moreover, the Plan will complement opportunities under the Australian Government's *Carbon Farming Initiative* for reforestation projects that support climate change adaptation.

Landscape scale environmental benefits and regional planning

DSEWPaC supports measures that encourage landscape scale environmental benefits and is committed to taking a more strategic, landscape-scale approach to managing biodiversity. This approach is being implemented through a mixture of new and existing policies and programs. The government's *Caring for our Country* investment has a clear focus on landscape-scale investments.

In considering plantation establishment, good land use planning at a regional or ecosystems scale provides an opportunity to consider the landscape environmental and community impacts. It also provides the framework to enable communities to maximise natural resource management and biodiversity benefits. For example, building connectivity and linking native species' habitats within and between landscapes is an important consideration in managing and conserving biodiversity.

Through *Caring for our Country*, the Australian Government currently supports fifty-six regional natural resource management bodies to undertake collaborative natural resource management and planning. Under the *National Wildlife Corridors Plan*, the Australian Government has committed to assisting these bodies to review and revise their regional plans to support native species and productive landscapes to adapt to a changing climate.

Carbon sink forests

The carbon stored in our landscape has a major part to play in Australia's approach to climate change mitigation and adaptation. The proposed Australian Government *Carbon Farming Initiative* provides an opportunity to foster innovative approaches to enhance the management of our natural resources and achieve multiple environmental benefits by increasing carbon stores through reforestation, avoided deforestation and improved forest management (carbon sink forests).

The environmental co-benefits achieved through carbon sink forests could be substantial. Co-benefits arise when carbon plantations are developed to have biodiversity as well as carbon value (e.g. plantings with multiple native species). Co-benefits for carbon sink forests should be based on best practice approaches for achieving multiple land and water environmental benefits e.g. biodiversity conservation, salinity mitigation and improving surface and ground water outcomes. Accordingly, the DSEWPaC is working with the Department of Climate Change and Energy Efficiency to progress voluntary co-benefits registration as part of the *Carbon Farming Initiative*.

Conservation of National Heritage

The EPBC Act enhances the management and protection of Australia's heritage places and provides for the listing of natural, historic or Indigenous places that are of outstanding national heritage value to the Australian nation as well as heritage places on Commonwealth lands and waters or under Australian Government control.

The National Heritage List, which commenced on 1 January 2004, was established through amending the EPBC Act. The National Heritage List includes natural, historic and Indigenous places of outstanding heritage value to the nation. At the same time, the Australian Heritage Council was established as the principal adviser to the Australian Government on heritage matters. The Council assesses nominations for the National Heritage List and the Commonwealth Heritage List. The Council also maintains the Register of the National Estate.

Identification, protection and promotion of heritage values could be seen to present both constraints and opportunities to the forest industry. The opportunity to protect and interpret heritage values, including those not formally listed, can offer significant potential benefit to regional communities. Conversely, risks to heritage values from forestry activities include direct damage or destruction of natural or cultural values, and indirect impacts to the integrity of heritage places, such as impacts on the boundary of heritage properties, its immediate buffer zone and/or catchment areas, and increased biosecurity and fire risks.

Impacts of plantations upon water yield and quality

Impacts of plantation forestry on water interception

Plantation forestry is a water interception activity with largely unregulated water impacts in Australia. Changing land use from pasture or cropping to plantation can result in changes to water interception. Such changes may be desirable, for example, in the mitigation or remediation of the impacts of saline groundwater. However, when surface and groundwater flows are intercepted, downstream water users, including the environment, can be adversely affected.

Most studies into plantation impacts on water yield concentrate on the surface water system. Direct interception of rainfall (canopy capture), indirect interception (soil moisture uptake) and subsequent evapotranspiration, significantly reduce surface water flows. The greatest impact from plantations on stream flow yield is during high growth and establishment phases, the impact of which may last for 10 to 20 years.

What is less clear is the impact of rainfall interception by plantations on the groundwater system. Recharge areas for groundwater systems can be impacted by local land use change, however the net impact from reduced groundwater recharge may lead to catchment or regional scale water yield losses.

Requiring water entitlements for surface water to offset the consumptive risk to water resources is generally required for the integrity of existing water access entitlements in the system and the achievement of environmental outcomes. Surface water entitlement offsets alone may not necessarily account for potential impacts on groundwater systems. Consideration must also be given to the connectivity of these systems and water regulation developed accordingly.

