SENATE PUBLIC AFFAIRS & ADMINISTRATION REFERENCES COMMITTEE

INQUIRY INTO

NATIVE VEGETATION LAWS, GREENHOUSE GAS ABATEMENT AND CLIMATE CHANGE MEASURES

NFF SUBMISSION

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Executive Summary

Australian farmers have a proud record of environmental management. They recognise that the preservation of their natural resources is vital for their future livelihoods. The desire for governments to regulate environmental outcomes must be viewed in this context.

Property rights of farmers must be respected in relation to government decisions affecting land and water entitlements. Full and adequate compensation must be provided where property rights are compulsorily acquired by governments or where farmers are required to undertake management practices above and beyond their duty of care. Unfortunately, the NFF believes there has been a substantial decline in support for the security of private property rights by courts and governments over the last 50 years. Too often we are seeing emergence of the modern problem of governments assuming the property right while leaving the title with the owner. This is unacceptable.

The NFF believes that this balance must be urgently corrected, whether it be in relation to rights surrounding carbon credits, water, natural resource management or mining's interaction with farming resources.

There is a role for the courts in finding resolution to past decisions by governments and the NFF, through the AFFF, is providing financial assistance to individual farmers to fund legal cases that may result in a national precedent and establish greater clarity and certainty for farmers in relation to their property rights. Cases of particular relevance to this inquiry include:

- Spencer v Commonwealth of Australia - (relating to the Commonwealth Government's capacity to utilise land clearing for the purposes of meeting targets in accordance with the Kyoto protocols)
- ICM Agriculture Pty Ltd v The Commonwealth [2009] HCA 51 – (relating to the status of water as a property right)
- Arnold v Minister administering the Water Management Act 2000 [2010] HCA 3 – (relating to the status of water as a property right)
- Brown & Anor v Coal Mines Australia; Alcorn & Anor v Coal Mines Australia Pty Ltd [2010] NSWSC 143 – (relates to the impacts of mining on agriculture and on natural resources)
- Parkins v Lightning Ridge Miners Association Limited [2009] NSWSC 621 – (relates to the management of the use of land by a mining licence or exploration holder)

The NFF urges the government to support and adopt the following recommendations that will ensure that the issue of resolving property rights disputes remains out of the expensive legal system, and to ensure that farm businesses can attain surety over their property entitlements into the future:

1. Compensation for decisions affecting property entitlements

While many of the issues surrounding compensation in arrears for past environmental regulations are currently before the courts, future government decisions affecting property entitlements should, wherever possible, adopt market based instruments to appropriately discover the amount of compensation payable to landowners.

The NFF supports the use of publically or privately funded Stewardship or Conservation Agreements, entered into voluntarily as a positive means for enhanced conservation of native

vegetation and biodiversity. Such approaches encourage participation, reward those who invest and foster community ownership and commitment to the resolution of issues within regions. Market based instruments (MBI's) are more likely to provide appropriate incentives for responding to environmental problems compared to regulatory approaches.

2. Define a public benefit test for NRM proposals

The NFF believes that the Commonwealth and State Governments should adopt and implement a comprehensive, rigorous and transparent Public Benefit Test to be applied prior to the implementation of any new Government regulations or legislative changes that may apply particularly to the transfer of property rights from landholders to the community.

3. Legislative change

The NFF believes that where the operation of Environment Protection and Biodiversity Conservation Act results in the reduction in the property rights of landholders that the legislation should require appropriate compensation to be paid to landholders. In addition, the NFF believes that the Australian Government should make protection of property rights a requirement of each state through an Inter-Governmental Agreement.

4. Analysis of international agreements

The NFF recommends that the Federal Government urgently assesses Australia's international agreements in terms of domestic impacts on property rights.

5. Securing water property right entitlements

a. Full and timely implementation of the National Water Initiative

The NFF recommends that all Governments immediately implement their obligations under the National Water Initiative and adopt similar approaches to water compensation and risk assignment.

b. A balanced Basin Plan

The NFF recommends that a balanced Basin Plan is developed that equally weighs social, economic and environmental values in the Basin.

c. Commonwealth water market transparency

The NFF recommends that the Commonwealth's engagement in the water market is undertaken transparently with the information relayed to other market participants in a timely manner.

d. Changing allocation and water plan rules

The NFF recommends that all measures by Governments to attenuate water entitlements apply a no third party impacts tests. Where cumulative impacts occur, these ought to be compensable using the NWI risk assignment provisions.

The National Farmers' Federation

The National Farmers' Federation (NFF) was established in 1979 and is the peak national body representing farmers, and more broadly, agriculture across Australia. The NFF's membership comprises of all Australia's major agricultural commodities. Operating under a federated structure, individual farmers join their respective state farm organisation and/or national commodity council. These organisations form the NFF.

The NFF has recently implemented a re-structure of the organisation. Through an associate category this has enabled a broader cross section of the agricultural sector to become members of the NFF, including the breadth and the length of the supply chain.

Each of NFF's members deal with state-based "grass roots" issues or commodity specific issues, respectively, while the NFF represents the agreed imperatives of all at the national and international level.

Introduction

Increasingly, farmers in Australia are being required to comply with environmental regulations that are designed to achieve a benefit for the entire community, but which have a significant cost for individual farmers.

Environmental outcomes such as the preservation of threatened species, the conservation of biodiversity and the amelioration of greenhouse emissions are benefits the entire community enjoys. However, in Australia these outcomes are being achieved via the imposition of regulations on the use of natural resources which often have an adverse impact on farmers.

The past approach has often amounted to the uncompensated removal of farmers' property rights. Environment regulations or legislation which ostensibly aims to achieve better environmental outcomes often have significant, negative economic impacts, create perverse incentives and fail any test of equity – a cornerstone of good governance in a democratic society.

Current evidence supports the view that Commonwealth and state environmental laws and instruments are causing significant direct and indirect financial impacts on farmers. These impacts are occurring through significant diminution of land values and by increased uncertainty in managing farm businesses.

These impacts are significant and widespread and affect farmers most acutely in the area of financing their farm business. Availability of finance is bound closely to asset values and future income. When farm assets are threatened by legislation and policies, or seasonal production cycles are broken or missed because of uncertainties arising from complex and unclear legislative requirements, then farmers' livelihoods are put at risk. This also has implications for the sustainability of many rural and regional communities.

The Federal Government must ensure that farmers' property rights are protected or compensated for in terms of Federal legislation or policies. Maximum leverage must be exerted by the Federal Government on the States to ensure a complementary approach.

The NFF recognises that the property rights debate is not about the issue of compensation per se but recognition of an existing right to use or access a natural resource in the context of the farmers' duty of care. It also implies a responsibility on the farmer or landholder to utilise the resource in a responsible manner and in accordance with principles agreed to in a legitimate planning and consultative framework.

A holistic approach must be utilised to deal with this issue effectively, taking into account a suite of solutions. These range from utilising the court system to gain improved clarity over farmers and other industry's responsibilities relating to land management, development of market based mechanisms that provide voluntary incentives for farmers to undertake activities that are in the public interest, legislative change to ensure due process is adhered to when dealing with land use regulation, and decisions made clearly and transparently in a partnership arrangement with landholders.

The NFF's history of involvement in the area of property rights, whether in its policy engagement role or through the Australian Farmers' Fighting Fund (AFFF), is extensive. It remains a key priority for the organisation, whether it is in relation to the area of mining exploration, water, carbon or natural resource management.

How are Australian farmers already contributing to optimising environmental outcomes?

The NFF's engagement in the property rights debate should not be misinterpreted as being a battle by farmers to produce agricultural goods to the detriment of the environment. This is far from being the case.

It should be remembered that Australian farmers have a proud record of environmental management and that the future livelihoods of them and their families strongly depend on ensuring that their natural resources are preserved for future generations. Indeed, sustainability is one of the NFF's key strategic priorities.

With approximately 150,000 commercial farms in Australia utilising approximately 60% of Australia's landmass, 80% of the productive land base and approximately 70% of our water resources, NFF believes that it is vital that the agriculture sector is recognised for its ability to have a genuine, positive involvement in the management of our natural resources including dealing with climate change.

Farmers rightly view themselves as environmental managers and have huge potential in delivering environmental outcomes demanded by society. The NFF recognises the opportunity to re-build the trust and understanding between farmers and the Australian community to harness this potential. Let us look at the data to support this.

According to the ABS[1] the most common land management practices undertaken by farmers was surface water (74% of agricultural businesses), application of fertiliser (62%) and monitoring ground cover in paddocks (54%). Overall, 63% of all agricultural businesses

[1] ABS (2009). Land Management & Farming In Australia 2007-08. Cat. 4627.0. Canberra, Australia.

reported making one or more land management changes over the last five years to address land and soil related problems on their holding.

In terms of protecting the natural environment, in 2007–08, 66% of all agricultural businesses reported having native vegetation on their holding and just over half of these protected their native vegetation for conservation purposes. Similarly, more than half of all agricultural businesses reported rivers or creeks on their holding with 49% of these protecting their river or creek banks for conservation purposes. Wetlands were reported by 10% of all agricultural businesses with just under half of these businesses reporting that they had protected these wetlands for conservation purposes.

For most farmers, the majority of natural resource management (NRM) activities are undertaken to improve economic and environmental conditions on agricultural land. The vast majority of farms (92%) conducted some NRM activities for preventative or remedial reasons. This level was greater than the proportion of farms reporting NRM issues due to farmers managing issues before they become problematic (i.e. for preventative reasons). Table 1 below shows NRM issues identified by farmers in the MDB and Australia as a whole.

Table 1: NRM issues identified on farms and management by farmers, Murray-Darling Basin and Australia - 2004-05[2]

	Farms reporting an issue (% of total farms)(a)		Farms undertaking management activities (% of total farms)(a)(b)		NRM expenditure (average $/farm undertaking management)		NRM effort (person days/farm)	
	MDB	Aust.	MDB	Aust.	MDB	Aust.	MDB	Aust.
Native vegetation(c)	(d)46	(d)45	(d)61	(d)62	5 400	5 000	31	32
Weeds	76	73	83	80	12 200	11 200	41	39
Pests	71	69	78	76	8 100	7 300	43	39
Land and soil	48	46	61	58	13 200	12 000	54	51
Water(c)	42	38	35	33	9 100	7 400	27	24
Any issue	87	86	92	92	32 200	28 200	132	121

(a) Number of farms was approximately 53,900 for the MDB; 129,900 for Australia.
(b) Activities undertaken for remedial or preventative purposes.
(c) Data for the Lower Murray Darling region excluded due to confidentiality issues.
(d) This is the proportion of farms with native vegetation on their land, not the proportion of total farms. Number of farms with native vegetation was approximately 33,000 for the MDB; 81,800 for Australia.
Source: Natural Resource Management on Australian Farms, 2004-05 (Reissue), cat. no. 4620.0; ABS data available on request, Natural Resource Management Survey, 2004-05

Of the estimated total 6.6 million person days spent managing NRM issues, most effort was spent managing weeds, pests, and land and soil (approximately 1.8 million person days spent on each of these three issues). Similar to the trend for average NRM expenditure, most effort (54 person days per farm undertaking NRM activities) was spent on land and soil activities.

[2] ABS (2008). Water and the Murray-Darling Basin - A Statistical Profile, 2000-01 to 2005-06. Cat 4610.0.55.007

Farmers conducted a variety of activities to address the water issues occurring on their farms. The most common activities employed were:

- earthworks, drains and water pumping (42% of MDB farms undertaking water activities);
- planting trees and shrubs (28%);
- removing stock from waterways (23%); and
- relatively fewer farms carried out water testing (11%).

Similar to the ABS, the OECD issues a report on the environmental performance of member countries[3]. The OECD report notes the changes in Australia's agricultural environment and makes a particular point that Australia agricultural production occurs in a very harsh environment, is becoming increasingly diversified and that support for agriculture is one of the lowest in the OECD countries[4]. The OECD also notes that *recent structural changes, developments in water and natural resource management, access to new biotechnologies and climate, are significantly impacting on agricultural productivity, land use and land use intensity*[5].

The OECD notes that many farmers are addressing environmental problems, with the assistance of Government programs such as Landcare and the former environmental programs of NHT and NAP (now Caring for our Country). Importantly, the OECD notes that farmers' awareness have increased and practices that exacerbated soil erosion are improving with more sustainable practices. Moreover, such improvements are also reflected in chemical and fertiliser use. They state that efforts to improve problems such as soil salinity by re-vegetation are also resulting in other benefits such as biodiversity and reduced greenhouse gases. Australia's report card can be viewed from the OECD website (http://www.oecd.org/tad/env/indicators) and further information is located at Attachment 1.

In addition, the University of New England, Institute of Rural Futures undertook a survey[6] of farmers in 2008, seeking to examine environmental crime on farms. The results cover a wide range of environmental management practices and attitudes, and is worthy of mention, particularly given that the survey covered things that farmers are doing on their land that contribute to environmental sustainability. Notably, this survey was Australia wide with 1,926 respondents, almost all of whom were farm owners of long standing in their area.

Some of the findings include:

- Almost all had introduced at least one type of best management practice, with the most common practices being weed control, pest animal control, industry sustainable practices, revegetation/conservation, erosion control etc.
- 56.5% had reported that they had preserved an area on their property for its environment, such as remnant vegetation, revegetation and riparian zones etc.
- Importantly, nearly 30% did so to preserve the native flora/fauna while another 20% did so for personal enjoyment. Coming in at third, was the benefits to production.
- Nearly 62% were involved, formally or informally, with local groups such as Landcare. Overall, membership of such groups increased over the period 1991 to 2008 for all states except WA.

[3] OECD (2008). *Environmental Performance Of Agriculture In OECD Countries Since 1990*. Paris, France.
[4] OECD (2008). *Environmental Performance Of Agriculture In OECD Countries Since 1990*. Paris, France. pp. 212-213.
[5] OECD (2008). *Environmental Performance Of Agriculture In OECD Countries Since 1990*. Paris, France. p/212
[6] Barclay, E. (2008). *Managing the Farm Environment.* Armidale: Insitute for Rural Futures, University of New England.

