South West Natural Resources Management Ltd. in the Carbon Economy

Carbon Sustainable Futures Program- A way forward for South West NRM's involvement in the Clean Energy Future package

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This document may be cited as:
Gavin, J., Moore, T. (2012) Project Report. *South West NRM in the Carbon Economy.*

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Executive summary & key recommendations

This report was instigated by South West NRM (SW NRM) to better understand the evolving regulatory environment relating to carbon trading in Australia, the activities other stakeholders and the broader NRM sector are undertaking to position themselves with respect to the risks and opportunities of the developing market opportunities, and to consider potential roles and opportunities for SW NRM in more detail.

The Clean Energy Future (CEF) legislation in Australia is being implemented to reduce greenhouse gas emissions, primarily through applying a market based approach to changing patterns of energy production and consumption, and land use management. The CEF allows for the Federal Government to require large emitters of greenhouse gasses to acquire permits to emit. In the future, these permits will be tradable in market priced transactions driven by supply and demand, but will be purchased at a fixed price in the early years of the scheme.

The Carbon Farming Initiative (CFI) has been created as a legislative process to regulate the development of projects that reduce emissions or increase carbon sequestration in the agricultural sector. The CFI provides the rules and regulations by which project proponents are eligible for earning tradable carbon credits, which can be generated from the development and implementation of changed land use management that leads to increased carbon storage in vegetation and the soil, as well as reducing emissions from agricultural activities such as fertiliser application and livestock (ruminant) emissions. These carbon credits may be sold into compliance or voluntary carbon markets, with the market volume and value expected to be dominated by those eligible for compliance trading purposes. An analysis of carbon credit demand and supply suggests a significant shortfall in supply relative to potential demand in the early years of the scheme. Of particular relevance to SW NRM, the CFI regulations and application process specifically require that project developers and proponents assess the applicability of the proposed project to the guidance for activities given in the SW Regional Natural Resources Management Plan (NRM Plan).

As a result of the implementation of the CEF, a range of land sector focused funding packages have been developed with the aim of providing “seed funding” that will assist in developing land sector management activities that will lead to increased carbon storage on the land, reducing emissions from agricultural activities, protect and enhance biodiversity and protect and enhance agricultural productivity.

A stakeholder survey was undertaken to determine the roles other Regional NRM Bodies are looking to perform with regards to the carbon economy and carbon credit generating projects. Of the responses

received, there was a spread of expectations of future possible roles, generally weighted towards facilitation and community engagement, along with carbon project development and carbon project delivery services. A stakeholder review clearly identified a large number of both “core” and partner organisations with which the SW NRM will need to develop and maintain relationships to successfully integrate “carbon” with more traditional NRM project delivery.

Following the examination of stakeholders and other participants proposed future activities, and a review of a range of needs and activities and subsequent possible roles under the CEF and CFI, a list of possible modes for engagement in the carbon constrained economy were developed.

In summarizing the findings of this report, three things are clear. First, carbon bio-sequestration and changed land management practices may be a financially valuable activity in to the future if the activity can generate carbon credits. Second, the NRM sector will have a key role in advising on the general appropriateness of “what kind of carbon projects should go where”. Third, with the interaction of funding support and carbon market development, there exists a key opportunity for SW NRM to advance the opportunity to develop models of engagement that will see market-based financial returns and investment in NRM outcomes, rather than being reliant on goodwill, volunteers and soft-cycle government funding allocations. While goodwill and voluntary activity will be critical to ongoing success in achieving the goals of the NRM plan, market based funding may flow when real and quantifiable outcomes in terms of changed land management have occurred. Capitalising on this opportunity will require a fundamental shift in NRM planning and program delivery and modes of engagement. However, it is generally considered that the benefits of the outcomes of engaging in the carbon market can be seen to outweigh the risks. Indeed, not engaging carries its own risks for the region.

The specific recommendations below have been developed through detailed consideration of the factors outlined above. The recommendations can be broadly classed into those focused on “policy”, “projects” and “support”. There is expected to be the potential for significant “economies of scale” benefit in delivering a number of these recommendations in partnership with other regional NRM groups.

1. Participate in the discussion regarding the development of a National NRM commercial carbon entity, while maintaining the option to withdraw and play the role of advisors, aggregator or carbon pool manager independently within the region.
2. Develop a program (possibly in partnership with other NRM’s) to support ‘early adopter’ landholder participation in the carbon market through activities funded through current incentives projects.
3. Modify current projects to make them CFI compatible, as further methodologies become available. This requires paying some attention to the methodologies that have been and are being developed, and may include getting involved in methodology development through the Methodology Development Fund, in association with other NRM entities in the region, and state level research bodies. This will also require significant landholder advisory on risk and opportunities of participation in such projects.

