Productivity Commission Inquiry – Regulation of Australian Agriculture

Submission from the Department of the Environment

The Australian Government Department of the Environment welcomes the opportunity to make a submission to the Productivity Commission's inquiry into the regulation of Australian agriculture. This submission provides information to assist the Productivity Commission prepare its inquiry report.

Various aspects of Commonwealth environmental regulation have been subject to investigation by recent inquiries and reviews, including:

- the current Australian Law Reform Committee's *Freedoms Inquiry* (http://www.alrc.gov.au/inquiries/freedoms);
- the 2013 Productivity Commission's *Major Project Development Assessment Processes Research Report* (http://www.pc.gov.au/inquiries/completed/major-projects/report); and
- the 2014 House of Representatives Standing Committee on the Environment's *Inquiry into streamlining environmental regulation, 'green tape', and one stop Shops* (http://www.aph.gov.au/Parliamentary_Business/Committees/House/Environment/Green_Tape).

Departmental submissions to each of the above inquiries are provided at Attachments A, B and C. This submission will build on information provided in previous submissions, focussing on:

- the relationship between agriculture and the environment;
- approaches to environmental protection that may be explored for their potential to be more effective in achieving productivity gains and environmental outcomes for agriculture;
- Commonwealth environmental regulation impacting on agriculture; and
- reforms already underway to improve Commonwealth environmental regulation.

1. Environment and agriculture

The environment and the agricultural sector have shared interests and the interaction between agricultural production and environmental services is well established.[1] [2] The Productivity Commission's Issues Paper of 22 December 2015 notes that agriculture accounts for 52 per cent of Australia's land mass, making it one of the biggest influences on the health of the Australian environment. Sustainable agriculture plays a significant role in conserving native species and ecosystems both on-farm and off. Likewise the health of ecosystem services such as water, soil and native vegetation have a role in successful agricultural production.

The Productivity Commission's 2004 report into the Impacts of Native Vegetation and Biodiversity Regulations argues that the retention, management and rehabilitation of native vegetation and biodiversity on private land is important for resource sustainability and protection of endangered ecosystems; although relevant regulatory approaches across jurisdictions could be improved.[3]

[1] MA Altieri (1999) 'The ecological role of biodiversity in agroecosystems' in *Agriculture Ecosystems and Environment* 74,19–31

[2] S McIntyre (2014) 'Farming, pastoralism and forestry', in *Biodiversity: science and solutions for Australia* (edited by S Morton, A Sheppard & M Lonsdale) CSIRO, Collingwood, Victoria, pp. 101-120.

[3] Australian Government Productivity Commission (2004) *Impacts of Native Vegetation and Biodiversity Regulations, Report no. 29,* available at: http://www.pc.gov.au/inquiries/completed/native-vegetation/report/native-vegetation.pdf

Similarly farmers recognise that conserving biodiversity is a shared responsibility and is critically important to the agricultural sector. The National Farmers Federation makes clear that farmers understand the interdependency of biodiversity and agriculture and that they are crucial to conserving ecosystems and enhancing agricultural productivity. Farmers also recognise that they have a responsibility to sustainably manage their land and contribute to environmental outcomes.[4]

Retaining and restoring native vegetation helps maintain natural hydrology and soils, and mitigates threats to agriculture such as erosion and dryland salinity. Native vegetation provides shelter for stock from severe heat, frosts and winds, and can provide relatively drought-tolerant food for livestock. Native species such as bats, birds and insects also provide critical services that benefit both the environment and production landscapes such as pollination and pest insect control.[5] [6]

Healthy aquatic ecosystems also perform important functions, including filtering water so that it is clean for drinking and agricultural use; nutrient-cycling between the river and floodplain to enrich riverine environments; providing habitat for fish breeding and providing an environment that supports tourism, recreation and cultural values. Further case study excerpts on the link between the environment and agriculture from Australia's *Fifth National Report to the Convention on Biological Diversity* can be found at Attachment D.

Invasive species threaten both production landscapes and healthy ecosystems.[7] The management of these species benefits to both agriculture and the environment. For example, feral pigs cause substantial production losses to sugar cane and bananas in north Queensland, costing hundreds of thousands of dollars to the respective industries.[8] It is estimated that the economic cost of feral pigs in Australia is $106.5 million per year.[9] Feral pigs also pose a major threat to biodiversity. Predation, habitat degradation, competition and disease transmission by feral pigs is listed as a 'key threatening process' under the *Environment Protection and Biodiversity Conservation Act*.

Land clearing is directly implicated in decline of some species. For example, the decline of the koala over its broad geographic range is primarily a legacy of the extensive clearing of eucalypt forests for agricultural land use over the past 150–200 years.[10]

Removal of native species that pose a threat to agriculture has also caused the decline (for example Carnaby's cockatoo, *Calyptorhynchus latirostris*; emu, *Dromaius novaehollandiae*; and spectacled flying-fox, *Pteropus conspicillatus*) and even extinction of species (thylacine, *Thylacinus*

[4] National Farmers' Federation (11 January 2010) *Farmers say conserving biodiversity is a shared responsibility,* media release, available at http://www.nff.org.au/read/1654/farmers-say-conserving-biodiversity-shared-responsibility.html.

[5] AG Power (2010) 'Ecosystem services and agriculture: tradeoffs and synergies' in *Philosophical Transactions of the Royal Society B*, vol. 365, issue 1554. pp 2951-2971.