- The major barriers to conservation practices were lack of money, time and support, and drought. To a lesser degree, other barriers included small area of property, concern about doing the wrong thing, lack of information or cooperation from neighbours.
- 24.9% indicated that they were affected by land use changes on neighbouring farms such as harbouring of pests & weeds, reduced water runoff, wildlife corridors increasing pest animals and poor farm management.
- The main environmental problems on farms include weed, pests, drought, water availability, soil erosion and the management practices of neighbours.
- The majority (around 85%) believed that they were responsible for their environmental resource management. This was strengthened by the view that the most effective management were landowners then local farmer groups (e.g. Landcare).
- In terms of environmental legislation, there was a variety of attitudes. Of most concern was the cost of complying, red tape, land clearing preventing good farm management (e.g. managing woody weeds), conflicting legislation (e.g. environmental, fire control and drought management) and a lack of flexibility.

A range of surveys and reports produced by the Australian Bureau of Statistics also backs up the above survey. See Attachment 2 for the NFF farm facts that summarises a range of quotes from various sources. This can be found on the NFF website[7].

As demonstrated above, farmers will undertake conservation efforts on farms because it is good for their farm, not because of Government intervention – this is the notion of reciprocity of environmental management.

Defining "duty of care"

The NFF recognises that all landholders have a duty of care for the land on which they manage. The NFF believes that farmers and others responsible for managing natural resources must take all reasonable and practical steps to prevent harm to the environment and to areas of cultural heritage.

There is no doubt that the vast majority of farmers already make significant efforts to avoid environmental harm such as:

- land degradation (e.g. soil erosion and decline in soil structure);
- water pollution (including pollution by salt, agricultural chemicals and nutrients);
- invasion of weeds and pests; and
- destruction of ecosystems and habitat.

Australian farmers have a vested interest in assuring that their natural resources are sustainable for future generations and that biological diversity is conserved.[8] Furthermore, they recognise and understand that they have a duty of care, as demonstrated by a recent article in the Tasmanian Country that stated:

[7] http://www.nff.org.au/farm-facts.html
[8] http://www.derm.qld.gov.au/land/management/duty_of_care.html

> *... it should go without saying that we understand our duty of care to the land, to its environment, to our animals and to the importance of the legacy that we hand on to future generations*[9].

The problem is that the definition of what constitutes this duty of care remains unclear from a legal sense and can be misconstrued due to an absence of well-developed community norms about responsibility to the environment. For this reason it is difficult to clarify what a duty of care means in practical terms for farmers. This is further complicated by the suggestion that duty of care, and thus property rights, may change over time to reflect new social expectations. This may occur through the evolution of the common law, or through government legislation[10].

Expectations of reasonable natural resource management by farmers may come from formal or informal sources and the expectations may not necessarily be consistent. Formal expectations are documented in domestic laws and administrative instruments, which may reflect international agreements and treaties. Examples of formal instruments with expectations about farmers' natural resource management are: the Native Vegetation Act 2003 (NSW), Property Vegetation Plans (NSW), the International Convention on Biodiversity, various treaties on migratory birds and the RAMSAR Convention. The NFF notes that successive Australian Governments have signed these international agreements, but with perhaps little consideration of their domestic implementation and impacts. The Water Act 2007 (Commonwealth) will have real impacts on water use, agriculture and rural communities in the Basin arising from such international obligations.

Clarifying landholders' property rights or their 'duty of care' for the environment is also an important first step in deciding who should pay for conservation on private land, according to two reports released by the Productivity Commission. The Commission's staff research paper, Cost Sharing for Biodiversity Conservation: A Conceptual Framework[11] discusses principles for sharing the costs of conservation between individuals, groups and the general community.

According to the paper, property rights determine the responsibilities as well as the rights of users over resources. *'Depending on how they are defined, property rights could imply that individuals are required to meet certain environmental standards'*, said Neil Byron, Commissioner. The paper suggests that property rights are not always clear, which leads to confusion and disputation, and further work - such as research and public discussion - is needed to clarify them.

A consultancy report by Dr Gerry Bates of the Australian Centre for Environmental Law, A Duty of Care for the Protection of Biodiversity on Land, also says that a statutory duty of care on landholders can offer considerable benefits in protecting the environment. It suggests that such a duty of care should be tied to environmental standards and codes of practice, so that landholders could have greater certainty about their responsibilities for the environment.

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[9] David Gatenby, President Tasmanian Farmers & Graziers Association quoted in Tasmanian Country, "Farmers Demand a Level Paddock", 26 February 2010, p.2.

[10] Bates, G. (2001) *A Duty of Care for the Protection of Biodiversity on Land, Australian Centre for Environmental Law*. Consultancy Report, Report to the Productivity Commission. Canberra

[11] PC (2001) *Cost Sharing for Biodiversity Conservation: A Conceptual Framework.* Canberra

Both reports recognise the contribution of private sector conservation in preventing biodiversity loss. *'Establishing an appropriate cost sharing framework is essential to ensure best use of public and private funds, and to achieve the full potential contribution of biodiversity conservation on private lands'*, said Dr Byron.

The reports form part of a stream of work being undertaken by the Productivity Commission in relation to private incentives for the conservation of biodiversity. They build on inquiries conducted by the Commission into Ecologically Sustainable Land Management and Ecologically Sustainable Development[12].

The Commission emphasises that a fundamental step in determining which cost sharing principle to apply is the clarification of the rights and responsibilities implied by existing property rights. They argue that if the community expects a higher environmental standard than is required under existing property rights then the community at large should be responsible for paying for the additional consideration and management by land owners (at least for meeting an amount to trigger additional conservation by the private sector). They state that calling for bids (auctions) for the voluntary provision of conservation by the private sector may be one way to determine the appropriate amount of compensation[13].

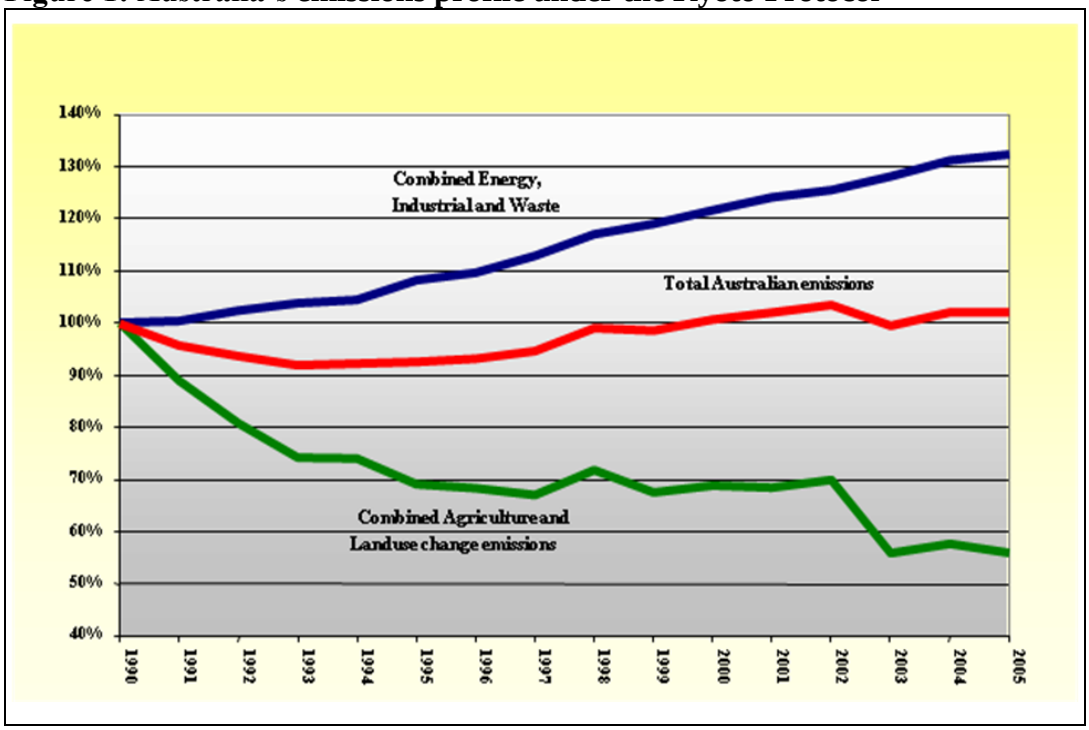
The major property rights issues for farmers

1. Carbon/climate change

It is now widely recognised that without the efforts of farmers in reducing broad-scale land clearing activities, Australia would not meet the Federal Government commitments to limit the nation's greenhouse gas emissions in 2008-2012 to an 8% increase above the levels achieved in 1990. While farmers in most Australian States have been affected by land clearing bans (most of which occurred pre-1990), it has been primarily those occurring in Queensland and New South Wales Governments (post-1990) that have been responsible for the major carbon credits attained by the Australian Government under their Kyoto liabilities. The entire Australian community has been the benefactor of this cost borne by the farm sector, which has seen emissions from agriculture plus deforestation (clearing of land the majority of which has been undertaken for agriculture, in particular to increase rangeland productivity) reduced by 40% since 1990 (Figure 1).

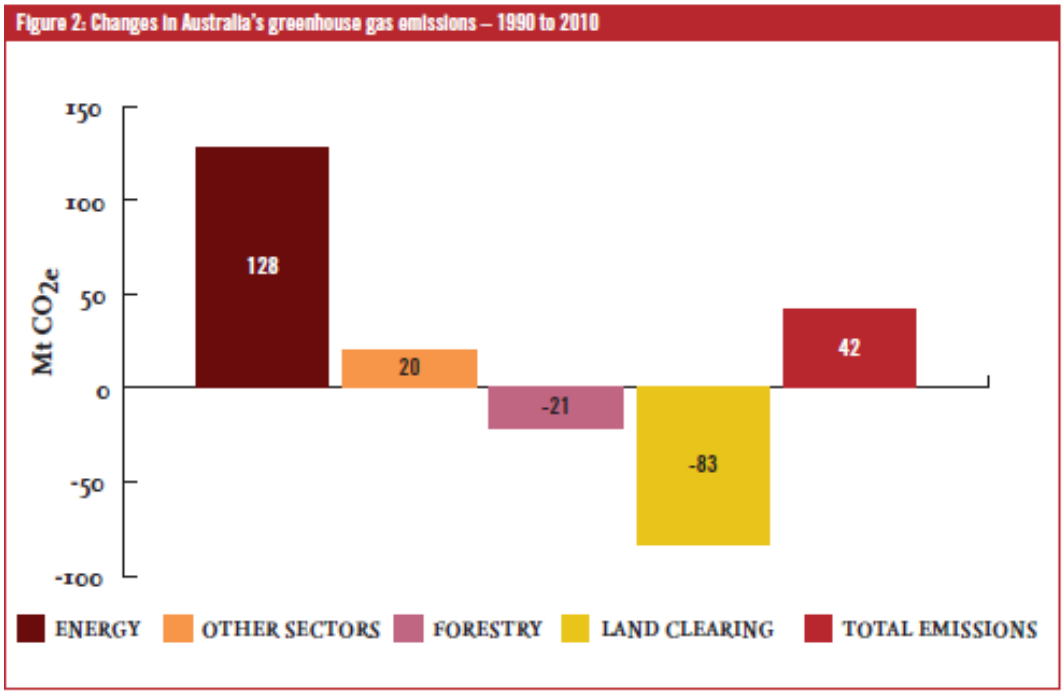
[12] PC (2001) *A Duty of Care for the Protection of Biodiversity on Land* on 11/05/2001.
[13] Aretino, B., Holland, P., Matysek, A. and Peterson, D. 2001, *Cost Sharing for Biodiversity Conservation: A Conceptual Framework*, Productivity Commission Staff Research Paper, AusInfo, Canberra.

Figure 1: Australia's emissions profile under the Kyoto Protocol



Source: AFI

By reducing broad-scale land clearing, farmers have already reduced greenhouse gas emissions by about 80 million tonnes since 1990 (Figure 2). It is only through this reduction in land clearing that Australia has been able to offset the substantial increases in greenhouse gas emissions from the energy sector since 1990.



The level of emissions reductions contributed by land clearing bans is equivalent to eliminating the total annual emissions of New Zealand or Ireland[14]. Assuming a carbon price of $45/tonne, land clearing regulations have cost Australian farmers in the vicinity of $3.5 billion (this figure does not include the opportunity cost of not farming the land productively). No compensation has ever been provided to Australian farmers to account for the carbon values associated with these bans.

Official Federal Government projections for 2010 show that without these efforts by farmers, Australia's greenhouse emissions would be 30% above 1990 levels, and way off track for Australia to meet its commitment to limit emissions growth to 8%.

Meeting the 8% commitment has been vital to the Federal Government both domestically and internationally. Federal ministers have continuously used the commitment to defend current greenhouse and energy policy settings and the Government's rejection of the Kyoto Protocol.

Into the future, the NFF believes that the carbon property right and the benefits that may flow from this right must be retained by those who are managers of the carbon and whose actions are responsible for the growth and/or retention of carbon abatement. This principle will become increasingly important as markets rewarding abatement such as that through soil carbon become more accessible.

2. Mining

The impact of mining and coal seam gas activities is becoming of increasing concern to Australian farmers as a substantial increase in exploration and extraction from both the mining and gas industries occurs in agricultural areas across the country.

Concerns held by farmers predominantly relate to the following matters:

- Environmental degradation of land and/or water;
- Lack of scientific analysis as to impact of activities on groundwater;
- Inconsistent and/or inadequate laws at a State and/or Commonwealth Government level;
- Inequitable and unfair legislative frameworks as to the interaction with a land owner; and
- Long-term impact on food production.

It is acknowledged that in most instances the issues relating to mining and coal seam gas activities are the jurisdiction of State Governments. However, the Commonwealth Government has an interest through the Water Act and also the Environment Protection & Biodiversity Conservation Act.

The NFF is of the view that mining and coal seam gas exploration and extraction needs to be formally recognised as an interception activity and as such the impact on water by the activity is accounted for within water plans or that mining companies be required to offset the impact by acquiring water entitlements.