4. Monitor the positive and negative lists and apply to alter them as required to ensure positive NRM outcomes for the region.
5. Modify current project delivery contracts so that the money generated through the sale of ACCUs from NRM supported projects (if they are ever developed) are re-invested into NRM activities, thus generating further credits or valuable environmental outcomes. This could be done through establishment of a separate fund or through contract agreement with landholders or through engaging in the national NRM carbon model (if and when one develops).
6. Review and revise the Regional NRM Plan to ensure it comprehensively covers climate change adaptability and is carbon economy ready. This will include providing clear guidance on what type of carbon projects are desirable within the region and where, and accessing resources made available through Federal funding programs regarding local climate change predictions and NRM plan revisions.
7. Facilitate relationships between landholders, carbon service providers and other stakeholders (including Traditional Owners), to encourage participation in the carbon market, where the proposed projects are consistent with the regional NRM Plan. This could include development of a panel of suitably qualified providers so that landholders can have confidence in the advice and support being offered from the commercial sector.
8. Review the outcomes of the current funding rounds to inform future program applicability and applications.
9. Develop a strong stakeholder engagement program so that the region is best positioned to take advantage of current Australian Government programs and future market drivers.
10. Develop an incentives project for changed land management, including changed land clearance activities that are for carbon sequestration and NRM co-benefits. These can target the outcomes outline in the regional NRM Plan and operate across a number of the current incentives projects. This could be done in collaboration with partnering NRM's.
11. Explore the potential for partnering with the large emitters within the region that have an offset requirement for the purchase of carbon credits generated within the region thereby providing a social, economic and environmental outcome of carbon investments remaining within the catchments.

Table of contents

1. Introduction

This paper was prepared by Northwest Carbon (NWC) for South West Natural Resources Management Ltd. (SW NRM) in August 2012. It builds on previous work completed for a number of regional NRM bodies across Australia and is delivered as the third component of a broader project looking at the opportunities arising from the CFI for the SW NRM region. SW NRM engaged NWC to undertake an investigation and provide a report focusing on:

- the current state of policy development in the carbon market,
- the role of enabling Federal legislation and programs,
- the state of the carbon markets (buyer demand and credit supply),
- current NRM and landholder activities, and how these interact with carbon market opportunities, and what other participants are doing,
- stakeholder analysis,
- detailed consideration of the likely roles that SW NRM could play in the carbon economy, and finally
- Scope for regional participants in the carbon economy.

This work has been undertaken to inform and thus allow the SW NRM to make key strategic decisions with regards to maximizing opportunities for achieving the goals of SW NRM's Strategic Plan through creative and effective engagement with the carbon market and associated funding opportunities.

2. Policy and Programs

Clean Energy Future

The Clean Energy Future (CEF) legislative package passed the Federal Parliament in November 2011. The CEF was comprised of 19 separate bills, which collectively developed the framework for an emission trading scheme in Australia. The CEF was designed to reduce Australia's aggregate greenhouse gas emissions profile through putting a price on greenhouse gas emissions, and to allow for the emissions to be reduced at least cost over time, through allowing for trading of emission rights. Market efficiencies will drive the greatest emissions reductions where they can be achieved most cost effectively. This is in line with Australia's commitments under the Kyoto Protocol, which aims to reduce the risk of significant human induced climate change by creating an agreed framework and path of action to reduce the levels of greenhouse gas emissions. The approach to emissions trading (emissions **mitigation**) is one of the three pillars to dealing with human induced climate change proposed by the Federal Government. The other pillars are to deal with the inevitable existing level of human induced climate change (**adaptation**), and to work towards shaping a global agreement on the action required to deal with human caused greenhouse gas emissions in an equitable fashion (**global solution**). The goals for the CEF with respect to Australia's net greenhouse gas emissions is to achieve a -5% reduction on year 2000 level emissions by 2020, and a -80% reduction on year 2000 level emissions by 2050.

In its own words, the Federal Government sees the CEF as:

> "*…part of the long-term plan to reshape the Australian economy, provide greater certainty to drive innovation, and help avoid the increased costs associated with delayed action on climate change. The comprehensive plan aims to dramatically cut pollution, introduce a carbon price, and invest billions of dollars in renewable energy. The plan also includes transforming the energy sector away from high polluting sources such as brown coal and storing carbon in the land through better land management strategies*."