In developing the Australian forestry industry, consideration should be given to the regulatory arrangements and supporting data requirements needed to ensure that the interception of water by plantation forestry does not impact the reliability of yields under existing water access entitlements, including those managed by the Commonwealth Environmental Water Holder.

Addressing water interception issues

The National Water Initiative (NWI), agreed by the Council of Australian Governments in 2004, is the national blueprint for water reform. Under the NWI (clauses 41 to 45), state and territory governments agreed to determine relevant pathways by which any water resource system found to be overallocated and / or overused will be adjusted to address and meet environmental and other public benefit outcomes. States and territories agreed that substantial progress will be made towards adjusting all overallocation and / or overuse.

Under the NWI (clauses 55 to 57), all parties recognise that a number of land use change activities, such as plantation forestry, have the potential to intercept significant volumes of surface and / or groundwater now and in the future. Many of the interception activities identified are currently undertaken without a water access entitlement. The NWI identifies that without some form of planning, management and/or regulatory measures, large-scale forestry can have a significant impact on future integrity of water access entitlements and the achievement of environmental objectives for water systems.

Under Clause 57 of the NWI, parties have agreed that in water systems that are fully allocated, overallocated or approaching full allocation:

- significant interception activities should be identified and recorded (e.g. through a licensing system);
- establish an agreed threshold limit for all interception activities in the planning area and any activity above the threshold will require a water access entitlement; and
- a robust compliance and monitoring regime must be implemented.

For those water systems not yet fully allocated, clause 57 of the NWI parties have agreed that:

- significant interception activities should be identified and estimates made of the amount of water likely to be intercepted over the life of the plan;
- an agreed threshold limit for all interception activities in the planning area is to be established and any significant interception activity is allowed without a water access entitlement;
- regular monitoring and reporting of activities against the threshold is required; and
- as the threshold limit approaches full allocation, all additional proposals for significant interception activities will require a water access entitlement.

Parties to the NWI agreed to implement the above measures in relation to water interception on a priority basis no later than 2011. South Australia is the only state to formally implement a policy framework to regulate the impacts of commercial forestry on water resources. Key challenges jurisdictions face in implementing NWI-consistent water planning in relation to interception commitments include inadequate monitoring and data, legislative barriers, calculating thresholds, identifying significance of interception activities, and public/stakeholder opposition to regulating intercepting activities.

Australian Government facilitation

The NWI Policy Guidelines on Water Planning and Management provide a useful approach for water planners to address interception issues, such as large-scale plantation forestry, with reference to an agreed NWI-consistent framework. The Guidelines were jointly developed with DSEWPaC, Murray-Darling Basin Authority, National Water Commission (NWC) and state and territory water agencies through the COAG Work Program on Water and agreed by COAG Senior Officials.

The NWC is also funding a $3.53 million interception work program to identify and quantify water used by activities that have the potential to intercept significant volumes of surface and/or ground water. This information will help establish water use thresholds to trigger the use of water access entitlements.

Impacts of plantation forestry on water quality

The impacts of plantation forestry management strategies on water quality also warrant attention. Well-managed plantations can help improve water quality by reducing salt and sediment flows into waterways. Conversely, poorly managed plantations may actually increase stream salinity and sedimentation, due to reduced dilution flows and increased soil disturbance from harvesting machinery traffic, respectively.

Potential energy production from the forestry sector

DSEWPaC supports the development of a range of alternative transport fuels, including biofuels, which may assist in minimising our reliance on imported oil, improving fuel security and reducing greenhouse gas emissions.

Biofuels are often assumed to be environmentally friendly alternatives to conventional fuels. Their climate or environmental benefits will, however, depend critically on the feedstock used, how it was grown and processed, and the environmental implications of these activities.

Emerging feedstocks such as forestry products do promise greater emission reductions than the 'first generation' feedstocks currently used, which are largely derived from food crops such as sugarcane, wheat and corn. Their main benefit is that they can be grown on land unsuitable for food crops.

It is also important that plants grown for biofuels are not weed risk species. Many ideal biomass plants promoted overseas would pose serious weed risk problems in the Australian environment. In this respect, Australian native plants such as mallee are well suited to biomass and biofuel production.