[14] The Climate Institute, (October 2006). **Missing billions:** How the australian government's climate policy is penalising farmers

Further, the NFF believes that there is a potential capacity to introduce amendments to the Water Act that provides for more effective mechanisms to ensure that the impact on water resources from mining and coal seam gas activities at an exploration or an extraction level.

The NFF believes greater research and consideration of the impact of mining and coal seam gas on water from the purview of the Water Act is required, including whether or not there is any inconsistency between state government legislation regulating mining and coal seam gas activities and the regulatory requirements both now and into the future under the Water Act.

The NFF, through the AFFF, will continue to consider applications for support to farmers in legal challenges in this area until greater certainty and equity is provided through legislative or common law means.

3. Water

In 1994/95, the Council of Australia Governments (COAG) agreed to implement a water reform agenda – this was formally part of the National Competition Policy reforms. Among the main focus for these water reforms was to separate land and water and develop water markets to maximise the value of water. Other important aspects included the provision of water for the environment and to implement cost recovery water pricing.

Irrigators supported these reforms as they were intended to introduce compensable property rights to replace licences that could be cancelled or amended by the Minister of the day without any security of tenure or compensation. However, implementation of reforms that benefited the states was given priority over those that benefited irrigators. The states have progressively introduced new legislation to deliver property rights, however this is not completed for all states as yet.

Irrigation farmers also support a healthy riverine environment and many are practising environmentalists. Irrigation farmers have been contributing more water to the environment and will continue to do so into the future. Historically, this has been through "planned" or rules based environmental water contained in water resource plans since 2004 as well as the specific provision of environmental allocations (e.g. Barmah Millewa Forest Allocation). More recently, governments have allocated significant money to either purchase water entitlements or invest in infrastructure, e.g. the Commonwealth Government's Water for the Future Program ($3.1 billion for acquisition and $5.8 billion for infrastructure).

COAG agreed to develop a new reform agenda. The NFF were leading advocates for revision of the water reforms that were finally articulated by COAG on 25 June 2004 in the form of an Intergovernmental Agreement (IGA) on a National Water Initiative (NWI). The focus for the NWI has similar headline policy reforms to the COAG water reforms, i.e. water access and entitlements, water planning framework, water markets and trading, best practice water pricing, integrated management of water for the environment and water resource accounting.

It must be remembered however, that the states are primarily responsible for these reforms as water ownership is vested in the states and consequently the management of water has been state based.

The Federal Government, through its Water Act 2007, is now intrinsically involved in water management in the Murray-Darling Basin. The Act provides for overarching Commonwealth control of water planning, the establishment of the Murray-Darling Basin Authority and the Commonwealth Environmental Water Holder, and roles for the Bureau of Meteorology (BOM) with regard to water information and the Australian Competition and Consumer Commission (ACCC) to develop and monitor implementation of water trade/market and water charge rules.

Within the irrigation industry alone, significant infrastructure costs have been incurred in the development of water assets that were granted under numerous government land development policies. Without the security of a property right or with significant changes to entitlement reliability through the Basin Plan and water plans, financial institutions are, rightly or wrongly, now reviewing their exposure in rural areas with the potential to "call in" funds on loan.

As an example, the NSW Government is proposing "*a cut-back of 80% of surface water and 85% of available ground water which would decimate a very productive sector of our community"*[15]. This example illustrates the wider issue; namely, the continued attenuation of the property right and the concomitant lack of compensation when it is removed is crippling many farming communities. Worse, in many cases if these issues are not resolved soon the capacity for entire regions to make the transition to sustainability will be seriously threatened.

The NFF supports the NWI but is concerned that these principles have not been applied in a consistent and transparent manner and that the fundamental issue of water property rights has not been adequately addressed. The National Water Commission (NWC) in its 2009 Biennial Assessment noted that Australia's water reform is "still in trouble"[16] as reform had slowed on most fronts. Key areas that needed to be urgently addressed included water planning (many plans were suspended or not yet done) and over allocation was supposed to be addressed by 1994 but still is not fixed. Importantly, the NWC noted the significant Government expenditure to buy back entitlements for the environment and to invest in infrastructure for a more efficient irrigation sector.

The NFF, despite the angst and concern by many farmers and communities, supports the Government's acquisition of entitlement from willing sellers. This is because it respects the property right now afforded to irrigators. The Government could have chosen to attenuate the entitlement by simply manipulating the water rules and water plans. However, Governments have respected the property right and respected the market environment it has long held as the pinnacle of water reform.

That is not to say that the NFF doesn't have concerns about Governments impeding the market (i.e. competitive neutrality) through the range of programs and policies. The NFF remains an advocate to ensure that the water market operates with the least government interference possible.

What are Water Property Rights?

The NFF has agreed on the basic principles constituting a water property right. Every effort should be made to protect these property rights in implementing reform, including not

[15] Peel Valley Water Users Association (2010), Peel Valley Water Users Reject Water Sharing Plan, media release.
[16] NWC 2009, Troubled waters: *Australian water reform 2009*, media release 9 October 2009.

implementing small incremental changes that have significant cumulative impacts on the property right.

There are six fundamental characteristics of a water property right:

- **Duration** –to be reflective of a real property right, farmers' current licenses and water entitlements need security. These rights must be granted in perpetuity;
- **Flexibility** – modification or alteration to account for recognised constraints on the availability of water resource;
- **Exclusivity** – an entity holds the water property right exclusively so that it can be traded in a market place;
- **Quality of Title** – secured to the extent that removal or impairment is compensated and the rights are adequately registered to facilitate financing and transfer;
- **Transferability** – easy transfer of water property rights on a permanent or temporary basis; and
- **Divisibility** – capable of being shared or subdivided.

Importantly, these characteristics are not mutually exclusive, they must all be present for a true property right to be acknowledged and no alteration to one characteristic ought to be able to erode any of the other five.

There is one further characteristic that needs to be provided by Governments to complete the property right – that is indefeasibility of title. It remains the outstanding issue for those states that have formally implemented water property rights. Indefeasibility should not be reserved or deferred until some unknown time in the future.

Regional Australia (at community and environment level) requires certainty to allow future planning through a water property right which provides for:

(a) **Security of the asset** - no asset removal or impairment without just compensation;
(b) **Security over the asset** - lending institutions need adequate description and register; and
(c) **Environmental obligations** - both percentage share and reliability of access are subject to change ensuring management flexibility as long as points one and two above are recognised.

What is the current position?

All water property rights are enshrined in State legislation – some States have moved to explicitly define in legislation compensation provisions. However, others steadfastly refuse to provide such security to property rights (e.g. South Australia).

The impacts on property rights of more water for the environment are now clarified through the risk assignment provisions in the National Water Initiative (cl. 46-51)[17]. These provisions constrain the impacts to be borne by irrigators to climate change, climate variability and the first 3% of "bona fide" new knowledge. Governments wear the risk for reductions in water availability for changes to government policy and new knowledge beyond the first 3%.

[17] Intergovernmental Agreement on a National Water Initiative 2004.

The major issue is that only the Commonwealth and NSW Governments have legislated these risk assignment provisions. For NSW, the Commonwealth Government will pick up the NSW Government's risk assignment obligations under new knowledge only.

The NFF understands that each of the States and Territories may be taking different approaches. These vary from no compensatory provisions (i.e. entitlement holders wear all the risk for future changes) to Government acquiring water entitlements or investing in infrastructure to offset reduced allocations. A perverse outcome of these various approaches will be where Governments do not adopt the risk assignment provisions (e.g. by adopting an "other measures" option under Cl. 51). It may see irrigators and Government operating without competitive neutrality.

As an example, the NFF understands that the South Australian approach is that irrigators in that state bear all the risks for future changes to water allocations. At the other end of the scale, the Victorian Government intends to purchase entitlements or invest in infrastructure efficiencies to offset any impacts to its irrigators (this is allowed for all Governments under NWI Cl. 79 (ii) (a)). However, while the Victoria Government has a policy position on risk assignment, it is not legislated. Future Governments may choose alternative options leading to increased uncertainty for these irrigators.

These real concerns were noted in the 2009 NWI Biennial Assessment[18] and the Productivity Commission Draft Report[19]. A further issue is just how the provisions will operate from a practical implementation perspective. The NFF has drafted a paper on this issue and provided this to Governments.

A further confusion is that the Federal Government's legislation for risk provides for payments based on the value of entitlements (new volume and value less the old volume and value) for changes to **allocations**. It could be that irrigators will see nothing if the future value of the entitlements increases significantly due to scarcity.[20]

Importantly, the Australia Institute[21] noted that the NWI risk provisions have failed to deal adequately with risks as there is scope for uncompensated reductions to water entitlements particularly in the area of over allocation. This is real as the NWI provisions do not commence until over allocation is resolved.

The paper also notes that there is an argument for compensation due to the importance of irrigated agriculture and increasing agricultural output and profits. Moreover, compensation could lessen uncertainty for irrigators and their financiers and encourage greater water trading and additional investment.

Until these issues are resolved, property rights for irrigators will remain capable of being attenuated without adequate compensatory provisions. Moreover, it could be considered a

[18] NWC (2009). Australian Water Reform: Second Biennial Assessment of progress in implementation of the National Water Initiative. NWC. Canberra

[19] Productivity Commission (2009). Market Mechanisms for Recovering Water in the Murray-Darling Basin. Draft Research Report.

[20] The NWI also provides for Governments to buy entitlement or investing in infrastructure rather than payment of risk assignment to offset the impacts.

21 MacIntosh, A. and Denniss, R. (2004). Property Rights and the Environment Should farmers have a right to compensation? Discussion Paper 74. The Australia Institute, Canberra, Australia

perverse outcome if one irrigator has to litigate either the State or Federal Government to receive risk assignment compensation[22].

What are the major issues now?

Murray-Darling Basin Plan

The Basin Plan will deliver a new sustainable diversion limit. The construct of the Basin Plan, as described by the Murray-Darling Basin Authority, will prioritise the environment. While irrigators accept there will be change, this is not the change envisioned by "*optimising social, economic and environment*" as the main objective of the *Water Act* 2007 (Cth). This will result in a significant cut to consumptive use – which currently sits at 48% for the Basin with 52% of the Basin's water resources going to the environment[23]. Cuts of the scale purported by wetland scientists[24] or perhaps environmental groups will not only undermine the security and reliability of water entitlements, but will decimate rural communities.

Moreover, the Basin Plan will require that all water users, even those not previously part of the consumptive pool "set", will be included in this pool. As much of this involves land management, it is likely that this will need to be addressed by state governments in their accredited water resource plans.

The construct of the Water Act 2007 is also not helpful. According to the Productivity Commission[25] the design of the Basin Plan is an attempt to achieve environmental objectives in isolation to other aspects, such as land planning, engineering solutions and multiple use of environmental water for consecutive environmental assets. The Productivity Commission rightly advises that the risk is that the Basin Plan will result in over correction with serious social and economic costs. Community preference must play a factor in getting the balance right.

Interception is the elephant in the room

Interception is one of the water "uses" that will now be included within the consumptive pool. Interception includes increased water use by bush fire regeneration of vegetation, climate change, plantation forestry, return flows, farm dams and groundwater surface water connectivity.

Previously, much of these large interception activities occurred prior to a water resource assessment, namely many farm dams, plantation forestry and bush fire regeneration. Much will depend at what scale the Murray-Darling Basin Authority begins their water resource assessment, i.e. at the dams as is traditionally done, or for the whole of catchment. If the former, this will undoubtedly impact on entitlement holders.

The reason being is that a smaller pool of water will need to be shared by more water users. Historically, both the environment and water users have borne the impacts of interception. In

[22] Noting that governments can offset risk assignment obligations by purchasing entitlements or investing in infrastructure in lieu of writing out cheques.
[23] Rob Freeman, CEO Murray-Darling Basin Authority, pers.comm 10 March 2010
[24] 2010, Cautious support from scientists for the emerging Murray-Darling Basin Plan, Murray-Darling_Basin_Plan_Scientific_Consensus_statement issued 11 March 2010.
[25] Productivity Commission (2009), Market Mechanisms for Recovering Water in the Murray-Darling Basin, Draft Research Report, December.

future, it is proposed that this be sheeted home purely to consumptive use. Certainly this will enhance the environment but at a significant cost unless governments choose to ensure that these interception activities are addressed. Governments are yet to show a penchant to either enforce monitoring and compliance (e.g. farm dams policies and theft) and are reluctant to deal with interception as a whole.

This will result in a major undermining of water property rights across the Basin unless interception is managed on an equitable basis.

Over allocation

Much of water reform is designed to deal with over allocation. When the states prepared their NWI implementation plans in 2004, they stated that they had dealt with over allocation through water resource plans commenced since 2004. However, the Commonwealth, the National Water Commission, environmental groups, scientists and the wider public did not agree.

The Commonwealth arrangements for the Basin Plan are about adjusting water use to the environment to deal, once and for all, with over allocation. However, NFF understands that COAG cannot agree on a definition. The current definition is not helpful as it basically espouses that over allocation occurs when there is insufficient water to meet environmental or economic objectives (e.g. critical human needs). It is a function of climate and, where the climate estimates will be drier than modelled, there will to be over allocation.

Governments changing water rules

The nature of water property rights is that they are entirely dependent not only on the legislation but all rules, regulation and plans at a state, Basin and catchment level. These rules determine how water is shared. Changes to the rules result in changes to the amount of water delivered over the long term. It is the reason why the state shares have been enshrined in the Murray-Darling Basin Agreement and *Water Act 2007* (Cth). However, enshrining state shares does not stop irrigator entitlements being eroded through such initiatives as the new Basin Plan, reserves and triggers for critical human needs and more conservative allocation assessments.

It should be noted that all water that irrigators use counts towards the establishment of their reliability, i.e. how much water irrigators can expect over 100 year period. This includes water from formal entitlements and licensed water (e.g. floodplain harvesting and supplementary or unregulated flow events).

Any changes must be modelled to ensure that there is no third party or unintended consequences of such changes.

The carry over beast

The NSW Government was the first to introduce a carryover policy. This was aimed at transferring the risk from government to the individual farmers. Irrigators treated it like an insurance policy, including that as allocations increased over the irrigation season, carry over is lost so that no more than 100% could be utilised if announced.