DCCEE 12/12/11 http://www.climatechange.gov.au/government.aspx accessed 15/06/12

The CEF will require large emitters such as cement factories and power stations to buy emission permits from the Government. Each permit creates the allowance to emit one tonne of carbon dioxide equivalent (1 tCO_2e). The CEF also creates a new entity, called the Clean Energy Regulator, who is an independent body that will advise the government on how many permits to issue in any given year of the scheme. There will be a general "path" for a reduction in the number of permits to be issued each year, expected to be roughly in line with the targets of -5% of emissions by 2020, and -80% reduction in emissions by 2050. Emitters that reduce their greenhouse gas emissions and have extra emission permits will be able to sell those permits in the market. Emitters that have not been able to reduce their emissions could buy those spare permits. Participants in the market could earn a profit if the market price for permits rises above the cost they paid for the permits. As an alternative to purchasing Government issued permits, emitters could also reduce their net reported emissions by investing in carbon credits generated by projects, such as bio-sequestration from forestry, improved land management or changed livestock management and feeding practices that reduce greenhouse gas emissions.

The CEF requires that entities that emit greater than 25,000tCO_2e of greenhouse gasses per year must acquire the right to continue to emit those greenhouse gasses. In the period 1 July 2012 to 31 June 2015, emitters will pay the Federal Government an indexed price of \$23/tCO_2e starting 1 July 2012. This is seen as a "fixed price period" of the carbon price mechanism, or "carbon tax". During this period, liable entities (emitters) will be required to simply pay the price set by the Government to meet their liabilities, or they may be able to meet up to 5% of their total obligations under the carbon price mechanism by buying from producers and surrendering the appropriate number of eligible carbon credits (Australian Carbon Credit Units; ACCUs) created under the Carbon Farming Initiative (CFI), instead of paying the carbon price to the Government.

At the end of the fixed price period of the carbon price mechanism, the scheme transitions to full emissions trading. Under an emissions trading scheme, liable entities can purchase emission permits from the Government at emission permit auctions, or purchase eligible carbon credits from participants in the Carbon Farming Initiative (CFI) or from other international carbon credit generating schemes, such as the European Union Emission Trading Scheme (EU ETS), or the United Nations administered Clean Development Mechanism (CDM). The CEF will allow emitters to meet their liabilities with up to 100% of Australian permits and/or carbon credits, but limit the use of international carbon credits and permits (such as to 12.5% of liability as CDM credits from carbon credit projects in developing nations, and a maximum of 37.5% of permits from the EU ETS) to a maximum of 50% of their liability.

As can be seen, the CEF creates a demand for carbon credits within Australia by requiring greenhouse gas emitters with an obligation under the CEF to reduce their net emissions, either by increasing their own efficiency, or by the use of carbon credits (which is effectively outsourcing the task of emissions reductions to another entity that is able to reduce emissions at a lower cost than could be achieved by the emitter themselves). Internationally, there are several significant existing emission trading schemes that take a similar structure, including the European Union Emission Trading Scheme (EU ETS), the California emission trading scheme (covering the eighth largest economy in the world), the New Zealand emission trading scheme, with several emission trading schemes proposed in countries such as South Korea (Australia's largest coal customer), China (the world's second largest greenhouse gas emitter), Mexico, and Brazil (the world's third largest greenhouse gas emitter).

Carbon Farming Initiative

The Carbon Farming Initiative (CFI) is created under the Carbon Credits (Carbon Farming Initiative) Act 2011 (CFI Act) and other legislation required for its implementation, including the Carbon Credits (Consequential Amendments) Act 2011 (Consequential Amendments Act) and the Australian National Registry of Emissions Units Act 2011 (Registry Act). One of the key tools to drive improved storage of carbon on and in the landscape and reducing emission as a result of change land management practices, is the ability for landholders to earn revenue for undertaking these activities.

The CFI is a *voluntary* program by which landholders can undertake specified activities that reduce emissions such as the establishment of biodiverse environmental plantings, reducing emissions from livestock and fertilizer application, changed land clearing or allowing regrowth of native vegetation, capturing of landfill gas and removing feral herbivores from the landscape. Projects developed and implemented in line with the rules of the CFI may be eligible for the project to be issued with carbon credits, called Australian Carbon Credit Units (ACCUs).