[6] S Morton and R Hill (2014) 'What is biodiversity, and why is it important?', in *Biodiversity: science and solutions for Australia* (edited by S Morton, A Sheppard & M Lonsdale) CSIRO, Collingwood, Victoria, pp. 55-68.

[7] SD Gregory, W Henderson, E Smee and P Cassey (2014) *Eradications of vertebrate pests in Australia: A review and guidelines for future best practice.* PestSmart Toolkit publication, Invasive Animals Cooperative Research Centre, Canberra, available at http://www.invasiveanimals.com/publications/research/

[8] P West (2008) *Assessing invasive animals in Australia 2008*, National Land & Water Resources Audit and Invasive Animals Cooperative Research Centre, Canberra, available at http://www.invasiveanimals.com/publications/research/.

[9] R McLeod (2004) *Counting the Cost: Impact of Invasive Animals in Australia 2004*. Cooperative Research Centre for Pest Animal Control. Canberra, available at http://www.invasiveanimals.com/publications/research/.

[10] CA McAlpine, JR Rhodes, JG Callaghan, ME Bowen, D Lunney, DL Mitchell, DV Pullar and HP Possingham (2006) 'The importance of forest area and configuration relative to local habitat factors for conserving forest mammals: A case study of koalas in Queensland' in *Australia Biological Conservation* 132: 153-165

cynocephalus).[11] Elevated nutrient levels caused by agriculture can also constrain habitat restoration in many Australian ecosystems by promoting rapid growth of non-native plants that out-compete natives.[12]

On a larger scale removal of vegetation can impact the hydrological cycle. Dryland salinity is one of Australia's most costly forms of land degradation[13] and this is caused by removal of native vegetation which changes the proportion of water that either infiltrates or runs off the land surface.[14]

Despite comprehensive environmental regulation at all levels of Government, indicators show that many components of biodiversity in Australia are continuing to decline in both extent and condition.[15] Biodiversity loss and degradation of ecosystem services impact the function of both production and natural ecosystems.[16] Historically agricultural activities and the conversion of natural habitats are the largest drivers of biodiversity decline in Australia. This continues to be a major issue for resource use and management in Australia; extending to land-use change, fragmentation of remaining habitats, introduction of weeds and other invasive species, as well as changes to soil and water quality.[17] [18] Given the Government's emphasis on development and investment in northern Australia, early thinking about how to expand the agricultural sector sustainably while protecting environmental assets and services will continue to be important to ensure both sectors can deliver benefits to the economy.

Given that agriculture covers over half of Australia's land mass, ensuring that our natural resources contribute sustainably to Australia's economic, social and environment strength can only be achieved with the partnership of the agricultural sector. Biodiversity is subject to classic market failures resulting from externalities, tragedy of the commons and transaction costs, as outlined briefly below.

Externalities and spillover effects: Economic activities such as farming can have spillover effects to the environment beyond impacts on a farmer's private land, and these spillovers can be positive or negative.

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[11] TG Martin, J Carwardine, L Broadhurst, S Ferrier, C James, A Sheppard, S Whitten and I Chades (2014) 'Tools for managing and restoring biodiversity', in *Biodiversity: science and solutions for Australia* (edited by S Morton, A Sheppard & M Lonsdale) CSIRO, Collingwood, Victoria, pp. 55-68.

[12] BJ Cardinale, JE Duffy, A Gonzalez, DU Hooper, C Perrings *et al.* (2012) 'Biodiversity loss and its impact on humanity' in *Nature* 486, 59‑67.

[13] State of the Environment 2011 Committee (2011*) 'Australia state of the environment 2011'* Independent report to the Australian Government Minister for Sustainability, Environment, Water, Population and Communities. Canberra, available at http://www.environment.gov.au/science/soe/2011.

[14] Land and Water Australia (2001) 'Australian dryland salinity assessment 2000: extent, impacts, processes, monitoring and management options' National Land and Water Resources Audit, Canberra.

[15] State of the Environment 2011 Committee (2011*) 'Australia state of the environment 2011'* Independent report to the Australian Government Minister for Sustainability, Environment, Water, Population and Communities. Canberra, p.4, available at http://www.environment.gov.au/science/soe/2011.

[16] T Tscharntke, P Batary, Y Clough, D Kleijn, C Scherber, C Thies, TC Wanger and C Westphal (2012) 'Combining biodiversity conservation with agricultural intensification' in *Land use intensification: effects on agriculture, biodiversity and ecological processes* (edited by D Lindenmayer, S Cunningham and A Young) CSIRO Publishing, pp.7-15.

[17] State of the Environment 2011 Committee (2011*) 'Australia state of the environment 2011'* Independent report to the Australian Government Minister for Sustainability, Environment, Water, Population and Communities. Canberra, available at http://www.environment.gov.au/science/soe/2011.

[18] JA Bellamy, and AKL Johnson (2000) 'Integrated Resource Management: Moving from Rhetoric to Practice in Australian Agriculture' in Environmental Management (25:3), p.268, available at http://link.springer.com/article/10.1007%2Fs002679910021.

Positive spillovers, for example, can be associated with revegetation on the farm property, which can help to mitigate global climate change and improve connectivity to natural landscapes. Negative spillovers can result from farm-level decisions that do not accommodate the value of ecosystems and biodiversity.