Moreover, the NSW Government's intent was to manage the cap – as farmers had to forego use in the current year to have the water available to them in the subsequent year. The only way around this was for irrigators to buy the water from those who didn't want it to carry over. Farmers have warmly endorsed the use of carry over, particularly those who use general or low security entitlements but have high security production (e.g. some horticulture and dairy).

High security water users in NSW traditionally do not have access to carry over – because of the nature of their entitlement reliability and the need to ensure this has priority of allocation. However, carryover has no legislative base. It is not mentioned in the NSW legislation and only mentioned in water plans to the extent of a maximum valley limit.

Other governments have decided to implement this policy, namely as a response to the severe drought conditions, i.e. there is a strong push into the future for privatising risk.

However, there are some lessons from NSW. In 2006/07 the NSW Government suspended all water in accounts – this included carry over. The response was due to errors in accounting for transmission losses that greatly increased.

Irrigators regard carry over as the highest property right – this is because it is water that is physically in the dam and ought to be available for use providing there is sufficient delivery water.

The actions of the NSW Government significantly affected general security irrigators (carry over is not typically available to high security water users due to their level of security). Moreover, the NSW Government refused to cut allocations first for all water users (the lower property right as this depends on water inflows during the irrigation year), then carry over.

The cut occurred after rice and other crops had been planted and nearly halfway through the milk production season. While the NSW Government did offer a compensation package, this was not nearly sufficient to offset the sunk costs of either the irrigated enterprise or the loss in production income that would have been derived from a harvested crop. It is important to note that irrigators may have entered the market to acquire water to finish crops where there may have been insufficient allocations to finish production.

In an era where Governments impose on irrigators the requirements to manage their own risk, and that irrigators should look to the markets to find additional water, these actions were regrettable. The flow on effects were felt beyond NSW into water market participants in Victoria and South Australia who had acquired NSW water.

Ultimately, the correct approach of NSW ought to have been to enter the market to acquire the necessary water to cover the transmission and other losses or to cut allocations only. Farmers would have at least been somewhat compensated for the inability to have their water delivered to planted crops.

From a moral and ethical perspective, NSW irrigators were denied the risk management arrangements that they had put in place.

Shepherding of environmental water

While supported by many, the danger of shepherding of environmental water is that this may result in third party impacts to other irrigators, and may lead to a redefining of the property right of environmental water to a super high class of water. The NFF does not support such approaches unless this is modelled. As a high level principle, there should be no winners or losers for irrigators in implementing such policy approaches.

Commonwealth Water Trading

The Commonwealth is a monopoly player in the water market. With $3.1 billion (and over 40% already spent), the Commonwealth's activities undoubtedly have an impact on the market.

In water or other markets, information is king and power. A fully functioning water market should be characterised by the availability of current information (i.e. transparency) on all water trades.

Commonwealth acquisitions are not provided to the market in a timely or transparent way. As a result, irrigators need to rely on brokers to lodge tenders for sale otherwise they are faced with attempting to offer several bids to attempt to find the right price range. This significantly increases their transaction costs. In short farmers wishing to participate in the two week tenders underway in 2010, face the real possibility of missing the mark and failing to sell water. This is particularly egregious if they are distressed sellers.

Importantly, the bilateral agreements between the Commonwealth and NSW and Victoria and other constraints on trade are affecting the ability of farmers to sell water and leading to impacts on the market i.e. there has been a collapse in the value of some water products of up to 34%. Table 2 below shows the market prices as provided on the Department of Environment, Water, Heritage & the Arts (DEWHA) website and prepared by GHD Hassall consultants. The consultant's analysis shows water product values largely increasing over the period to the end of 2009.

Table 2: Market price information for Murray-Darling Basin Water Entitlements[26]

Region/Entitlement	***Volume Weighted Average Prices (per ML or Unit Share)***		
	2007/08	***2008/09***	***1st half 2009/10***
Southern Basin – High Security/Reliability			
NSW Murray High Security	$2,161	$2,447	$2,798
NSW Murrumbidgee High Security	- $2,800 -	$3,100	No Price
Vic. Goulburn High Reliability	$1,935	$2,260	$2,345
Vic. Murray High Reliability above Choke	$1,683	$2,078	$2,163
Vic. Murray High Reliability below Choke	$1,941	$2,248	$2.362
South Australia River Murray Prescribed	$2,241	$2,402	Not available
Southern Basin – General Security and Low Reliability			
NSW Murray General Security	$893	$1,163	$1,395
Murray Irrigation Limited (adjusted)	$901	$1,154	$1,307
NSW Murrumbidgee General Security	$926	$1,287	$1,282

[26] Source: DEWHA website: http://www.environment.gov.au/water/policy-programs/entitlement-purchasing/market-prices.html.

Region/Entitlement	*Volume Weighted Average Prices (per ML or Unit Share)*		
	2007/08	***2008/09***	***1st half 2009/10***
Vic. - Goulburn Low Reliability	$202	$195	$184
Vic. Murray Low Reliability above Choke	$197	$164	$176
Vic. Murray Low Reliability below Choke	$140	$199	$192
Central and Northern Basin – General Security			
NSW Lachlan – General Security	$562	$668	$746
NSW Macquarie – General Security	$1,232	$1,236	$1,330
NSW Namoi – General Security	- $2,050 -	$2,116	$2,200
NSW Gwydir – General Security	- $2,198 -	$2.263	$2,354
Qld Borders supplemented medium priority	No price	$2,206	Not available
Qld Borders unsupplemented	No price	$1,804	Not available
Warrego supplemented medium	No price	No price	Not available
Warrego unsupplemented	No price	No price	Not available

Actual Commonwealth acquisitions have varied. The 2007-08 round saw the Commonwealth acquire 24.353 GL for $34.4 M – an average cost of $1,413/ML. The 2008-09 tender saw water prices average around $1,560/ML[27]. Again, the acquisitions show an increased value.

The table below is sourced from the DEWHA website and shows the impact of the new tender rounds and the reduced property right values across all water products – essentially distressed sellers are undervaluing their water to ensure that their bid is accepted within the constraints of a two week tender. The effect of a monopoly market player can clearly be seen and perhaps is driven from a tender open all year (i.e. 2008-09) versus three quick two week tenders. Not only are these activities impacting irrigators, but they are also impacting the Commonwealth (and taxpayers) asset values.

Table 3: Average price of offers pursued from the January 2010 tender, by catchment

Catchment	Entitlement class	Average price of offers being pursued
Vic		
Goulburn	High Reliability	$2,054/ML
Murray Below Choke	High Reliability	$2,072/ML
Murray Above Choke	High Reliability	$1,795/ML
NSW		
Murrumbidgee	General Security	$930/ML
Murray Below Choke	General Security	$967/ML
Murray Above Choke	General Security	$870/ML
SA		
Murray River	High Reliability (Class 3A)	$2,047/ML

Finally, the actions of the Commonwealth at the closure of its acquisition package must be clearly spelt out to the market. It will be untenable for the Commonwealth to keep spending significant amounts in the market and then abruptly stop. This will only lead to market collapse and the property rights for irrigators will be de-valued. Where these underpin financial borrowings, there will be significant impacts more broadly.

[27] NFF notes that the DEWHA website is still being adjusted for these purchases and this may vary when the round is finalised.

Therefore, the NFF is advocating a clear arrangement for the phase down of the Commonwealth program, and that this arrangement is clearly and transparently spelt out to the water market well in advance.

4. Natural resource management

The Australia Institute[28] notes that over the decade to 2004, Governments have sought to introduce a range of laws to provide protection to native vegetation and biodiversity. The Australia Institute paper observes that the Government remains the ultimate owner of land and water – this being backed by Government's right/ability to regulate how the land is used commensurate with legal limits.

In terms of biodiversity, the areas that continue to have impacts on farmers are the *Environment Protection and Biodiversity Conservation Act* (EPBC Act) 1999 and state vegetation legislation.

Compounding direct impacts on property values, the EPBC Act is also causing impacts on the viability of some agricultural regions. Uncertainties in the complex operational aspects of the EPBC are denying farmers the ability to plan in the longer term. For example, the majority of farmers across the country are unsure about what constitutes routine farming activities in terms of threats to plants and/or communities listed under the Act or what is "substantial". Furthermore, there continues to be a lack of clarity and duplication with state regulation.

These uncertainties can also result in perverse incentives and poor environmental outcomes for effective long-term stewardship of the natural resource base.

In the same ways that the Commonwealth EPBC legislation is causing financial impacts on farmers, there are numerous documented examples of farmers losing asset value and income earning capacity through vegetation legislation and instruments enacted by the States.

To illustrate the issue of direct impacts through diminution of property values, in one documented case of an approximately 5000 ha property in central Queensland, the diminution of market value resulting from enactment of state vegetation controls is up to $400,000, or around 29%. Few family-run businesses in other sectors of the economy would be expected to absorb the levels of asset devaluation being experienced.

A recent study undertaken by one of the country's most respected resource economists, Professor Jack Sinden of the University of New England, quantifies the scale of the problem. The study found that in just the Moree Shire alone the cost to farmers of the Native Vegetation Conservation Act was $20 million per year[29]. If this study was replicated across the more than 130 rural local government areas in NSW, it is expected that the cost to farmers in just one state and from just one environmental edict would be measured in the billions per year.

For the Productivity Commission's 2004 Inquiry into the Impacts of Native Vegetation and Biodiversity Regulations, the NFF submitted eleven case studies on the impacts of regulation. These were also provided to the Senate Inquiry into the operation of the *Environment*

[28] MacIntosh, A. and Denniss, R. (2004). **Property Rights and the Environment Should farmers have a right to compensation?** Discussion Paper 74. The Australia Institute, Canberra, Australia.

[29] Sinden, J A 2005, "Conservation of Native woodland by farmers in Moree Plains Shire, New South Wales", *Australian Forestry*, 68 (1), 65-72.

Protection and Biodiversity Conservation Act 1999 whose first report was released in March 2009. NFF would be happy to again provide these on request.

Inquiries into NRM and regulation

There have been numerous inquiries into the impacts of NRM legislation and regulation on farmers. The more recent key ones have been the 2004 Productivity Commissions report into the Impacts of Native Vegetation and Biodiversity Regulations[30] and the 2007 Productivity Commission Annual Review of Regulatory Burdens on Business - Primary Sector[31].

The 2004 Productivity Commission report notes that retention, management and rehabilitation of native vegetation and biodiversity on private land is important but existing regulatory approaches are not as effective as they could be. Importantly, the Productivity Commission noted that "*many landholders are being prevented from developing their properties, switching to more profitable land use and from introducing cost saving innovation"*[32].

Suggested key improvements included following good regulatory practice that promoted transparency and accountability. But a more fundamental change is needed to better target policies to achieve specified environmental outcomes efficiently – and for a more equitable cost-sharing arrangement. The Productivity Commission suggested devolution to regional level – which is clearly against the format of the current Caring for our Country program which clearly focuses on the delivery of national priorities.

The Productivity Commission advised there was a need to encourage and reward the ongoing cooperation and effort of landholders. Landholders would have positive incentives to retain and manage native vegetation and deliver specified environmental outcomes and payments for public-good conservation would facilitate increased scrutiny of costs and benefits of policy intervention.

This clearly refutes the concerns expressed by the Environmental Defenders' Office Draft paper on the payment of "compensation" to farmers.

Moreover, the Australian Government's response to the report concurs with the findings of the Productivity Commission:

> *"Over and above agreed landholder responsibilities, additional biodiversity conservation services sought by the community should generally be purchased from landholders, where intervention is deemed necessary and cost effective. For example, purchase could be through providing transitional assistance payments where mandatory biodiversity standards are changed, incentives for voluntary biodiversity management services, or purchase of specific biodiversity management services*[33]*"*

[30] Productivity Commission (2004), Impacts of Native Vegetation and Biodiversity Regulations, Report no. 29, Melbourne.
[31] Productivity Commission (2007), *Annual Review of Regulatory Burdens on Business: Primary Sector*, Research Report, Canberra.
[32] Productivity Commission (2004), Impacts of Native Vegetation and Biodiversity Regulations, Report no. 29, Melbourne. pp.xxii
[33] Commonwealth Treasurer (2004), The Australian Government's Response To Recommendations In The Productivity Commission Inquiry Into The Impacts Of Native Vegetation And Biodiversity Regulations, pp.5. Accessed 16 March 2010.

And

> *"...prior to the removal of landholder's rights, State and Territory Governments must consult fully with landholders and any other interested parties and meet any legal requirements for direct compensation to property rights holders[34]."*

The Australian Government clearly supports payments to landholders for imposed biodiversity intervention measures voluntary services. Moreover, the Australian Government supported compensation for removal of landholder rights.

The 2007 Productivity Commission report notes that Government imposed regulation on the primary industry sector has a "heavy burden" due to regulations that are "*unnecessarily burdensome, complex or redundant or are duplicative across portfolios or with state and territory regulation*".

In terms of land, the Productivity Commission recommended:

- improving communication about the significant impact trigger under the EPBC Act;
- undertaking negotiations for specific bilateral agreements for approvals under the EPBC Act;
- evidence-based risk assessments and rational risk management; and
- assessments of the loss of property rights imposed by regulatory changes which are aimed at achieving community-wide objectives[35].

Regarding the last point, the Productivity Commission observes that regulatory changes in the pursuit of national objectives can effectively impose a loss of property right by limiting the way in which land and other resources can be used. Participants questioned their disproportionate burden and that where compensation had been provided it was less than the loss imposed[36].

What is the solution?

Since the 1980s, the NFF has been actively seeking to codify property rights of farmers, particularly in relation to land and water. Much work has been undertaken trying to ascertain the problem and provide constructive solutions. Some of the highlights of this work include the Decade of Landcare (which remains an enduring icon 21 years after its inception) and the establishment of the Environmental Stewardship Program (now part of Caring for our Country program) to assist private land managers to actively manage and enhance protected biodiversity on their land.