Some ACCUs created under the CFI may be used for compliance markets (such as the Australian carbon price mechanism, or other international schemes), while others may be used in voluntary markets (either internationally, or in Australia under the National Carbon Offset Standard; NCOS). Compliance or ACCUs are issued to projects that reduce emissions or increase carbon stores in a fashion that is consistent with the way the Federal Government reports emissions, and the creation of the credits from the project will allow the Federal Government to report reductions in emissions on the national greenhouse gas accounts. These are Kyoto or "compliance" ACCUs. The CFI regulations identify the following activities to be potentially able to create compliance ACCUs:

- agricultural emissions avoidance projects (that may include reducing emissions from fertilizer application, or reducing emission from savanna burning)
- landfill legacy emissions avoidance projects
- reforestation projects
- the protection of native forest from deforestation
- the establishment of vegetation on land that was subject to deforestation by:
    - seeding
    - planting, or
- human-induced regeneration by means of:
    - the exclusion of livestock
    - the management of the timing and the extent of grazing
    - the management, in a humane manner, of feral animals
    - the management of plants that are not native to the project area, or
    - The cessation of mechanical or chemical destruction, or suppression, of regrowth.

Emission reducing projects that fall outside of these definitions are regarded as non-Kyoto or voluntary ACCUs by the CFI regulations. The value of voluntary ACCUs is expected to be lower in the markets compared to compliance ACCUs, as the demand for the voluntary credits is coming from entities or organisations that wish to reduce their emissions for voluntary reasons, such as marketing and product differentiation. Projects that are identified in the CFI regulations as being able to generate voluntary ACCUs includes:

- managing feral herbivores
- increasing soil carbon stores through changed land management
- increasing carbon stores in vegetation and litter in shrubbery or lands that fall short of the definition of a forest under the Kyoto Protocol,
- increasing soil carbon stores through the addition of biochar, and

- the restoration of wetlands that had been drained.

The CFI Act provides that a Kyoto compliant offsets project will also include projects that fall within the parameters of meeting Australia's emissions reduction targets under any successor international agreement that replaces the Kyoto Protocol. As such, it is possible that the way Australia chooses to account for emissions in the future may influence whether projects that are currently regarded as generating voluntary ACCUs may in the future convert to compliance ACCUs, with consequent impacts on their market value.

The CFI also identifies two broad categories of projects that will be able to create ACCUs: projects that reduce emissions at the source ("emission avoidance" projects) and projects that lead to enhanced carbon storage ("carbon sequestration" projects). The key difference between emissions avoidance projects and carbon sequestration projects is that sequestration projects carry a long term (100 year) liability to maintain and protect the increased carbon store, whereas emission avoidance projects activities are non-reversible.

Table 1 defines projects in the avoidance and sequestration categories, and defines whether they will create compliance or voluntary ACCUs.

Table 1. Different categories of CFI projects.

Emissions Avoidance	Carbon Sequestration
Compliance	
Capture and combustion of methane from livestock manure	Human induced regeneration of native vegetation on land that was forest on 31 December 1989 and has since been converted to a non-forest land use
Reduced enteric fermentation in livestock	Avoided deforestation of land that was forested on 31 December 1989
Nitrification inhibitors to manure or fertiliser	Reforestation of land that was clear of native vegetation at January 1 1990
Savanna fire management	
Voluntary	
Management of feral herbivores	Human induced regeneration of native vegetation on non-deforestation land
	Non-forest revegetation
	Native vegetation protection (non-forest)
	Increasing soil carbon stores

CFI projects are governed in principle by the positive list and the negative list. The positive and negative lists were developed and implemented to manage as best as possible, the type of projects that are permissible under the CFI, giving regard to water availability, the protection of biodiversity and to manage unwanted impacts on agricultural productivity.

The positive and negative lists were set out in the CFI regulations of December 2011. It is expected that as the CFI develops and matures, there may be modifications made to the lists. The Department of Climate Change & Energy Efficiency is responsible for the management of the lists, and has made available guidelines on the positive list and ways and reasons for potential modifications to the list at http://www.climatechange.gov.au/government/initiatives/carbon-farming-initiative/activitieseligible-excluded/positive-list.aspx.

CFI projects must also be undertaken in accordance with an approved methodology. A CFI methodology is the legislative instrument which provides essential information to project proponents in how to determine project baselines (or what emissions would occur in the absence of the project activity), project area and project related emissions and the way to determine project emission reductions (emissions reduction or enhanced sequestration over and above the baseline emissions). Approved methodologies have been examined in detail by the independent Domestic Offset Integrity Committee (DOIC) and then have been approved by the Minister. The approved methodologies have all met the requirements for:

- **Additionality**: the project activity is occurring beyond "business-as-usual" and is not required by legislation or regulation
- **Permanent**: the emissions reductions must be non-reversible over a 100 year period, which is generally easily met by emission avoidance projects, but requires of carbon storage projects an ability to protect the carbon store for the non-reversible period
- **Avoids leakage**: the project activity must cause a net decrease in emissions, and must avoid driving emission causing activity outside of the project boundary
- **Measurable and verifiable**: the emission reduction or carbon storage must be able to be measured, and the measurement and reporting of the reduction or storage must be able to be independently verified. The measurement protocols must be consistent over time.
- **Conservative**: conservative assumptions, numerical values and procedures should be used to ensure that emission avoidance and carbon storage claims are not over-estimated.
- **Peer-reviewed science**: the technical and methodological approach to the determination of emissions reductions or carbon storage should be based on the most relevant, peer-reviewed scientific principles available and relevant to the technology or process being used as the basis for the project activity
- **Internationally consistent**: the way in which emissions reductions or carbon sequestration is estimated must be consistent with the way in which Australia has agreed internationally to measure and track emissions and sequestration.