Tragedy of the commons: Environmental degradation can also occur because some environmental services are common property resources or a public asset such as trees, fish, or long paddock grazing lands. Common property resources may be subject to exploitation and overuse, if sustainable management norms are not established and enforced.

Transaction costs: Transaction costs can prevent efficient bargaining between farmers and those adversely affected by the impacts of the farming activity. For example, the diffuse nature of pesticide runoff may affect diverse range of communities which may inhibit a cost effective negotiation among parties. Further, the costs of gathering data to demonstrate a causal and explicit link between farm-level activities and downstream impacts may be too high. This means that environmental degradation often continues unchecked.

Under some conditions governments are well placed to intervene in addressing such market failures and to manage impacts that the market is unable to. This includes agricultural impacts on the environment and other affected parties discussed above. Government interventions should be well designed to efficiently mitigate against unexpected negative side-effects.

2. Alternative approaches to regulation

a. Using market-based mechanisms to achieve environmental and argricultural outcomes

Regulation is a key component in the suite of tools available to governments in achieving outcomes for biodiversity conservation. It need not be the default intervention. There is significant potential to complement regulation with innovative agriculture and environment policies to deliver outcomes that are mutually beneficial for the environment and the agriculture sector.

For example the financial sector is increasingly recognising 'natural capital' and ecosystem services in its business decisions. The National Australia Bank's Natural Value Strategy aims to integrate natural capital risks and opportunities into its products and services. Such market-based incentives encourage farmers to invest in 'eco-system services' that benefit present and future Australians and enhance agricultural productivity. In some instances, the market will start valuing ecosystem services if frameworks are provided, such as through The Economics of Ecosystems and Biodiversity (TEEB) programme, which currently includes a focus on agriculture[19].

Such frameworks also include the provision of information on the contribution of a healthy environment to agricultural productivity or frameworks that measure and account for ecosystem services' value in business decisions.

b. Non-regulatory Government interventions

Private sector valuation efforts, though an important development, will likely be limited to those environmental values and services that are directly linked to profit. In many cases there is not an immediate economic return to an individual farmer for investing in biodiversity and ecosystems. Ecosystem services also provide a public good over and above business profits, and the return on investment is often shared across the global or local community, and typically over longer time frames.

[19] The Economics of Ecosystems and Biodiversity initiative - http://www.teebweb.org/agriculture-and-food/

There is arguably a role for government in ensuring that the full value of ecosystem services provided by farmers (i.e. farm-level, local, regional and global) is recognised and supported. For example, the benefits of a healthy environment are important by-products from projects under the Emissions Reduction Fund. The Fund works by purchasing estimated emissions reductions from eligible projects, providing an incentive for businesses and the community to improve practices and invest in new technologies that have a range of environmental co-benefits. Funds are allocated through a pay-as-bid auction, following which the Government contracts with successful bidders for the delivery of emissions reductions. The price sought by project proponents (and ultimately paid by the Government) must be competitive at auction, but could conceivably reflect the value of other benefits associated with the project, beyond emissions reductions.

In recent years, Australian state and territory governments have been testing a range of other market-based instruments for conservation that are relevant to agricultural landholders. These have largely been designed to solve local-level problems, such as the Queensland Government's voluntary market-based mechanism for nutrient management[20] or to solve broader-scale environmental degradation such as the Victorian Bush Tender programme (an auction approach to protecting and improving native vegetation on private land[21]) or the New South Wales Government's Biobanking scheme (a voluntary scheme in which landowners receive payments for conservation[22]). Reviews of some of these initiatives[23] found that there is a need to improve consistency and efficiency across the schemes. There may also be scope for the development of market based mechanisms that value and provide incentives for farmers so they account for environmental inputs in production systems, as well as encourage efforts to support local ecosystems and biodiversity.

The Department also works collaboratively with farmers outside of the regulatory framework to recover and manage matters of national environmental significance through Commonwealth programmes such as the National Landcare Programme.

There are other methods that could be considered by Government that more explicitly incentivise efforts to maintain or improve local ecosystems services for the benefit of both agricultural landholders and local communities. [24] The provision of incentives for conservation on private land, such as payment for ecosystem services schemes could potentially lead to better outcomes for the farmer, the environment and the wider community.

3. Commonwealth environment regulation affecting agriculture industry

Good environmental standards create certainty for business, confidence within the community and sustain natural resources for future generations. Environmental regulation has a role to play in helping to maintain production landscapes by preserving environmental standards and healthy natural capital. Importantly, regulation is one in a suite of policy levers available to the Commonwealth and the Department continues to explore opportunities for regulatory reforms that will reduce regulatory burden on farmers while improving environmental outcomes.

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[20] http://www.ehp.qld.gov.au/water/monitoring/voluntary-nutrient-management.html

[21] http://www.depi.vic.gov.au/environment-and-wildlife/environmental-action/innovative-market-approaches/bushtender

[22] http://www.environment.nsw.gov.au/biobanking/

[23] Office of Environment and Heritage (2014) *BioBanking Scheme: Statutory Review Report.* Office of Environment and Heritage for the NSW Government, Sydney. available at: http://www.environment.nsw.gov.au/resources/biobanking/140695BBRev.pdf

[24] BDA Group and CSIRO (2007) *Use of market based instruments by Catchment Management Authorities in NSW to achieve landscape scale change - Background Paper.* Report to the NSW CMA Chairs' Council. Canberra, available at: http://www.epa.nsw.gov.au/resources/licensing/hrsts/mbibground.pdf

Environmental regulation, including in relation to agricultural activities, is primarily the responsibility of state and territory governments. The Department's submission to the Australian Law Reform Committee's Freedom Inquiry (Attachment A) provides further background on the scope of Commonwealth power.