Available online: http://parlsec.treasurer.gov.au/Ministers/phc/Content/publications/pub_downloads/066_Government_response.pdf.

[34] Commonwealth Treasurer (2004), The Australian Government's Response To Recommendations In The Productivity Commission Inquiry Into The Impacts Of Native Vegetation And Biodiversity Regulations, pp.5. Accessed 16 March 2010. Available online: http://parlsec.treasurer.gov.au/Ministers/phc/Content/publications/pub_downloads/066_Government_response.pdf.

[35] Productivity Commission (2007), *Annual Review of Regulatory Burdens on Business:Primary Sector*, Research Report, Canberra, pp. xii.

[36] Ibid, pp. xviii- xix.

The NFF has called on government to commit to public investment in biodiversity where wider community benefits are anticipated such as healthy environments and rivers, and biodiversity conservation[37]. Moreover, the recognition that private land conservation is important and should be funded from the public purse is not a new concept. This case was made by the Industry Commission (now the Productivity Commission) in its 1998 Inquiry:

> *The public good nature of biodiversity and environmental amenity indicates that relying on altruism, even with encouragement from governments, is likely to be insufficient to meet community demands in a number of cases.....As many inquiry participants acknowledged, ensuring that on-farm habitat is adequately managed for conservation purposes will require the community to contribute to the costs*[38].

For a long time, the NFF has also recognised that under land ownership, landholders have a bundle of rights which may be adversely impacted on by government action to meet public conservation objectives. In the case of conservation of native vegetation, landholders may face identifiable costs in terms of opportunity cost of production on the land foregone and the ongoing maintenance costs of managing the land to retain its conservation values.

As a consequence landholders are under ever increasing pressure to meet community expectations for the preservation of environmental values. However, at the same time there is little made available to the landholder in terms of recompense for loss of property rights, productive land or future development potential[39].

This imbalance needs to be rectified and we remain a long way from getting to an appropriate balance that recognises farmers' property rights and actions or regulation that exceed their statutory duty of care.

As a remedy, the NFF has therefore outlined the following broad areas that need resolution before farmers, governments and the community can positively move forward.

1. Legal clarity through the courts

The NFF, through the AFFF, has the capacity to provide financial assistance to individual farmers seeking to challenge unfair and unwarranted barriers to the development of sustainable farming practices and vibrant regional communities. In recent years issues relating to property rights have become particularly prevalent in the matters being funded by the AFFF.

The AFFF seeks to fund matters that may result in a national precedent and are in the interests of rural Australia. In most instances the AFFF is funding legal cases to establish greater clarity and certainty for farmers.

[37] NFF (2000). House of Representatives Standing Committee on Environment and Heritage Inquiry into Public Good Conservation – Impact of Environmental Measures Imposed on Landholders. Canberra.
[38] Industry Commission (1998). A Full Repairing Lease: Inquiry into Ecologically Sustainable Land Management. Pp.338. Canberra.
[39] NFF (2000). House of Representatives Standing Committee on Environment and Heritage Inquiry into Public Good Conservation – Impact of Environmental Measures Imposed on Landholders. Canberra.

A case that has received assistance of the AFFF and is of particular relevance to this inquiry is Spencer v Commonwealth of Australia. The matter has recently been granted special leave to appeal to the Full Court of the High Court of Australia and is likely to be heard mid-year. The case relates to the inability of Mr Spencer to clear his land and the consequential impacts particularly relating to the Commonwealth Government's capacity to utilise land clearing for the purposes of meeting targets in accordance with the Kyoto protocols.

The determination of the case may have a significant bearing on the questions being considered in this inquiry.

Mr Spencer claims that restrictions resulting from State legislation affected the acquisition or expropriation of some of his interests in his property and that it has occurred by the authority of Commonwealth legislation and as such the Commonwealth legislation are laws with respect to the acquisition of property which do not provide for just terms as required by section 51 (xxxi) of the Australian constitution. As a consequence Mr Spencer is seeking compensation relating to the Commonwealth acquiring interests in his property. A summary of Mr Spencer's claim can be found at paragraph 6 of the primary judgment of the Full Court of the Federal Court of Australia in Spencer v Commonwealth of Australia [2009] FCAFC 38.

The impact of the following legislation will be examined by the High Court in the Spencer matter:

- Native Vegetation Act 2003 (NSW)
- Native Vegetation Conservation Act 1997 (Cth)
- Natural Resources Heritage Trust of Australia Act 1997 (Cth)
- Natural Resources Management (Financial Assistance) Act 1992 (Cth)

The impact on property rights through the interaction between Commonwealth and State legislative instruments and Inter-Governmental agreements (IGA) has also been the subject of High Court review in the past 6 months through the cases of ICM Agriculture Pty Ltd v The Commonwealth [2009] HCA 51 and Arnold v Minister administering the Water Management Act 2000 [2010] HCA 3. Both matters considered, inter alia, the status of water as a property right. The AFFF provided financial assistance to the Arnold matter.

In both matters the High Court rejected the assertions of the farmers that the alleged role of the Commonwealth Government through an IGA amounted to an acquisition of property in accordance with section 51(xxxi) of the Constitution. The Arnold case also considered the consideration of section 100 of the Constitution that specifies that the Commonwealth shall not abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation. It was found that the Commonwealth had not contravened section 100 as the laws in question were not in relation to trade or commerce but more importantly from a property rights issue, the waters of rivers did not extend to groundwater.

Pertinent to the issue of property rights from the ICM and Arnold cases is the clear conclusion that a water licence is an entitlement to access water rather than ownership to water and as such can be varied by government which may have a significant financial impact on a farmers' business. As a consequence the NFF is of the view that it is critical that any change to water licensing arrangements by governments will require clear and fair

compensation provisions relating to changes in access to water and risk assignment provisions relating to changes in water allocation. This matter is discussed in more detail in the water section of this submission.

The AFFF has been, and continues to be, involved in the question of impacts of mining on agriculture and on natural resources. The most recent being the cases of Brown & Anor v Coal Mines Australia; Alcorn & Anor v Coal Mines Australia Pty Ltd [2010] NSWSC 143.

The Brown and Alcorn matters were the subject of a recent decision of Justice Schmidt in the NSW Supreme Court where it was determined that Coal Mines Australia P/L had not complied with the notification requirements of an exploration licence to ensure that all those with a legal interest in the property were made aware of exploration and had the opportunity to be involved in negotiations to determine the conditions of the access arrangements.

Justice Schmidt also identified that there is and should be the capacity to attach specific conditions to the access arrangement relating to the exploration licence. This is of particular importance because unless there are conditions contained in the access arrangements rather than a reliance on conditions attached to the exploration licence granted by the Minister there is no capacity of the landholder to deny access until the contravention ceases or is remedied to the reasonable satisfaction of the landholder.

There has been commentary that this case will have disastrous impact on the economy of NSW and on mining in general. The NFF believes this to be an alarmist view. Rather, the Supreme Court of NSW has effectively highlighted that the Mining Act in NSW acknowledges that there can well be significant economic and environment impacts from these activities and as such appropriate measures should be incorporated into the process of developing an access arrangement and the substance of the access arrangement in accordance with the Act. It is noted that at the time of writing the right to appeal the decision was still in place.

Despite this significant decision, the NFF is of the view that greater work should be undertaken at a state level to ensure that the rights of landholders are considered in more effective terms, that greater clarity and equity is provided as to the management of the use of land by a mining licence or exploration holder (an example of the inadequacies of the legislation is in Parkins v Lightning Ridge Miners Association Limited [2009] NSWSC 621 – also funded by the AFFF); that independent research is conducted as to the environmental impacts of exploration and extraction of minerals and gas and that greater scrutiny and enforcement of licence conditions is undertaken by State Governments.

Importantly, the above cases and their outcomes will be vital in clarifying the boundaries that Government and industry need to respect when operating or developing legislation relating to regional land use. Or alternatively, in some instances the cases will identify where there are gaps in the legal framework that necessitate legislation review to correct these inequities. The AFFF will continue to assess cases as they are presented to determine whether or not assistance should be granted to provide greater clarity relating to property rights matters.

The NFF urges the Government to support and adopt the following recommendations that will ensure that the issue of resolving property rights disputes remain out of the expensive legal system and to ensure that farm businesses can attain surety over their property rights into the future.

2. Compensation mechanisms for decisions affecting property entitlements

Farmers currently provide, either voluntarily or by legislation, a range of environmental outcomes on behalf of the entire community yet they bear up to 100% of the cost with little public recognition. Many governments, environmental and community groups now acknowledge that this can no longer be the case if we are to optimise outcomes for our scarce natural resources. Farmers rightly view themselves as environmental managers and have huge potential in delivering environmental outcomes demanded by society. The NFF recognises the opportunity to re-build the trust and understanding between farmers and the Australian community to harness this potential.

The NFF notes that many issues of compensation in arrears for past environmental regulations, particularly those relating to land clearing bans, are currently before the courts. The NFF awaits the outcome of these hearings intently and hopes that they will address many of the issues surrounding compensation foregone relating to these decisions once and for all.

However for future government decisions affecting property entitlements, a new method must be adopted to ensure that we do not have the compensation definition issues experienced in the past.

It is imperative that we move away from a system of ad hoc environmental actions and regulations to one that is supported by clearly defined outcomes that are fully integrated in delivery. Through articulating these principles, benefits can be attained through streamlining all levels of government, providing stakeholders with a better understanding of the importance of their contributions, increasing resource certainty, and being better able to measure performance.

The NFF has been a long term advocate for voluntary and incentive based approaches toward achieving sustainable outcomes in natural resource and environmental management. Such approaches encourage participation, reward those who invest and foster community ownership and commitment to the resolution of issues within regions. Market based instruments (MBI's) are more likely to provide appropriate incentives for responding to environmental problems compared to regulatory approaches, but unless they are well designed, can also be costly and have significant redistributive effects.[40]

The potential advantages of MBI's include flexibility, least-cost abatement, information generation, and better alignment of incentives for conservation or investment in the resource; however costs can include information and input requirements in defining, allocating, measuring and enforcing property rights.[41]

MBI's are being used increasingly for environmental management (including in Australia), but it must be ensured that these instruments are well directed, appropriately designed and effectively implemented, so as to avoid leading to limited environmental gains and high regulatory costs.

[40] PriceWaterhouse Coopers, op. cit., p. 3
[41] Productivity Commission, op. cit., p. 4

Public sector stewardship initiatives

The NFF supports the use of publically funded Stewardship or Conservation Agreements, entered into voluntarily as a positive means for enhanced conservation of native vegetation and biodiversity. Payments for such agreements recognise the value of what is being conserved and adequately recompenses the costs incurred by the landholders. Payments through such agreements should not only recognise the financial costs to the landholder of conservation, but should also act to increase wider community understanding of the costs associated with conservation of environmental assets.

Perhaps two of the most recent examples of MBI's being implemented in public policy design are in the Caring for Country Programme (Environmental Stewardship) and the Queensland Nature Refuges Program. An outline of the three programmes is listed in Boxes 1 and 2 below. Further information on Environmental Stewardship is located at Attachment 3.

Box 1: Caring For Country – Environmental Stewardship[42]

In late August 2008, the NFF welcomed the Australian Government's launch of a $42.5 million pilot environmental stewardship program to target endangered Box Gum Grassy Woodlands in the Lachlan and Murrumbidgee Valleys of NSW. This announcement was closely followed by a tender to widen the stewardship program to Box Gum Grassy Woodlands in the Northern Basin. This is the first stage in a process of rewarding farmers for undertaking environmental works on behalf of the broader community that are above and beyond their duty of care.

The programme pays land managers to undertake agreed actions beyond their regulated responsibilities to achieve public benefit environmental outcomes that contribute to the long-term protection, rehabilitation and improvement of targeted environmental assets on private land. Relevant actions could include changing property management in relation to aspects such as;

- Stocking and grazing intensity
- Implementation of a different fertiliser regime
- Weed management

The NFF recognized that this program has been outstandingly successful with uptake over the past two financial years, a total of 150 land managers have been contracted to manage over 11,000 hectares of the critically endangered Box Gum Grassy Woodland ecological community on their properties. Importantly, contracts are issued for up to 15 years, which overcomes many problems associated with election terms. During 2009 and 2010, the NFF has been calling for this program to be widened to cover all matters of national environmental significance across all geographic regions[43].

Moreover, this program is in its final 15 months of funding under Caring for our Country. The most recent Business Plan seeks only expression of interest to run the program in South Australia. This is clearly not seeking to expand the program widely.

[42] Australian Government Natural Resource Management Team (2009) *Caring for Our Country- Environmental Stewardship*, Caring for our Country is an Australian Government initiative jointly administered by the Australian Government departments of Agriculture, Fisheries and Forestry and the Environment, Water, Heritage and the Arts, http://www.nrm.gov.au/index.html, (Accessed 23/4/09)

[43] See NFF Pre-budget Submissions for 2008 and 2009. Available online: http://www.nff.org.au/publications.html.

Box 2: Queensland's Nature Refuges Program

Nature refuges are protected areas under the Queensland Government's Nature Conservation Act 1992. Nature refuges form part of the National Reserve System, Australia's network of parks, reserves and protected areas. Nature refuges have recently gained popularity among landholders as a means of protecting areas of conservation significance, while allowing for the continuation of sustainable agricultural production. In many cases, nature refuges provide a valuable wildlife corridor between other protected areas such as national parks and state forests.

Nature refuges now protect in perpetuity over 1.7 million hectares of Queensland through voluntary nature refuge agreements.

Farmers support the Queensland Government's Nature Refuge Program because it:

- recognises the vital role which Queensland landholders play in the protection of significant natural and cultural values on their properties
- allows the continuation of sustainable primary production activities, including grazing and pasture development
- recognises individual management requirements, including the need for pest and weed, fire and timber management, to be undertaken
- does not change public access to properties
- involves entering into a voluntary agreement (covenant) which is negotiated directly between individual landholders and the Queensland Government
- provides significant incentives and assistance for landholders to meet their obligations under a nature refuge agreement.

Nature refuges now protect in perpetuity over 1.7 million hectares of Queensland through voluntary nature refuge agreements.