The methodologies that are available for use (already approved) and those that are currently under consideration can be found at http://www.climatechange.gov.au/government/initiatives/carbon-farminginitiative/methodology-development.aspx. The CFI allows for both public and private proponents to propose a new methodology under the CFI.

Programs developed by the CEF

It is important to note that the CEF legislative package has the intent of being broadly revenue neutral: that is the amount of revenue the program develops should be returned to the economy. The pathways of return of Government issued carbon permit sale revenue to the land sector are the focus of the review presented here. The Land Sector has been targeted to receive around $1.7billion in funding over the first six years of the CEF (2012-2018), with this money being made available as a result of liable entities purchasing emission permits, or paying the fixed carbon price in the first few years of the scheme. Some programs under the CEF are expected to be ongoing, others are seen as "once-off" investments by the Federal Government that should have the potential to increase the land sector's resilience to climate change and improve long-term farm productivity

Figure 2 outlines the key funding programs established by the Federal Government under the CEF of significant interest to the NRM.

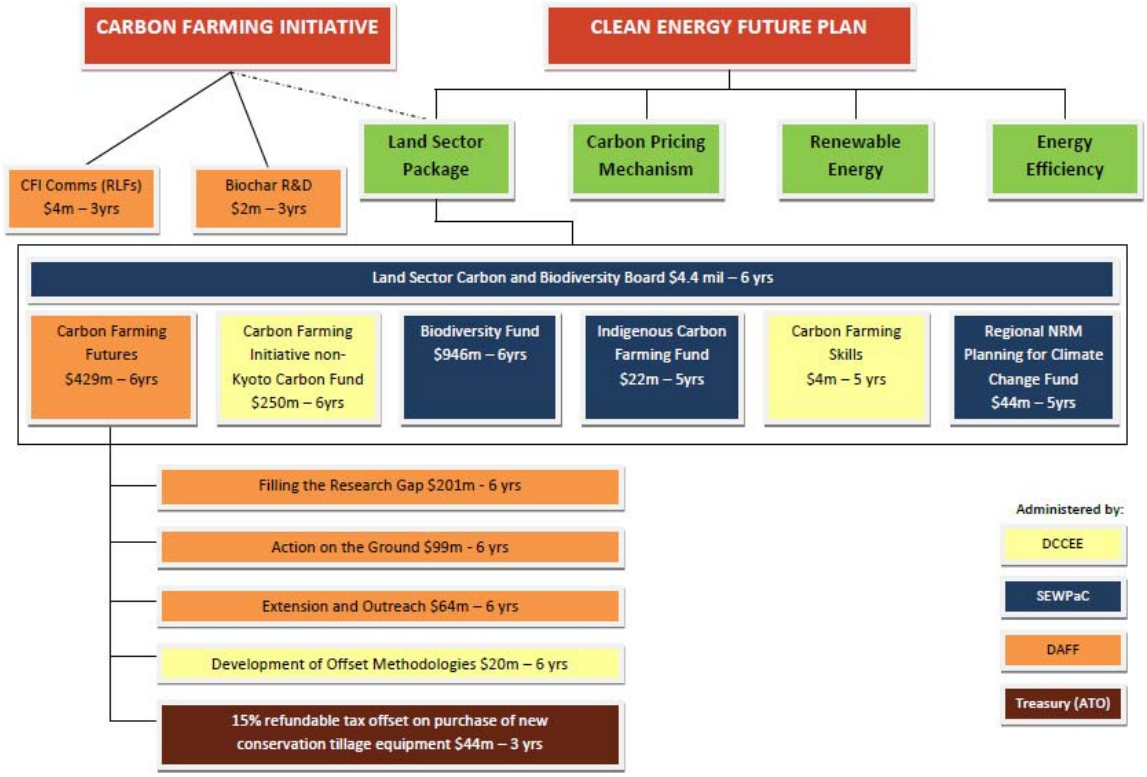


Figure 2. Key land sector opportunities and programs established under the Clean Energy Futures program of interest to the NRM. (Australian Government, Explanatory presentation)

Land Sector Carbon and Biodiversity Board (Ongoing)

The Land Sector Carbon and Biodiversity Board was established in December 2011, and is administered by the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC). This board was established to advise the Government on the implementation of the Land Sector Package, performance indicators of the package and the priorities for research under the package identified in Figure 2.