The Commonwealth's regulatory impact on agricultural activities from protecting the environment is minor. Typically only a few agricultural projects require approval each year under the EPBC Act[25] and the Department is committed to ensuring its regulation is efficiently and effectively administered. The Department is enhancing its collaboration with landholders and the agricultural sector, to identify ways to regulate more efficiently and effectively, and to increase understanding of the EPBC Act.

a. Referral, assessment and approvals under the EPBC Act

As noted in the Issues Paper, the main Commonwealth environment regulation affecting the agriculture industry is the EPBC Act. This section will provide information about the interaction between Commonwealth environmental law and the agricultural sector.

The EPBC Act protects nine matters of national environmental significance. Those of most relevance to agriculture are:

- nationally threatened species and ecological communities;
- migratory species;
- wetlands of international importance (Ramsar wetlands);
- world heritage properties;
- national heritage places;
- the Great Barrier Reef Marine Park; and
- a water resource, in relation to coal seam gas and large coal mining developments.

Actions that are likely to have a significant impact on a matter of national environmental significance cannot be undertaken without assessment and approval under the EPBC Act. Actions can include agricultural activities, such aslarge scale land clearing in sensitive areas.

The EPBC Act assessment and approval process is explained in the Department's submission to the Productivity Commission's review of Major Project Development Assessment Processes (Attachment B)[26].

Historically the numbers of agriculture-related projects that have required approval under the EPBC Act have been low. There are fewer referrals from the farming sector than in any other sector. Agriculture and forestry made up just 2% of all referrals received under the EPBC Act from 1 January 2000 to 4 March 2013. Other categories of projects that may be relevant to the agriculture

[25] Australian Government (2013) *Submission from the Department of Sustainability, Environment, Water, Population and Communities: Major Project Development Assessment Processes, Productivity Commission Inquiry*, p.4, available at http://www.pc.gov.au/inquiries/completed/major-projects/submissions/submissions-test/submission-counter/sub055-major-projects.pdf

[26] See Attachment C (pages 2 - 16).

sector such as 'water management and use' and 'natural resources management' made up 6% and 4% respectively during this time.[27] [28]

Exemptions for approvals exist under the EPBC Act for the continuation of an existing activity or where approval to undertake an action was held prior to the commencement of the EPBC Act in July 2000.[29] Agricultural activities that may be exempted under the continuing use provisions include routine grazing; continuing cropping or crop rotation; and maintenance of dams, roads and fences.[30] These exemptions enable farmers to continue to engage in their day to day business without any interaction with the EPBC Act.

Agricultural activities with environmental impacts that are large in scale, located in a sensitive area containing threatened species (or other protected matters), or which will impact on a particularly rare or isolated protected matter, are more likely to require assessment and approval under the EPBC Act. The environmental impacts of these projects can often be managed through the application of the Department's 'avoid, mitigate, offset' policy.[31]

The low interaction of farmers with the EPBC Act is also because approvals are only required for actions likely to have a significant impact on a matter of national environmental significance, and many agricultural activities, when taken individually, do not meet the threshold test for significance. The Department notes, however, that the cumulative impact of some agricultural activities, when conducted by a number of farmers across a large geographical area, may have a significant impact on a matter of national environmental significance. The Department also acknowledges that some farmers may not refer actions that should be referred. Typically this is due to a lack of knowledge about requirements under Commonwealth environmental law.[32] As noted above the Department is continuing to work with rural stakeholders to help them better understand the EPBC Act.

b. Strategic assessments

To better address cumulative impacts, the EPBC Act provides for strategic approaches to environmental impact assessments such as strategic assessments and bioregional plans.[33] These approaches can assess and approve a number of activities at a landscape scale. These approaches can also be more ecologically beneficial and economically efficient than conventional individual, often small-scale, project assessments.

For example, the Midlands Water Scheme was endorsed by the Commonwealth in April 2011 following a strategic assessment under Part 10 of the EPBC Act. This scheme encompasses the construction of new irrigation infrastructure and delivery of up to 4,750ML across over 310,000 hectares of land in the Midlands region of Tasmania. This allowed the Minister to give approval for all irrigation-related activities under the scheme without the need for separate assessments under

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[27] See Attachment C (page 4, figure 1).

[28] Statistics on EPBC Act assessments and approvals are published in the Department of the Environment's Annual Reports, available at https://www.environment.gov.au/about-us/accountability-reporting/annual-reports

[29] Further detail on these exemptions can be found at Attachment B (pages 2 and 3).

[30] Australian Government Department of Environment website: Prior authorisation and continuing use exemptions – Sections 43A and 43B, available at http://www.environment.gov.au/resource/prior-authorisation-and-continuing-use-exemptions-sections-43a-and-43b.

[31] Australian Government Department of Environment website: EPBC Act Environmental Offsets Policy, available at http://www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy

[32] National Farmers' Federation (2013) *Performance Audit of Managing compliance with the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Conditions of Approval: Submission by the National Farmers' Federation*, available at http://www.nff.org.au/submissions-search.html?subcategoryid=3655.