The NFF believes markets should play a larger role in meeting natural resources and environmental needs in the future. However, the lack of a clearly defined property rights regime in Australia remains an impediment to the emergence of more efficient markets for key natural resources. Farmers require certainty of property rights for investment. The NFF believes a property rights regime which is clearly defined, tradeable and provides security of supply is fundamental to the future viability of Australian agriculture and a priority for sustainable resources management.

Property rights and responsibilities are given expression through law (common or legislation), custom or tradition. The Productivity Commission[44] has defined four main characteristics of an efficient property rights system in terms of land management:

- **universality** – all resources are privately owned and all entitlements (rights over how they can be used) are completely specified;
- **exclusivity** – all benefits and costs that result from owning and using the resource only accrue to the owner, either directly or indirectly by sale to others;
- **transferability** – all property rights are transferable from one owner to another in a voluntary exchange; and
- **enforceability** – property rights are secure from involuntary seizure or encroachment.

[44] Productivity Commission (2001). Cost Sharing for Biodiversity Conservation: a Conceptual Framework.

The NFF believes the above principles should be upheld in the design and implementation of Government programs that affect land owners. Yet it should also be remembered that there are also potential economic solutions to deliver many environmental initiatives that are demanded by the public that may not require government funding.

Private sector stewardship initiatives

The NFF believes that there is also an enormous opportunity to constructively participate in the environmental debate and engage all stakeholders toward achieving sustainable and resilient outcomes, by improving the understanding of private sector/consumer funded stewardship initiatives broadly based around carbon, water and biodiversity. Already we are seeing that many consumers are prepared to pay premiums for green energy, organic food and fair trade products.

The NFF believes that this can and will expand into other, broad based environmental services as well. On the domestic front, there are real opportunities for the private sector to provide incentives through the development of voluntary industry/community driven initiatives such as commodity specific Best Management Practice (BMP) programs, the Environmental Champions Program, and Landcare. Internationally, we are already starting to see signs that the paradigms are changing, and consumers are voluntarily paying for intrinsic product values in the delivery of environmental services above and beyond farmers' accepted duty of care[45]. Box 3 below outlines some of these private sector/consumer funded stewardship initiatives.

Box 3: International private sector stewardship initiatives[46]

Water
Initiative: Watershed Agricultural Council.
Target: Water quality – nutrients.
Funding: User pays - New York City water utilities pass on costs to water ratepayers.
Key points: Voluntary, whole of landscape, flexible, farmer initiated, incorporating funding for capital expenditure including machinery and infrastructure.
Location: Catskill Mountains, New York State, USA.
Overview: Under the Clean Water Act New York City's nine million residents were faced with building a US$8.0bn water treatment plant with daily operating costs of US$1.0m. Instead the city's residents pay farmers in its' two catchments a total of US$7.0m/year to mitigate nutrient and pathogen runoff from their farms. The farmer initiated, science based, voluntary programme, receives technical support from the USDA (United States Department of Agriculture) and Cornell University. Non-traditional funding is available in the form of Nutrient Trading Credits, which can be allocated toward the capital cost of farm machinery and infrastructure that further mitigates nutrient and pathogen runoff. Farmers have also developed a "Pure Catskills" eco-brand to market the benefits of their fresh and environmentally grown local produce.

Habitat
Initiative: Operation Bumblebee.
Target: Bumblebee habitat.

[45] Archer. S, (2009) *Market Based Ecosystem Services - A proposed National Stewardship Initiative*, A report for the Nuffield Australia farm scholars
[46] Archer. S, (2009) *Market Based Ecosystem Services - A proposed National Stewardship Initiative*, A report for the Nuffield Australia farm scholars

Funding: Mixed. R&D - industry, incentives – government.
Key points: Voluntary, industry lead R&D, implemented on marginal farmland, significant multiplier effect.
Location: UK arable farmland (with pilot sites now in Portugal, Spain, France, Italy, Germany and Hungary).
Overview: Bumblebees are an important pollinator species and their decline poses a significant threat to UK ecosystems and food production. Research undertaken by agribusiness company Syngenta led to the development of a pollen and nectar seed mix enabling the re-establishment of the bumblebee's food source. Farmers plant the mix on their marginal land including field boundaries and corners. They are paid UK£450/ha per annum through the government's stewardship programme and derive marketing benefits from food retailer Sainsburys. The initiative has succeeded in planting 1,000ha of habitat, which with a multiplier effect of every 1ha planted delivering 1,000ha of pollination services, has resulted in sufficient new habitat to provide pollination services to 25% of the UK's arable land.

Renewable energy
Initiative: Samsø Renewable Energy Island.
Target: Renewable energy, carbon emissions.
Funding: 93% private, 7% government.
Key points: Community initiated, self sufficient in renewable energy, selling green energy and carbon credits.
Location: Samsø Island, Denmark.
Overview: In 1997 the Danish Government called for expressions of interest from communities willing to demonstrate a 100% transition to complete self-sufficiency with renewable energy within ten years. Samsø, a 144 sq km island, known largely for its agriculture and tourism was awarded the project. Using a combination of windmills, central heating plants, biomass and solar generation, it successfully converted to 100% renewable energy. The project was predominantly funded by the islands' 4,100 inhabitants, costing €14,000 per person (93%), with the government contributing €1,000 per person (7%). A small-scale biodiesel plant has been developed using canola seed, with the high protein "cake" bi-product fed to livestock. Samsø's per capita carbon footprint has reduced 15.1 tonnes, from 11.1 tonnes to -4.0 tonnes per person, enabling the sale of carbon credits.

To facilitate private sector/consumer funded stewardship initiatives, the NFF believes that government should provide enabling legislation. This should allow for a lightly regulated non-government organisation to administer the scheme and the private sector/consumers to develop and foster a marketplace for consumers to pay land managers who deliver environmental benefits above their duty of care[47].

Is there a role for regulatory approaches?

The NFF notes that regulatory approaches do have their place in circumstances where price incentives may be ineffective in changing consumer behaviour due to myopia and inertia (particularly in areas like encouraging energy efficiency in vehicles and buildings where setting compulsory minimum standards may be the only way to guarantee adequate change)[48].

[47] Archer. S, (2009) *Market Based Ecosystem Services - A proposed National Stewardship Initiative*, A report for the Nuffield Australia farm scholars
[48] PriceWaterhouseCoopers (2009) *Carbon Taxes vs. Carbon Trading – Pros, cons and the case for a hybrid approach,* Pg 3, PriceWaterhouseCoopers LLP, London

However regulation of inputs and/or outputs to solve environmental problems has a number of disadvantages including high costs, inflexibility, ineffectiveness, and industry capture. Importantly, regulatory decisions take place in the absence of information about alternative uses that market trading can generate[49].

At a maximum, regulation can only ever be credited with slowing down the rate of change. To this end, it must be recognised that regulatory approaches are extremely limited in their capacity to actually enhance environmental outcomes, as is the desire of Australian farmers and the community at large.

Regulatory practices have been utilised by State Governments in Australia in the past, through the restrictive regulations of land clearing that have enabled Australia to meet its Kyoto targets. This regulatory practice has come at significant cost to Australian farmers, led to numerous perverse outcomes and has created significant limitations to future farm productivity.

Concerned about the obvious 'command and control' approach to implementing many regulatory approaches to environmental problems, the Productivity Commission analysed the costs of poorly designed regulatory responses to environmental problems in Australia. Table 4 outlines some of the findings from this inquiry;

Table 4: Productivity Commission analysis on the costs of poorly designed regulatory responses to environmental problems in Australia[50]

Native Vegetation and Biodiversity	Native vegetation and biodiversity regulations found that existing regulatory approaches are not fully effective while imposing significant costs.
Historic heritage	Historic heritage inquiries concluded that because heritage regulation does not significantly account for the costs of conservation, it can have perverse effects.
Energy Efficiency	An Energy Efficiency inquiry argued that although government intervention to overcome failures in markets for energy efficiency technologies may be warranted, a light-handed regulatory response is likely to be preferable to more prescriptive and intrusive approaches.
Waste Management	Waste management policies contain many inappropriate and inconsistent objectives, resulting in some unrealistic, and potentially costly, waste minimisation targets.
Water Quality	A report on Water Quality in the Great Barrier Reef catchment argued that existing water quality policies, based largely on prescriptive controls, should be replaced with measures tailored to particular land uses, locations, and pollutants, providing land users with the flexibility to choose abatement actions best suited to their property.

Thankfully for Australian farmers, the NFF believes that Government is finally coming to recognise what farmers, environmentalists and scientists have known for some time, that

[49] Productivity Commission, op. cit., p. 4
[50] Productivity Commission, op. cit., p. 4

working with the people who live, work and care for the land, whether they are farmers, indigenous Australians or indeed people in regional communities, is the most effective way of delivering environmental outcomes. This is not to mention the benefit of supporting food and fibre production, jobs and the social fabric of communities and regions.

3. Define a public benefit test for NRM proposals

The issue of private versus public conservation measures and how these continue to attenuate land property rights must be resolved to provide future certainty – for farmers and the wider community. To do otherwise will inevitably lead to continuing conflict which will either result in litigation or legislation.

Public benefits tests have been talked about for some time. However, to date, there are no agreed definitions on what matter ought to be considered, no routine requirement and transparency is the critical element. The National Competition Policy reforms proposed a public benefits tests but this was never defined[51].

The NFF believes that the Commonwealth and State Governments should adopt and implement a comprehensive, rigorous and transparent Public Benefit Test to be applied prior to the implementation of any new Government regulations or legislative changes that may apply particularly to the transfer of property rights from landholders to the community.

Such a Public Benefit Test would:

- provide an assessment of the full economic and administrative costs of all natural resource management and environmental proposals;
- provide an assessment of social and other benefits and costs arising from the proposal;
- identify those sections of the community that will incur the costs and those that will enjoy the benefits;
- demonstrate how the proposal generates a Net Public Benefit for the community; and
- demonstrate that no other viable options exist whereby the same Net Public Benefit could be generated using non-regulatory options.

The underlying principle for compensation and transition incentives is recognising that the community must be prepared to bear the cost where a landholder is required to forgo a development opportunity or undertake some activity for the community's benefit.

4. Legislative change

EPBC Act

The NFF believes that the Australian Government should review and amend existing legislation to ensure that where the operation of Environment Protection and Biodiversity Conservation Act results in the reduction in the property rights of landholders to generate public-good environmental benefits, appropriate compensation is paid to landholders.

[51] Institute of Public Affairs (IPA) (2000), Submission to House of Representatives Standing Committee on Environment & Heritage Inquiry into Public Good Conservation: Impact of Environmental Measures Imposed on Landholders.

Inter-Governmental Agreement

The NFF believes that the Australian Government should make protection of property rights a requirement of each state, through an Inter-Governmental Agreement, similar to the mechanisms that have been used for the National Action Plan on Salinity, and earlier for National Competition Policy. See Box 4 below for NFF policy position.

Under an Inter-Governmental Agreement, the Australian Government should require that the states implement appropriate protection for property rights as a pre-condition to making Federal Government funds available to the states for national environmental programs such as Caring for Our Country.

In order to ensure compliance by the states, the Australian Government should establish a national review committee (similar in structure to the National Competition Council) which would have the role of validating the extent to which states have complied with the Australian Government's standard of property right protection.

Box 4: Summary of NFF Policies and Guiding Principles

In 2004, the NFF drafted a series of policy papers on property rights[52], including Resource Security and Sustainable Production Policies. The Resource Security policy is the most relevant of these and essentially discusses the need for an Intergovernmental Agreement under COAG to deliver investment security for farmers with agreed risk sharing arrangements. This policy is not about compensation but clarifying the role of Governments and farmers for private land conservation, along with clearly defined risk assignment (i.e. for future efforts, what is clearly to be funded by farmers and what by Governments).

In 2005, the NFF and the Australian Bankers Association called on the Council of Australian Governments (COAG) to take a bipartisan approach and develop a National Framework for Native Vegetation and Biodiversity Management[53] for the long term management of Australia's native vegetation and biodiversity. This followed the successful agreement of governments for a National Water Initiative in 2004. Essentially, the NFF and ABA had agreed on a set of six principles to guide the development of an IGA:

1. Governments to commit to minimise the financial uncertainty of potential regulation so as not to impede the continuing investment by farmers in best practice sustainable use of natural resources which are under their management.
2. Governments to reduce the 'red tape' and ensure that implementation of legislation and policies are flexible, efficient and accountable.
3. Governments to ensure that agencies are adequately resourced to effectively administer legislation and policies.
4. All processes are transparent, consultative and informed by science.
5. Assignment of future risk:

- Government should prepare Regulation Impact Statements (RIS) for all policies, legislation and associated regulations that include an assessment of the problem being targeted, expected costs and benefits of the proposed policy (environmental, social and economic), and an assessment of alternative instruments.

[52] Available online: http://www.nff.org.au/policy/nrm.html.
[53] NFF & ABA 2005, Farmers and Bankers call on governments to develop a national framework for native vegetation and biodiversity management, media release, 1 June 2005.

- Changes due to bona fide improvements in science/knowledge – land owners, State/Territory Governments, and the Australian Government share the risks equally.
- Changes to Government policy – landholders to receive direct incentives from Government to deliver environmental services including greenhouse savings demanded by the community through the establishment of a national farm environmental program.

6. Governments to commit significant new funding to regional programmes beyond 2007/2008 and undertake an immediate independent review of regional program delivery mechanisms.

It is unfortunate that COAG failed to adopt a national framework for private land conservation efforts but recognized similar issues in water and addressed this through the National Water Initiative in 2004. Clarification of the private land and Government responsibilities for conservation efforts remain outstanding.

5. Analysis of international agreements

The NFF notes that it is unclear whether successive Australian Governments have ever undertaken an analysis of the impacts of obligations under international treaties may have on property rights. This has come to the fore in relation to the domestic carbon policies related to meeting Australia's commitments under the Kyoto Protocol, but also covers a range of additional water and NRM related treaties.