Carbon Farming Futures

The Carbon Farming Futures program is mostly administered by the Department of Agriculture, Fisheries & Forestry (DAFF) and consists of a number of sub-programs.

Filling the Research Gap

The Filling the Research Gap program is seeking to deliver new scientific research that has the potential to lead to new methodology development that will benefit the land sector. The first round of applications to the fund closed in February 2012, with future funding round calls expected on a roughly annual basis. The priorities for research funding under this program were a focus on increasing carbon stores in the soil, and reducing methane and nitrous oxide emissions from agricultural activities.

Action on the Ground: $99m

The Action on the Ground program is a grant based program that is looking to invest up to $99 million of funding in on-farm projects over six years. Action on the Ground is designed to enable on-farm trial and demonstration of practices and abatement technologies to reduce agricultural greenhouse gas emissions and/or increase carbon sequestered in soil. The first round of Action on the Ground closed in February 2012, with another call for projects expected within 18 months. Action on the Ground on-farm projects are expected to create new opportunities for landholders and farmers to participate in the CFI trialling and demonstrating outcomes from research programs such as the Climate Change Research Program (fully allocated, ceasing July 2012) and the Filling the Research Gap program (as described above). Projects under Action on the Ground are intended to ensure that research results can be practically applied on the ground in real farming situations.

Extension and Outreach: $46m

The Department of Agriculture Fisheries and Forestry is managing the extension and outreach program for the Land Sector package through the existing Landcare officer network, associated with NRMs and other NRM groups throughout the country.

Development of new offset methodologies: $20m

The Department of Climate Change & Energy Efficiency is responsible for the management of the $20 million dollar fund to develop new methodologies for the CFI. At time of writing, the draft methodology development fund (MDF) guidelines had been released. The objective of the MDF is to expand the opportunities for land managers under the CFI through the development of methodologies that meet CFI requirements.

The program will achieve this objective through support for methodology development projects that have the following characteristics:

- the project involves a methodology that has potential for application across a region or industry because the abatement activity or activities: have significant abatement potential
- are cost effective and easily adopted, and/or
- have co-benefits for agricultural productivity, biodiversity or natural resource management
- the proposed methodology has the potential to be approved under the CFI the abatement activity is covered by the CFI, and on the Positive list or likely to be assessed as beyond common practice
- there is a coherent methodological approach, including an accurate and realistic baseline scenario, a defined abatement activity or change in management practice, a clearly defined project boundary and a rigorous approach to emissions estimation
- the proposed methodological approach is likely to meet the CFI integrity standards and is supported by peer reviewed science
- the project team has demonstrated technical capability to carry out the project there is a budget for the project that includes cash and/or in-kind contributions by the applicant
- there is a well-structured draft work program that covers the development of the methodology through to its final assessment by the Domestic Offsets Integrity Committee.

It is expected that DCCEE will retain around $12m to staff the MDF, with around $7m being made available to the grant program. There is no minimum or maximum funding per project although it is anticipated that most grants will be between $50,000-$200,000 depending on scope and complexity of the project. This very tight proposed budget guideline would require that there is a significant amount of in-kind contribution made by relevant industry experts, NRM groups and tertiary research organisations.

No-till tax break

A 15% Refundable Tax Offset (RTO) will apply to eligible “no-till” machinery purchases from the 1st July 2012 to the 30 June 2015 (i.e. the 2012-13, 2013-14, 2014-15 income tax years). The machinery must be an eligible no-till seeder and can be any of the following:

- Tine machines fitted with minimum tillage points designed to achieve minimum soil disturbance and less than full cut-out.
- Minimum tillage points designed to achieve minimum soil disturbance and less than full cut-out include narrow points, knife points or inverted 'T' points.
- Disk openers with a single, double or triple disc arrangement.
- Disc/tine or disc/blade hybrid machine.
- The seeder must be new, i.e. not previously used by anyone.
- The entity buying the seeder must use it in a primary production business.

The no till tax breaks are administered by the Australian Taxation Office.