[33] Australian Government Department of Environment website: Strategic assessments, available at http://www.environment.gov.au/protection/assessments/strategic.

the EPBC Act, resulting in improved environmental outcomes and less red tape for affected landowners.

Greater use of strategic approaches could better manage the cumulative impacts, target actions most likely to impact on matters of national environmental significance, give greater certainty for farmers and more equitably spread the costs and impacts of regulation.

c. The water trigger

Under the EPBC Act, an action that involves a coal seam gas development or a large coal mining development requires approval from the Minister for the Environment if the action has, will have, or is likely to have a significant impact on a water resource. This is known as the 'water trigger'.

Under the water trigger, the impacts of coal seam gas and large coal mining developments on water resources are now assessed by the Commonwealth, with input from the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Developments.

The water trigger was incorporated into the EPBC Act in June 2013, partly in response to community concerns at a time when coal seam gas development was relatively new. In this context, a need was identified for increased scrutiny around how coal seam gas and large coal mining developments were interacting with surface and groundwater resources; particularly in rural areas. The environment, community and farmers are intended to benefit from this new regulation. The water trigger seeks to provide confidence about the impacts of these developments on water resources and water quality, including management responses to secure good water outcomes.

The water trigger legislation is currently being independently reviewed to determine whether it has been appropriate, effective and efficient in protecting water resources from the impacts of coal seam gas and large coal mining developments.

d. Wildlife trade – export of native species

Australia is one of 182 signatories to the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES). The primary aim of CITES is to ensure that international trade in wild fauna and flora is legal, sustainable and traceable and does not threaten species' survival in the wild. Australia's international obligations under CITES are implemented under the EPBC Act which requires that permits must be issued for all international exports or imports of CITES listed wildlife unless a species or product is specifically exempted.[34] By meeting Australia's international obligations, the Department's permitting system enables trade in these products and their acceptance in international markets. A number of species are farmed for international trade in Australia. These include live orchids and saltwater crocodiles which are listed under CITES and subject to permitting requirements under the EPBC Act.

The EPBC Act also regulates exports of Australian native fauna and flora. Under the EPBC Act, a permit is required for all native wildlife unless specifically exempted. [35] To obtain a permit for the import or export of a CITES listed species and other regulated native wildlife, the exporter must provide evidence that the specimen was lawfully obtained and sustainably sourced. That is, the harvest and levels of trade will not be detrimental to the survival of the species in the wild. At present, exemptions to permitting requirements for CITES listed species and native wildlife apply to only a limited range of specimens and are generally subject to conditions. For instance, exemptions for native regulated kangaroo and emu products currently apply only to specimens carried as

[34] Australian Government Department of Environment website: Wildlife import and export information, available at http://www.environment.gov.au/biodiversity/wildlife-trade/permits#need
[35] Ibid.

personal baggage.[36] Other than under very limited circumstances such as some species that may be carried as personal baggage, exemptions for CITES listed species are not possible, as they would not meet Australia's obligations and would negatively impact on trade. The Department is developing a new permits database for wildlife trade that will improve the processing times for the issuing of CITES permits and enhance the online capability for clients.

The Department is currently examining proposals to streamline the processing and issuing of CITES permits to provide greater certainty for commercial wildlife trade, including for northern Australia's crocodile industry following the Australian Government's White Paper on Developing Northern Australia. The Department is also examining proposals to remove permit requirements for low risk native species (such as for some kangaroo and emu products) and tourist souvenirs containing wildlife where the Australian requirements are stricter than international requirements under CITES.[37]

Public consultations have been undertaken on proposals to streamline Australian trade in CITES listed species and targeted options are currently under development.[38] Consultations on potential regulatory reform of low risk native species will be undertaken during 2016.

e. Biosecurity

The EPBC Act contributes to Australia's biosecurity by requiring that any new species of animal proposed to be introduced into Australia must be listed on the EPBC Act 'live import list' before specimens may be imported. This includes biological control agents such as insects. Applications for species to be included on the live import list require a full environmental risk assessment.[39]

This requirement may affect agricultural businesses that are considering diversification into a new species, sub-species or hybrid not present in Australia. Such requirements are designed to protect not only the environment, but agricultural production and the environmental integrity of agricultural markets in Australia and for export.

f. Commonwealth water regulation (the Water Act 2007)

The Murray Darling Basin Plan is a Commonwealth regulation that has a material impact on the competitiveness and productivity of Australian agriculture. Although the Department of Agriculture and Water Resources is the Commonwealth agency responsible for the Basin Plan, there are a number of areas where the Commonwealth Environmental Water Holder has a specific role.

In its submission to the *Senate Select Committee Inquiry into the Murray-Darling Basin Plan* the Commonwealth Environmental Water Holder outlined how the use of Commonwealth environmental water (regulated under the Basin Plan and the *Water Act 2007*) has helped ease constraints on the availability of water for agriculture. The submission discusses for example how "delivering water early in the year can:

a) increase the free space in dams available to capture inflows. This in-turn increases the availability of water for other water users. Preliminary modelling indicates early water delivery in the River Murray is expected to benefit water users in all states (New South Wales, South Australia and Victoria);

[36] A list of native specimens exempt from export regulations is available at http://www.environment.gov.au/biodiversity/wildlife-trade/natives/list-exempt-native-specimens

[37] Further information on the Department's proposal to streamline wildlife trade regulation is available at http://www.environment.gov.au/biodiversity/wildlife-trade/comment/streamline-regulation.