The Water Act 2007 is the first Commonwealth Act that relies on international treaties for its establishment (along with Trade Practices Act and Corporations Act powers). The provisions of the Basin Plan also specifically require that the Plan addresses and implements Australia's obligations for Ramsar wetlands, and NFF believes the Convention on Biological Diversity, UN Convention to Combat Desertification, the UN Framework Convention on Climate Change, World Heritage Convention and the Bonn Convention (migratory birds) and various other agreements.

The onus of these international obligations is clearly only being sheeted home to farmers in the Murray-Darling Basin, i.e. it is not inclusive of all Australians. Moreover, it is untenable that compensation is not clearly provided for the impacts these international obligations have on land and water property rights.

The NFF recommends that the Federal Government urgently assesses these international agreements in terms of domestic impacts on property rights and seeks to implement compensatory arrangements to entitlement holders.

6. Securing water property right entitlements

Full and timely implementation of the National Water Initiative

All Governments signed on and accepted the NWI - and have been criticised by the NWC for tardy implementation.

The NFF recommends that all Governments immediately implement their obligations under the National Water Initiative. This must include separation of land and water (where not already done), the inclusion of compensation where these entitlements are cancelled or

reduced, risk assignment for changes to water allocations (which is different from the property right) and the resolution of over allocation.

The NFF also recommends that Governments adopt similar approaches to compensation and risk assignment otherwise the principles of competitive neutrality will continue to be undermined.

Ultimately, if the irrigation sector does not feel a valued part of the Australian community, then the whole water reform process will have failed.

A balanced Basin Plan

The construct of the Basin Plan (or at least the Murray-Darling Basin Authority's interpretation) will lead to over recovery of water and substantial social and economic impacts across the Murray-Darling Basin. Attaining a skewed balance in priorities surrounding the Plan that does not appropriately acknowledge economic and social priorities will have a negative effect on irrigators' water property rights.

The NFF recommends that the Basin Plan is implemented as was originally envisaged and supported by the NFF, i.e. a balanced approach to equally weigh social, economic and environmental values in the Basin and deliver a sustainable environment, a sustainable irrigation sector and sustainable vibrant regional communities.

Commonwealth water market transparency

The Commonwealth is a monopoly buyer in a limited market for water. Therefore, it is imperative that the Commonwealth's water acquisitions are made transparently with the information relayed to other market participants (both buyers and sellers) in a timely manner. Failing to do so will undermine the value of the water property right by creating uncertainty in the market.

The NFF recommends that the Commonwealth disclose water trades to the market upon the first agreement being signed (i.e. not after the conveyencing process is concluded). Trades must be reported by volume and price (i.e. the identity of the seller is not required).

Furthermore, the NFF recommends that the Commonwealth put in place a transparent phase down of its exit from the market. This should be disclosed to the market at least two years prior to the phase down commencing.

Changing allocation and water plan rules

Governments continue to attenuate water entitlements through a range of measures. Ultimately, this leads to declining reliability and can, at the extreme, result in 'empty' entitlements. The Water Act 2007 proposes to amend the reliability of entitlements through the introduction of measures such as critical human needs triggers, new reserves policies and the Basin Plan. State Governments, likewise, can introduce similar measures that can impact on reliability of water entitlements.

The NFF recommends that all such measures apply a no third party impacts tests. Such an approach requires modelling benchmarked against the 2004 water resource plans. Where

cumulative impacts occur, these ought to be compensable using the NWI risk assignment provisions.

In the future, the NFF notes that a number of proposals under discussion may directly affect entitlement reliability. These include announcing allocations only based on the physical water available in the dam (rather than a combination of physical and modelled inflows) and bringing climate change into the water allocation rules. The latter is egregious as entitlement reliabilities themselves are a factor of climate, i.e. if there is little rain and little runoff, there is less water to announce for extractive use. This is what has occurred over the period since 2004.

Both these will result in less water being available over the long term (i.e. over 100 year period). The NFF does not support such approaches and recommends against ultra conservative allocation policies.

Conclusion

The NFF remains committed to ensuring that the property rights of farmers are respected in relation to government decisions affecting land and water entitlements. As indicated by the High Court of Australia, full and adequate compensation must be provided where property rights are compulsorily acquired by governments. Unfortunately, the NFF believes that this is not always the case and we have instead seen a substantial decline in support of the security of private property rights by courts and governments over the last 50 years. Too often we are seeing emergence of the modern problem of governments assuming the property right while leaving the title with the owner[54]. This is unacceptable.

The NFF believes that this balance must be urgently corrected, whether it be in relation to rights surrounding carbon credits, water, natural resource management or mining's interaction with farming resources. There is a role for the courts in finding resolution to past decisions by governments and the NFF, through the AFFF, is actively pursuing these matters. The NFF urges the government to adopt the recommendations within this submission that will ensure that the issue remains out of the expensive legal system, and ensure that farm businesses can attain surety over their property entitlements into the future.

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ATTACHMENT 1: OECD REPORT CARD ON AUSTRALIA'S ENVIRONMENTAL PERFORMANCE

3.1.2. Environmental performance of agriculture

Australia has recognised the need to address a number of land and water management issues in which farming plays a key part [2, 3, 10]. Three issues are important to agriculture's relationship with the natural environment: soil resources, water resources, and biodiversity.

Estimates suggest that management of these issues costs AUS 3.5 (USD 2.5) billion annually [11], or 10% of agricultural GDP. Farmers are estimated to have invested in natural resource management and environmental protection (mainly on fencing, earthworks and weed management) AUD 220 (USD 140) million in 1999-2000, or about AUD 2.60 (USD 1.65) for every AUD dollar invested by the government [12]. A large share of farmed soils are naturally shallow, acidic, low in fertility, high in salt, have low water holding capacity and require careful management to avoid degradation.

Soil conservation and management is a major national issue [2]. While soil degradation occurs naturally some farming practices have exacerbated the problem, with, on average across Australia, 20% of farmland showing acute degradation [10]. Evidence over the 1990s, however, suggested some improvement in soil quality [5, 11, 13]. For example, farming practices in certain areas have improved the fertility and health of soils through: the use of fertilisers; lime to reduce soil acidity; and minimum tillage techniques [2]. ***On-farm costs*** of degradation from soil acidity, sodicity and salinity were estimated in 2000 at AUD 2.6 billion (USD 1.5 billion) [14] (about 7% of agricultural GDP), with most farmers reporting these problems as having a significant impact on their businesses [5], especially in Western Australia [15]. Soil degradation is also leading to ***off-farm damage*** on a national scale, from agriculture and non-agricultural sources, especially from dryland salinity and soil erosion, by degrading aquatic environments, raising drinking water treatment costs, and damaging buildings and roads [13].

Soils are naturally predisposed to salinity due to climatic and topographical factors, but past land clearing and management have contributed to increased soil salinity in some regions. Recent estimates suggest that about 2 million hectares of farmland show some signs of salinity [2]. As the problem of salinity evolves slowly with time lags of 50-100 years, the area at high risk may triple between 2000 and 2050 [16]. By 2002 two-thirds of irrigated farms had changed practices to address salinity, including tree planting, fencing and building banks, levees and drains [17]. Accelerated ***soil erosion*** above natural rates is relatively evenly distributed across Australia, but while grazing land has typically erosion rates 2-5 times natural rates, for croplands rates are 5-20 times higher [18, 19]. While erosion rates on cropping lands are in some areas higher, the area of land involved is significantly smaller. About 20% of farmers report that erosion has a major impact on their business [5], but the off-farm impacts can be significant. Some 120 000 km of rivers have degraded riparian vegetation, with the restoration cost estimated at AUD 1.2 (USD 720) billion [18], reinforcing the importance of policies in place to manage impacts on water quality. Also 90% of soil sediment reaching estuaries are derived from 20% of catchments, with the greatest concern for sediment flows into the Great Barrier Reef, a UNESCO World Heritage Site [12, 19]. ***Soil acidity*** is estimated to affect about half of the total agricultural land area, at a level probably affecting crop yields [2]. While the application of lime could remedy the problem and is used in cropping systems, this is financially not viable for many pasture-based industries [2]. Run-off from disturbance of coastal ***acid sulphate soils***, including by

agriculture, has had an adverse impact on aquatic ecosystems, in some areas of North New South Wales and Queensland [20]. Enhanced management practices indicate that some improvement in the problem of acid sulphate soils is underway [21].

The expanding demand for water resources, including from agriculture, is an issue of national significance. The growth in use of water by agriculture (24%) was more than double that of other users (9%) over the period 1993-95 to 2000, when annual average rainfall levels have declined in major farming areas (Figure 3.1.2) [16]. Nationally 26% of river basins and 30% of aquifers are close to or exceed sustainable extraction limits [10]. Many irrigators in the Murray-Darling Basin (MDB) have switched from surface water to groundwater since the surface water cap on withdrawals was introduced in 1995. In combination with other groundwater uses and the drought, this has caused groundwater to decline over large areas of the MDB [2]. A key driver in the growth of water demand has been the 17% rise in irrigated area over the period 1990-92 to 2001-03, with farming accounting for three quarters of total water use in 2000 (about 90% of which is used by irrigators), although data for 2001-02 suggest agriculture's share in total water use was 69% [3]. Irrigators produce about 25% of total agricultural gross value of production [2]. There has been considerable improvement in water use efficiency by irrigators, with water application rates declining from 8.7 megalitres/hectare of irrigated land (ML/ha) in 1996-97 to 4.3 ML/ha in 2002-04, with around 40% of water applied by technically efficient irrigation technologies (Figure 3.1.2) [2, 22]. Almost a third of water used by agriculture is for irrigating pasture, especially for dairy cows, with sugar cane and cotton accounting for a further 25% [22].

Agriculture is one impact, among others, on water quality for some rivers and coastal waters. In river basins in the most populated areas of Australia, nutrients and soil turbidity are the most widespread pollutants from agriculture amongst other sources, followed by salinity, acidity/alkalinity, with pesticides and biological contaminants having a lower occurrence [23]. About two thirds of river basins were found in 2000 to have nutrients in excess of acceptable standards or were excessively turbid, while water quality exceeded salinity standards in over a third of river basins [3, 23]. Salinisation is also affecting drinking and irrigation water quality, with some surface water in Western Australia too saline for domestic use [10], while rising groundwater levels which contain salt are damaging urban infrastructures in parts of New South Wales [16]. Groundwater in intensively farmed areas of north eastern Australia show only 3% of wells with nitrate concentrations above drinking water standards [24].

The quality of water entering the Great Barrier Reef (GBR) is of concern. Water quality entering the GBR has declined affecting about 25% of its area, partly as a result of farm pollutants, although phosphorus run-off from urban sewerage is also a problem [26, 26]. The dry tropical regions in Queensland are the main source of these pollutants, although some farmers are adopting practices to reduce pollution. While evidence of adverse impacts on the GBR from pollutants is not conclusive, research suggests the need for caution for any activities leading to elevated pollution levels [25].

Environmental pressure from agricultural nutrients and pesticides are very low compared to most OECD countries, however, input use has grown with the large increase in the volume of agricultural production over the period 1990-92 to 2002-04 (Figure 3.1.2). With an overall decline in livestock numbers, much of the growth in ***nutrient surpluses*** is from greater use of fertilisers, especially nitrogen. Overall efficiency of nitrogen use (*i.e.* ratio of nitrogen crop uptake to total nitrogen inputs) is low [27] and below the OECD average although higher for phosphorus. Increased soil nutrient testing over the 1990s may improve

nutrient efficiency [27], although management of manure ponds on dairy farms is poor [28]. Nearly 19 000 tonnes of total phosphorus and 141 000 tonnes of total nitrogen were estimated to be transported down rivers to the coast from areas of intensive agricultural activity [2].

Pesticide use volume increased by 10-15% annually over the period 1996-99, of which about 40% is accounted for by glyphosate (a herbicide) used in conservation farming and minimum tillage techniques that reduce soil erosion. More recent pesticide use data is unavailable and there is little monitoring of the environmental impacts of pesticides [29]. There was a shift in the late 1990s from broad spectrum, relatively toxic pesticides, to use of targeted and less harmful ones [29]. In the cotton growing areas of Eastern Australia only 10% of samples from surface water exceeded drinking water standards for pesticides [29], and 50% of the land cultivated to cotton is grown under best management practice codes [16]. The cotton industry has also made significant steps to reduce pesticide use through growing genetically modified cotton varieties and using other improved practices (Figure 3.1.4) [2, 29, 30]. An environmental audit of the sugar industry, however, reveals only a small share of farmers using Integrated Pest Management practices [31].

Trends in air emissions from agricultural sources have revealed mixed results over the past decade. Agriculture is the major source of ***ammonia emissions***, but time series emissions data is unavailable [32]. However, given nitrogen surpluses rose slightly over the period 1990-92 to 2002-04 (mainly due to higher fertiliser use, as overall livestock numbers have declined), it is possible ammonia emissions and acidifying air pollutants have also risen slightly. As a signatory to the *Montreal Protocol*, Australia agreed to phase out by 2005 the use of ***methyl bromide*** for purposes other than for quarantine and pre-shipment use, agreed critical uses where no technically or economically viable alternatives are available, and feedstock uses.

By 2004 methyl bromide was reduced by over 70% from the 1991 baseline level. "*Critical Use Exemptions*" (CUE) were sought in 2005 and following years, and agreed for certain uses, which under the *Protocol* allows farmers additional time to find substitutes. In 2005, methyl bromide use was reduced a further 10% compared to the 1991 baseline level. With some methyl bromide users ceasing use in 2007, but rice, strawberry growers and cut flower producers have exemptions for use up to, and including 2008. Rice and strawberry growers are currently seeking to continue use under CUE status after 2008 [33]. Both these latter industries are undertaking research, together with the Federal Government, into alternative chemicals and/or application methodologies.