Non-Kyoto Carbon Fund: $250m (Ongoing)

The Non-Kyoto (voluntary) Carbon Fund will spend $250 million over six years from 2013 to purchase voluntary (non-Kyoto) ACCUs. There is currently very little detail available on the structure of the CFI non-Kyoto Carbon Fund. The governance structure, eligibility requirements and procurement process of the Fund were due for release in the first quarter of 2012. How the Fund engages in the market will be very important for the pricing and the stability of the market for voluntary (non-Kyoto) ACCUs, and thus drive new emission reducing projects under the CFI. The Non-Kyoto Fund will commence activities in July 2013. This fund may hold significance in the region depending on the type of CFI projects that are undertaken in the region.

Biodiversity Fund: $946m (Ongoing)

This fund will provide incentives for public and private landholders to enhance the environmental outcomes of CFI projects. This includes the restoration and management of biodiverse carbon stores such as restoring native vegetation, protection of biodiversity and reduction of erosion or salinity. This fund is managed by SEWPaC, and the first round of funding applications closed 31 January 2012. It is understood that the two driving policies for the implementation of the Biodiversity Fund are the Biodiversity Conservation Strategy 2010-2030 and the Clean Energy Future Land Sector policies. It is currently not clear how projects the Biodiversity Fund invests in will favour the balance for successful applications in terms of weighting towards “biodiversity” or “carbon” outcomes. The first round appeared to suggest around 30% of the successfully funded projects expected to generate carbon credit revenue in the future. This fund is significant for NRM and NRM groups such as SW NRM, as the administration of the funds is similar in format to Caring for our Country (CfoC), and it is possible that many projects that are currently funded by programs such as CfoC, and operated by the SW NRM may be able to access the Biodiversity Fund. This funding program is considered critically important for SW NRM. The outcomes of the first call are discussed in more detail at a later stage in this report. The second round of the fund appears to have been tightly targeted at Northern Australia, thus meaning it has no immediate value to the SW QLD NRM region.

Indigenous Carbon Farming Fund: $22m (Ongoing)

The Indigenous Carbon Farming Fund will support Indigenous Australians to benefit from carbon farming. The was due to commence from July 2012, and will be delivered in two streams:

1. Research and Development stream (DCCEE; $5.2 million over five years) will provide funding for research and reporting tools for Carbon Farming Initiative methodologies. The objective of the research and development stream of the ICFF is to encourage Indigenous participation in the CFI by supporting the development and accelerating the uptake of CFI methodologies for abatement activities, such as savanna fire management, likely to have high Indigenous participation. This will include support for research to underpin CFI methodologies, and the development of tools for estimating and reporting on emissions. There is no minimum or maximum funding per project although it is anticipated that most grants will be between $50,000-$200,000 depending on scope and complexity of the project. The call for funding under this stream opened late August, and closed on 4th October 2012.

2. Capacity Building and Business Support stream (SEWPaC; $17.1 million over five years). Support will include giving Indigenous communities access to:
    - knowledge and information to help guide their decision-making in relation to participation in the carbon market,
    - access to carbon market specialists and business development tools to help them to build their capacity to maximise carbon project investments and
    - the provision of expert legal advice and other assistance to develop governance and contractual arrangements for carbon projects involving multiple land interest holders, for example Indigenous groups, pastoralists and the Crown.
    - At time of writing this report (November 2012) this fund had not yet opened.

Carbon Farming Skills: $4m (Ongoing)

The Carbon Farming Skills initiative will ensure that landholders have access to credible, high quality advice and carbon services. The program is expected to deliver the development of a new nationally accredited qualification for carbon service providers, a program for accreditation of carbon brokers and aggregators operating in the Carbon Farming Initiative and importantly for NRM, information workshops for farm extension officers, catchment authorities and rural service providers about carbon farming. This program will be administered by DCCEE.

3. Methodology Review for SW Qld NRM Rangelands Region.

The Carbon Farming Initiative, as defined by the Carbon Credits (Carbon Farming Initiative) Act 2011 pays some significant attention to the role and importance of Natural Resource Management groups and the need to balance NRM outcomes with the development of carbon credit generating projects within the landscape being driven to reduce emissions or increase rates of carbon sequestration. The CFI actually requires that project proponents make the specific assertion that their proposed activity is consistent with the relevant regional NRM plan. However to date, no NRM plans in Australia have been developed with the carbon economy or the CFI specifically in mind. Hence this project is looking to give SW QLD NRM region an indication as to the potential of carbon projects that deliver on regional NRM priorities to be developed. It is expected that such projects will be able to deliver project activities that are unfunded by other funding programs, and lead to long term enhanced land management and NRM outcomes.

We cannot definitively know what projects are going to take place, or what methodologies are going to be available, nor are we able to test in any detail the likelihood of specific project types going ahead because there will be a variety of commercial considerations that need to be taken into account at this point in time. These variables will be assessed differently by a range of potential participants, and each land holder and investor will assess risk and opportunity of carbon projects differently.