[38] Ibid.

[39] Further information on the live import list is available at https://www.environment.gov.au/biodiversity/wildlife-trade/live/import-list

b) reduce water losses in the system under standard river operations, resulting in improvements in state water resource shares; and

c) reduce competition for channel capacity during periods of peak agricultural demands."[40]

The submission also highlights the benefits to trading environmental water (including farmers); and in improving water quality (of note, the management of salinity). Further details are provided at Attachment E.

4. State and Territory regulation

The Commonwealth and the State and Territory jurisdictions have different but complementary regulatory regimes. The Productivity Commission's 2004 report into the Impacts of Native Vegetation and Biodiversity Regulations highlights that the primary responsibility for the regulation and management of land use activities lies with state and territory governments; including separate and additional legislation protecting threatened species of flora and fauna.[41]

State and territory regulatory regimes have higher transaction rates with the agricultural sector as they deal with vegetation and zoning issues. Many jurisdictions have a two tiered regulatory system, with local government assuming control for development proposals with limited impacts. [42]

The Commonwealth has limited, but complementary, responsibilities the majority of which are defined by the EPBC Act. This Act provides a framework for Australian Government involvement in matters of national environmental significance (listed at section 2.a) or where state and territory governments do not have the jurisdiction to regulate (such as Commonwealth land). Commonwealth intervention in State matters is typically rare but regulatory overlap can and does occur.

Governments recognise the importance of minimising duplication and improving streamlining within and across regulatory regimes. Commonwealth environmental outcomes are best secured by robust and efficiently administered regulatory regimes at state and territory level. The Commonwealth with state and territory governments have been working together to ensure that regulatory responsibilities are clearly delineated. This helps ensure that the regulated community (including the agricultural sector) is not subject to regulatory duplication and unnecessary red tape.

Key reforms to limit regulatory duplication include the development of a nationally consistent assessment method for threatened species and the One-Stop Shop. The One-Stop Shop will be discussed further at point 6.

5. Threatened species listing

Until recently each jurisdiction in Australia conducted their own assessments of threatened species using different processes and criteria, leading to misalignment of threatened species lists.

In October 2015 a memorandum of understanding was signed by Western Australia and the Commonwealth (and subsequently by the Australian Capital Territory, Northern Territory and

[40] Australian Government Commonwealth Environmental Water Office, *Supplementary submission by the Commonwealth Environmental Water Holder to the Senate Select Committee Inquiry into the Murray-Darling Basin Plan*, pp.15 - 16, available at http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Murray_Darling_Basin_Plan/murraydarling/Submissions

[41] Australian Government Productivity Commission (2004) *Impacts of Native Vegetation and Biodiversity Regulations, Report no. 29,* available at http://www.pc.gov.au/inquiries/completed/native-vegetation/report/native-vegetation.pdf.

[42] R Hollander (2010) *Rethinking overlap and duplication: Federalism and Environmental Assessment in Australia* in Publius, The Journal of Federalism (40:1),pp 136-170

Tasmania, with other jurisdictions expected to follow) agreeing to align assessment processes with the international best practice standard of the International Union for Conservation of Nature. A nationally consistent assessment method will ensure, over time, alignment of listing decision outcomes and threatened species lists across jurisdictions and increase certainty for stakeholders. This initiative was part of the National Review of Environmental Regulation Threatened species listing is an example of cross-jurisdictional duplication and the efforts to streamline.

6. One- Stop Shop reforms

A number of reviews and bodies have identified regulatory duplication in the environmental approvals and assessments system and have recommended simplification.[43] [44] [45] The One-Stop Shop reform has been a key policy of the Australian Government focussing on removing duplication and setting standards. It will reduce regulatory burden where an activity is being managed by a state or territory government and is likely to have an impact on a matter of national environmental significance.

The One-stop Shop is being implemented through the use of bilateral agreements between the Commonwealth and the states and territories under the EPBC Act. Assessment bilateral agreements allow state and territory governments to undertake a single assessment for both state and Commonwealth matters. This reduces regulatory duplication and red tape. Over the last two and a half years the Commonwealth has put in place renewed assessment bilateral agreements with each of the states and territories.

The One-stop Shop reform will also use approval bilateral agreements. Under an approval bilateral agreement, states and territories would assess the likely impacts of a project on the environment and make a decision on approval, accounting for both state/territory-specific matters and matters of national environmental significance. Under an approval bilateral agreement no separate Australian Government assessment or approval would be required.

Through the One-Stop Shop reform, the Department has also developed standard terms of reference, assessment report templates and guidance documents. These documents have been made available to other jurisdictions, to assist them in formulating their own guidance documents. This will enhance industry understanding of state and Commonwealth processes and improve the consistency of decision-making. For example, the Western Australia Department of Environment Regulation has updated its application form and guidance material for applicants to include requirements for considering matters of national environmental significance. This means that proponents only need to refer to one set of guidance material that covers both Commonwealth and state matters.