Greenhouse gas emissions (GHGs) from agriculture accounted for 16% of Australia's net GHG emissions in 2004, and 18% of gross emissions over 2002-04 [2]. Projections to 2010 suggest that agricultural GHGs could be 5% above their 1990 level, without taking into account possible savings from soil sequestration and land use changes, although estimates of these savings are still subject to a high degree of uncertainty [34]. ***Soil carbon levels*** vary annually, but results from the Australian Greenhouse Office, based on long term nationally consistent modelling, suggest that as a result of clearing for agriculture soil carbon has declined from slightly above 675 million tonnes in 1990 to about 643 million tones in 2004 [2]. The growth in agricultural gross GHG emissions was 6% between 1990-92 and 2002-04, compared to a reduction of 3% across the OECD area, while total Australian gross GHG gross emissions rose by 22% (Figure 3.1.2). The growth in agricultural GHG emissions was largely driven by increases in the application of fertilisers and manure to soils, intensive savannah burning, and clearance of land under native vegetation for agricultural use, although the rate of clearance has decreased [35]. Use of ***agricultural biomass*** for bioenergy

is at present contributing, in the case of biofuels, less than 0.1% of transport fuel use [2, 37]. Agriculture's ***direct on-farm consumption of energy*** rose by nearly 50% over the period 1990-92 to 2002-04 (the Australian Bureau of Statistics [3], calculate an increase of 35% over the period 1990 to 2002), almost twice the rate of growth in national energy consumption over this period, although agriculture accounted for only 3% of total energy consumption in 2002-04 [37].

Agriculture is one source of pressure on biodiversity, but there are signs of the pressure easing [2]. Conserving biodiversity is a serious environmental challenge, especially given Australia's world "megadiversity" status [3, 38]. But while farming contributes to pressure on biodiversity other pressures are also important, including invasive species, urbanisation, mining and climate variability. ***Clearing of native vegetation*** for agricultural and other land use purposes has been one of the main threats to terrestrial biodiversity.

Over the last 20 years state/territory governments have tightened land clearing controls and in 2004 all Australian governments agreed to phase out broadscale land clearing by the end of 2006 [39]. These changes have seen a reduction in land clearing, with flow on benefits to the environment. The rate of clearance (forest conversion and reclearing of land previously cleared) was nearly 30% between 1990 and 2004, with about 325 000 hectares of conversion and reclearing in 2004 [3]. While from 2007 all land clearing has been prohibited, there can be long time lags between land clearance and future adverse ecological impacts [40].

Agricultural pressures on wild species reductions have been significant in the past but more recently the pressures have eased. Almost 30 mammal and bird species over the past 20 years showed significant reductions in farming areas, especially where land has been cleared [2, 41], or overgrazed [2, 42]. For aquatic biodiversity conditions in rivers and coastal environments have been modified by environmental disturbances, including farming [2].

All sources of environmental disturbances combined, have resulted in over 30% of total river length degraded from reduced riparian vegetation, and nutrient and sediment loadings, while 50% of inland waterbirds are listed as vulnerable or threatened mainly from habitat loss [43]. Nationally nearly 10% of wetlands are affected by salinity [38, 44]. A number of reports have identified agriculture as one of the main sources of pollution threatening some coastal habitats, especially the GBR [25, 26].

3.1.3. Overall agri-environmental performance

Agriculture's environmental footprint remains significant. This can contribute to lowering farm productivity (e.g. due to soil degradation, low nutrient efficiency), and also causing much larger off-farm costs. Of particular concern have been the clearing of native vegetation and water use by agriculture, contributing to pressures on the quality and availability of water for environmental purposes. However, there is now a trend in reducing land clearing.

Problems of agricultural pollution from nutrients and pesticides and soil erosion are more regional, while methyl bromide use has declined, likely to have increased slightly for agricultural ammonia emissions, but showing a slight rise for agricultural GHG emissions.

Australia has built a natural resource management programme, largely through the Australian Government's *Natural Heritage Trust* and its funding of regional natural resource management groups. Investment plans produced by regional groups require both environmental outcome and environmental performance monitoring and reporting through

State of the Environment reports and other mechanisms [2, 8, 13, 45, 46]. Addressing information gaps will improve the ability to track environmental performance and evaluate policies, as the paucity of relevant time series data sets has inhibited the development of more effective responses [2, 12]. Key areas where monitoring could be improved are: regular assessment of soil erosion [2]; water pollution, in particular, measuring pesticide and other agricultural discharges into coastal waters [2]; and tracking changes in biodiversity, [43]. The Australian Greenhouse Office is developing a new reporting procedure for on-farm emissions to improve measurement of methane and nitrous oxide emissions from agriculture.

Australian agriculture will continue to face challenges with regards to the environment. But these challenges need to be understood in the context of the difficult "natural environmental" conditions in which Australian farmers operate relative to many OECD countries, in terms of: high levels of risk from natural climatic hazards and climate variability (*e.g.* drought, floods, fire) [3, 47, 48]; domination of soils of "naturally" low fertility, poor water holding capacity, and easily degraded; and existence of invasive non-native species imposing costs on both farmers and the environment.

The ongoing decline of soil quality is a concern, as are inefficiencies in the use of other resources by agriculture. Despite lack of definitive data it is clear that soil acidity, salinity, soil erosion and nutrient loss all remain a major threat to the long term sustainability of agriculture [2]. Also livestock grazing, while providing high economic value for agriculture, continues to place heavy pressure on the environment, especially in some sensitive areas [2]. Taking action to raise the efficiency of nitrogen use in crop and livestock agriculture would bring production, greenhouse and environmental benefits [48].

Moreover, subsidising farm diesel energy costs is a disincentive to improving energy use efficiency and reducing GHGs.

The country also has a major challenge in terms of biodiversity conservation given its world mega-biodiversity status, and agricultural pressures from land clearing and grazing pressures [3]. There has been considerable progress since 1990 in terms of reducing land clearance by agriculture, especially with the prohibition of broad-scale vegetation clearing from 2006 [3]. Nevertheless, past declines in vegetation extent and condition, as well as fragmentation of habitats and continued grazing pressures on some habitats, especially in sensitive areas, are cause for ongoing action and vigilance [2]. Moreover, there are concerns that rivers and associated aquatic ecosystems in tropical Australia could come under increasing pressure as sources of water to support irrigation development in southern Australia are subject to enhanced climate variability [2].

There has been ongoing adaptation in the approach of agricultural and environmental policies over the past 10 years, from a mainly farm focus to a more integrated and long term emphasis operating at water catchment and regional levels [49]. Many farmers are addressing environmental concerns, with Government initiatives, such as the NLP, raising farmer awareness and responses to these issues, with over 40% of farmers in *Landcare* groups (Figure 3.1.3) [49, 50]. Agricultural practices, that have in the past exacerbated natural erosion rates, are improving, with the NLP encouraging more sustainable practices.

A range of government supported initiatives are being led by industry to address the environmental footprint of agro-chemical use. For example, the NLP is funding delivery of *FertCare*, through the fertiliser industry, to encourage farming practices that manage environmental risks of fertiliser use. Increased funding of the NAP to control soil salinity,

such as through revegetation, is leading to secondary beneficial impacts on biodiversity and reducing GHGs [42]. Between 1996-2004 the NHT facilitated nearly 800 000 hectares of land rehabilitation which, together with state/territory government controls on land clearing and the NHT *Bushcare Program*, should help biodiversity conservation.

While increasing attention is being paid to water management, recent droughts have placed additional pressures on an already stressed water system [2]. For water some issues that need addressing include, among others: variation between States in water reforms and securing adequate water for environmental purposes; exploring new opportunities for water recycling; and improving irrigators water use efficiency [4, 9, 51, 52]. Uncontrolled and unsustainable growth in groundwater use in many regions, linked to the stress on surface water systems, is a cause for serious concern [2]. There are, however, some positive signs of more sustainable use of groundwater use by irrigators, for example in the Great Artesian Basin many bore holes have been capped, drainage canals covered and some wetlands restored [2].

Water reform policies are beginning to change farming systems. This is evident with farmers producing products with higher economic returns (*e.g.* from pasture to horticultural crops), increasing efficiency of irrigation and by diverting water for environmental purposes to encourage biodiversity conservation [2]. Further improvements in agricultural water use are needed. Some are being delivered through provision of technical advice to irrigators under initiatives such as the *National Program for Sustainable Irrigation through Land and Water Australia*. In 2007, the Federal Government allocated an additional AUD 10 (USD 7.5) billion under the *National Plan for Water Security*. Improving the efficiency of agricultural water use is a key objective of the Plan through reforms in the management of water access and trading, and improved irrigation practices, in the industry.

ATTACHMENT 2: AUSTRALIAN FARMERS - FRONTLINE ENVIRONMENTALISTS.....[55]

- **Farmers occupy and manage 61% of Australia's landmass**, as such, they are at the frontline in delivering environmental outcomes on behalf of the broader community.
  - Australian Government Bureau of Rural Sciences, *Land Use of Australia 2001-02*.
- Over the past year, more than **986,000 hectares of environmentally-sensitive farmland was fenced-off and put out of production to protect it**.
  - Australian Bureau of Statistics, Agricultural Commodities 2005/2006.
- Australian farmers spent **$3 billion on Natural Resource Management (NRM)** over 2006-07, managing or preventing weed, pest, land and soil, native vegetation or water-related issues on their properties. More than **$2.3 billion was spent on weed and pest management**, while **land and soil-related activities accounted for $649 million** of total expenditure.
  - Australian Bureau of Statistics, Natural Resource Management on Australian Farms 2006-07.
- Australian farmers are planting more trees for environmental purposes than a decade ago. In 1991, the Agricultural Census recorded that farmers planted 9,000,000 tree seedlings for conservation purposes. **In 2001, farmers planted 20.6 million tree seedlings for NRM**. On average, **each Australian farmer plants 150 tree seedlings a year, solely for conservation purposes**.
  - Australian Bureau of Statistics, Agricultural Census, 1991 & 2001.
- **Australian primary industries have led the nation in reducing greenhouse gas emissions - a massive 40% reduction over the past 16 years (1990-2006)**.
  - Australian Government Department of Climate Change, National Inventory by Economic Sector 2006, 2008.
- NRM is an important activity on the majority of Australian farms. In fact, **NRM practices are employed on 94.3% of Australian farms**.
  - Australian Bureau of Statistics, Natural Resource Management on Australian Farms 2006-07.
- Farmers improving their NRM practices reported doing so to **increase productivity** (88.6%), **farm sustainability** (88.4%) and **better environmental protection** (74.5%).
  - Australian Bureau of Statistics, Natural Resource Management on Australian Farms 2006-07.
- **71% of farmers reported barriers to greater NRM activity**, including a **lack of financial resources** (78.9%), **time** (63.1%), **government incentives** (40%), **age and ill-health** (22.2%).
  - Australian Bureau of Statistics, Natural Resource Management on Australian Farms 2006-07.
- In 2008, the Australian Government developed a one-stop program under the $2.2 billion '**Caring For Our Country**' initiative, recognising the work farmers already do in sustainable agriculture and protecting Australia's natural resources, to encourage greater undertakings. The National Farmers' Federation (NFF) is intimately involved in the development, implementation and promotion of these programs, as well as those that

[55] Source: http://www.nff.org.au/farm-facts.html

complement it – including the $50 million '**Environmental Stewardship**' and $130 million '**Australia's Farming Future**' programs, both initiated by the NFF.
- Australian Government Federal Budget 2008.

ATTACHMENT 3: ENVIRONMENTAL STEWARDSHIP AND BOX GUM GRASSY WOODLAND PROJECT

The Environmental Stewardship Program (ESP) was announced in 2006. On 14 March 2008 the ESP was announced as a component of Caring for our Country with a four year budget of $42.5 million.

The objective of Caring for Our Country – Environmental Stewardship is to increase the quality and extent of high public value environmental assets on private land or impacted by activities on private land.

Environmental Stewardship is targeting matters of National Environmental Significance (NES) under the Environment Protection and Biodiversity Conservation Act 1999.

The White Box, Yellow Box and Blakely's Red Gum grassy woodland and derived native grasslands ecological community (Box Gum Grassy Woodland (BGGW)), was selected as the first priority for Environmental Stewardship because of its importance as a critically endangered ecological community which supports a variety of critically endangered and vulnerable species, and because it is largely managed by private landholders.

Environmental Stewardship uses market-based approaches to determine which land managers are recommended to receive contracts. Successful land managers can enter into contracts with the Government for up to 15 years. As the approach is competitive to choose land managers who can provide the highest environmental services at least cost to the Australian Government, not all land managers who participate may be recommended to Ministers for approval to enter into contracts at the completion of any tender round.

Tender rounds are targeting patches of Box Gum Grassy Woodland of greater than 5 hectares in size in the Lachlan and Murrumbidgee Catchments in NSW and a tender round targeting Large High Quality Sites of Box Gum Grassy Woodland of greater than 50 hectares have been conducted. The NRM regions targeted under the Large High Quality Site rounds include Central West, Namoi and Border Rivers Gwydir Catchment Management Authority (CMA) regions in NSW and the other the Condamine, Border Rivers-Maranoa-Balonne and South East NRM regions in Queensland.

A competitive auction process evaluated bids submitted by eligible land managers wishing to participate. An environmental benefits index called the Conservation Value Measure was used to evaluate value for money of bids submitted for each round.

In 2008-2009 financial year a total of 126 land managers have been contracted to manage over 11,100 hectares of the critically endangered Box Gum Grassy Woodland ecological community on their properties. This includes 108 contracts with land managers in the Lachlan and Murrumbidgee NRM regions managing over 8,200 hectares of Box Gum Grassy Woodland, and 18 contracts totalling 2,856 hectares through the Large High Quality Sites round in Central West, Namoi and Border Rivers Gwydir Catchment Management Authority (CMA) regions in NSW and Condamine, Border Rivers-Maranoa-Balonne and South East NRM regions in Queensland.

The final number of land managers contracted and hectares included from the current rounds will be confirmed following Ministerial approval, and the issuing and return of contracts for the NSW Large High Quality Sites project area.

Further Box Gum Grassy Woodland rounds will occur in FY 2009-10 in the Central West, Lachlan and Murrumbidgee NRM regions.

In addition, Ministers have approved scoping of projects to target additional matters of National Environmental Significance for Environmental Stewardship projects in coming years.

For further information about Environmental Stewardship please contact DEWHA or refer to the ESP webpage at: http://www.nrm.gov.au/stewardship/index.html.