The One-stop Shop reform is expected to save businesses about $426 million per year.[46] The reform will also deliver a range of environmental and administrative benefits previously outlined in the Department's submission to the 2014 House of Representatives Standing Committee on the

[43] Australian Government Productivity Commission (2013) *Major Project Development Assessment Processes Research Report*, available at http://www.pc.gov.au/inquiries/completed/major-projects/report.
[44] House of Representatives Standing Committee on the Environment (2014) *Streamlining environmental legislation: Inquiry into streamlining environmental regulation, 'green tape' and one stop Shops*, available at http://www.aph.gov.au/greentapereport.
[45] Decisions made by the Council of Australian Governments in 2011 and 2012 pertaining to duplication and double-handling of assessment and approval processes - https://www.coag.gov.au/meeting_outcomes.
[46] Department of the Environment (2014) *Regulatory Cost Savings under the One-Stop Shop Environmental Approvals,* available at http://www.environment.gov.au/epbc/publications/regulatory-cost-savings-oss.

Environment's *Inquiry into streamlining environmental regulation, 'green tape', and one stop Shops* (Attachment D).[47]

The One-stop Shop model is intended to provide equivalent environmental protections through a simpler process. This type of process, aimed at achieving at least equivalent environmental outcomes with less regulation, may be a model for a broad range of environmental measures in the future. The reform is expected to have positive flow-on effects to agriculture and other industry stakeholders. Under this model, the Commonwealth sets standards and states and territories implement the regulations.

The Department is also pursuing related initiatives to further streamline of regulation and enhance administration. In particular the Department is implementing an outcomes based approach to focus on: outcome based conditions for Commonwealth assessments; and to rely on State and Territory conditions of approval for shared assessments, rather than duplicative approvals processes. Wildlife trade reforms.

7. The Department's engagement in chemicals regulation reform

The Department is also responsible for assessing and advising on the environmental risks of chemicals and biotechnology, which informs chemicals policy and regulation by the Department and a number of other Australian government entities[48]. The Department is engaged in chemical regulation reforms being led by the Department of Agriculture and Water Resources and the Department of Health. These reforms will ensure regulation of chemicals and biotechnology achieves its policy objectives. These objectives include protection and safety of humans, animals and the environment from the potentially harmful effects of agricultural chemicals and veterinary medicines.

Areas which continue to be of interest to the Department of the Environment include the assessment of new chemicals where there is no established method, and issues which may interact with matters of national environmental significance.

The Department of the Environment leads on setting the *Environmental Standard for the Assessment and Evaluation of Chemicals and Biological Organisms* which continues to be updated over time to incorporate improvements in knowledge, systems and technology. While the Department's main focus is on environmental impacts, these measures will also help protect the ecological integrity of the systems that support agricultural productivity.

Conclusion

A healthy environment is both a common good and of direct benefit to agriculture. The agricultural sector has an important role in environmental management and biodiversity conservation with farmers having a real stake in the health of the environment for their livelihoods. Early interventions are crucial with the cost of and ability to recover depleted and degraded landscapes across Australia a key challenge. An integrated effort to halt decline and recover biodiversity is needed and with 52 percent of the Australian land mass involved in agricultural production, farmers are crucial to the success of recovery efforts and to ensuring our natural resource base is sustained for use by future generations.

As the Australian Government continues to support the expansion of agribusiness while protecting natural assets, particularly in the north of Australia, early thinking about safeguarding the

[47] See Attachment D (pages 6 to 8).

[48] The Office of Water Science, Australian Pesticides and Veterinary Medicines Authority and the Department of Health National Industrial Chemicals Notification and Assessments Scheme and Office of the Gene Technology Regulator.

environment for future generations is important. The Northern Australia White paper identifies agribusiness as a key industry for investment in the north, and the economy more broadly. This means that more of Australia land mass could be converted to productive landscapes. In this policy context, applying the lessons from regions of south eastern Australia is key; in particular, the impacts of developing the agricultural sector on biodiversity and ensuring both agriculture and the environment can deliver benefits to the economy and the community more broadly.

Into the future regulation will continue to have an important role in placing necessary restrictions on activities in order to protect biodiversity. Although Commonwealth environmental regulation has relatively minor interactions with the agricultural sector, the Australian Government continues to improve regulation and to look into alternatives to regulatory interventions to deliver outcomes that support both the environment and production landscapes. Providing non-regulatory incentives are important considerations. Farmers taking extra responsibility for environmental management deserve recognition of the costs involved, as well as their time and expertise in delivering sound frontline land care. [49]

Market-based mechanisms may assist farmers to get a return for their natural resource management activities and investments and there may be a role for governments beyond what is currently being implemented. There is real potential to develop and implement cohesive policy approaches that deliver improved outcomes for our environment and productive agriculture systems using well designed regulation, coupled with alternative approaches including appropriate incentives.

[49]National Farmers' Federation (11 January 2010) *Farmers say conserving biodiversity is a shared responsibility*, media release, available at http://www.nff.org.au/read/1654/farmers-say-conserving-biodiversity-shared-responsibility.html.

Attachment D – excerpts from *Australia's Fifth National Report to the Convention on Biological Diversity.*

"The Murray-Darling Basin is Australia's most iconic and largest river system and Australia's most important agricultural area. In 2011-12 the total agricultural area irrigated in the Basin was 1.4 million hectares, which represented 66 per cent of all irrigated land in Australia. In 2010-11, the Gross Value of Agricultural Production in the Murray-Darling Basin was $19.2 billion, which is 42 per cent of the total GVAP for Australia (ABS, 2012). As well as providing food for Australia, Murray-Darling Basin-grown produce is also exported overseas. The Murray-Darling Basin is ecologically diverse, supporting a wide range of nationally and internationally significant plants, animals and ecosystems. A 2012 CSIRO report assessed the Basin-wide value of enhanced habitat ecosystem services — arising from floodplain vegetation, waterbird breeding, native fish and the Coorong, Lower Lakes, and Murray Mouth — was potentially worth about AU$3 billion to AU$8 billion (present values using 2010 dollars) under the 2800 scenario relative to the baseline scenario (CSIRO, 2012)." [1]

"... Introduced plants and animals, pathogens and diseases threaten the survival of many of Australia's native plants through habitat destruction, disturbance to the balance of an ecosystem and land degradation by promoting soil erosion, stream turbidity and modified fire behaviour. Invasive species also have social impacts (e.g. loss of social amenity) and economic impacts such as loss of productivity in the agriculture industry. In its 'Measures of Australia's Progress' report, the ABS states that the annual cost in Australia, in terms of control and production loss estimates, of 11 types of feral animals is estimated at around AU$720 million based on 2004 data (ABS, 2010a)." [2]

"Weeds are among the most serious threats to Australia's natural environment and primary production industries. Nationally, invasive plants continue to invade the land with exotic species accounting for about 15 per cent of flora. About one-quarter of them are either serious environmental weeds or have the potential to be serious weeds. Invasive weeds displace native species, contribute significantly to land degradation, and reduce farm and managed forest productivity. Some of the direct effects of weeds on ecosystems are changes in structure, increased or decreased productivity, increased litter, different litter breakdown rates, and altered nutrient regimes, hydrological cycles and fire regimes. Indirect effects include deleterious associations with micro-organisms such as bacteria and mycorrhiza and flow-on effects for larger invertebrate and vertebrate animals.

Australia spends considerable resources each year in combating weed problems and in protecting ecosystems and primary production on private and public land – it is estimated that in 2006-07, Australian farmers spent more than AU$1.57 billion on the management of weed related issues (ABS, 2008). Weed related issues were the highest category of spending by farmers (53 per cent) followed by pest management (25 percent) and management of land and soil (22 per cent) (ABS, 2010a)." [3]

[1] Australian Government Department of Environment (2014) *Australia's Fifth National Report to the Convention on Biological Diversity*, p.9, available at http://www.environment.gov.au/biodiversity/international/fifth-national-biological-diversity-report.
[2] Ibid. pp.20 – 21.
[3] Ibid. pp.21 – 22.

Attachment E – excerpts from the Commonwealth Environmental Water Holder's submission to the *Senate Select Committee Inquiry into the Murray-Darling Basin Plan*.

"*Benefits to other water user from delivering water early in the year*

Environmental water is often delivered in response to natural triggers, such as naturally occurring flow events. This means the timing of environmental water is often different from the timing of irrigation deliveries. In the southern Basin, significant volumes are delivered in winter and spring, prior to the start of the irrigation season. While environmental water is delivered in winter and spring for environmental outcomes, it also provides benefits for other water users. Delivering water early in the water year can:

d) increase the free space in dams available to capture inflows. This in-turn increases the availability of water for other water users. Preliminary modelling indicates early water delivery in the River Murray is expected to benefit water users in all states (New South Wales, South Australia and Victoria).

e) reduce water losses in the system under standard river operations, resulting in improvements in state water resource shares

f) reduce competition for channel capacity during periods of peak agricultural demands.

Trading environmental water

Similar to the delivery of environmental water, the trading of Commonwealth environmental water must be undertaken for environmental purposes. However, it can also provide benefits to other market participants. For example, in January 2014, 10 GL of Commonwealth environmental water allocations were sold in the Gwydir catchment of northern New South Wales. Conditions for a sale of temporary water allocations in the Gwydir were favourable at the time because:

a) the needs of the environment had largely been met and there was sufficient environmental water to sell some allocation without affecting the ability to meet current and foreseeable environmental requirements; and

b) there was strong demand for water from irrigators due to drier than normal conditions.

The Commonwealth Environmental Water Holder accepted offers from 16 bidders, which were from a range of primary industries including cotton, beef, wheat, and pulse crops. The sale of the water generated a return of $3.217 million. The sale enabled producers to buy water when temperatures were high and rainfall was low, allowing them to either finish off their crops or to improve crop quality or yield."[1]

"Water quality

...Commonwealth environmental water has provided improved water quality throughout the Basin. In addition to supporting environmental outcomes, improved water quality also supports economic outcomes. For example, salinity in the River Murray has real and measurable economic costs. Managing salinity is important to all water users and ensures that water is suitable for drinking, agriculture, recreation and the environment. That is why for almost 30 years, the Australian and state governments of the Murray-Darling Basin have been working together to manage salinity in

[1] Australian Government Commonwealth Environmental Water Office, *Supplementary submission by the Commonwealth Environmental Water Holder to the Senate Select Committee Inquiry into the Murray-Darling Basin Plan*, pp. 15 - 16, available at http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Murray_Darling_Basin_Plan/murraydarling/Submissions.

the Basin. The long-term salinity target for the River Murray has been set at less than 800 EC (electrical conductivity units) for 95 per cent of the time measured at the town of Morgan in South Australia. In 2010, the salinity target was met for the first time. Since then, salinity has been maintained within this target. The additional environmental water provided under the Basin Plan to date has contributed to these improved salinity outcomes..."[2]

[2] ibid. p16