It is expected that more detailed knowledge of potential carbon projects and their interactions with NRM outcomes will occur over time. This will allow for development of project specific information, and

for modifications to be made to the plan in a way that will allow the plan to be modified through time to deal with the changing regulatory and commercial space of the nascent carbon market.

Negative list

The CFI legislation has a number of checks to manage adverse impacts from CFI projects. The first is by setting in regulation a negative list that looks to disallow certain projects as they have negative NRM, biodiversity or regionally unfavourable outcomes. The negative list is specified in the Carbon Credits (Carbon Farming Initiative) Act 2011 Regulations, and is an "open" list that can be updated to reflect regional priorities and issues.

CFI projects:

- will need to comply with all state, Commonwealth and local government water, planning and environment requirements
- will be required to take account of regional natural resource management plans—these provide a mechanism for local communities to have their say about the type and location of CFI abatement projects, and
- can be excluded by the Negative List.

There are certain project activities that will not be eligible to receive carbon credits under the CFI. The CFI regulations set out projects that are specifically not to be allowed (the "negative list"), and as specified, may be inconsistent with the regional NRM plan, but not necessarily. The following kinds of projects are excluded offsets projects as November 2012:

- A project that:
    i. was mandated under a law of the Commonwealth or a state or territory, and
    ii. is no longer mandatory because the law was repealed after 24 March 2011.

The first set of specifications on things that are not allowable under the CFI are "activities that are already required by law." For example, if a land manager has a legally enforced responsibility to undertake a certain kind of activity, such as planting trees to make good for removing trees on another part of the property, then the newly planted trees will not be eligible to earn credits under the CFI.

- The planting of a species in an area where it is a known weed species.

The CFI regulations define "known weed species". In QLD this includes those listed in the *Land Protection (Pest and Stock Route Management) Act* 2002.

- The establishment of a forest under a forestry managed investment scheme for Division 394 of Part 3–45 of the Income Tax Assessment Act 1997.
- The cessation or avoidance of the harvest of a plantation.

- The establishment of vegetation on land that has been subject to illegal clearing of a native forest, or illegal draining of a wetland.
- The establishment of vegetation on land that has been subject to clearing of a native forest, or draining of a wetland (that was not an illegal clearing or draining), within:
    i. seven years of the lodgement of an application for the project to be declared an eligible offsets project, or
    ii. if there is a change in ownership of the land that constitutes the project area, after the clearing or the draining—five years of the lodgement of an application for the project to be declared an eligible offsets project.
- Specified tree planting in an area that, according to the CFI rainfall map, receives more than 600 mm long-term average annual rainfall, unless it is mentioned in the sub regulations.

Giving the "tree plantation" rules some more examination, it can be seen that "Planting trees in an area that receives more than 600 mm long-term average annual rainfall" is an *excluded* offsets project, *except when:*

- the project is a permanent environmental planting, or the project contributes to the management of dryland salinity, or
- the project occurs in an area where the relevant jurisdiction has been determined by the National Water Commission as meeting its National Water Initiative commitment to manage interception by plantations, or
- the project holds a suitable water access entitlement for the life of the project, or
- where it is not possible to obtain a water access entitlement, and the CFI Administrator is satisfied that the project causes no material impact on water availability.

It is highly likely that in the event where it is not possible to obtain a water access entitlement for the life of the project, as is expected to be the case for the majority of lands in the SW QLD NRM region, then there will be a strong reliance by the Clean Energy Regulator when assessing a project application on the relevant NRM organisation in providing specific advice on the likelihood of the project in impacting water availability. This may include a letter signed by the regional NRM Chairman or CEO to the effect that the project is consistent with the water allocation and regional NRM plan.

Positive list

Potential project activities currently identified on the positive list are specified to be "additional" or beyond business-as-usual. As with the negative list, the positive list is found in the CFI regulations and is intended to be an open list that allows for inclusion of new project types over time.

Vegetation and wetland restoration projects

- The establishment of permanent plantings on or after 1 July 2007.

- The human-induced regeneration, on or after 1 July 2007, of native vegetation, on land that is not conservation land by the:
    i. exclusion of livestock, or
    ii. management of the timing and the extent of grazing, or
    iii. management, in a humane manner, of feral animals, or
    iv. management of plants that are not native to the project area, or
    v. cessation of mechanical or chemical destruction, or suppression, of regrowth.
- The restoration, on land that is not conservation land, of natural wetlands that had been drained.
- A forestry project accredited under the Australian Government's Greenhouse Friendly™ initiative.
- Permanent plantings established before 1 July 2007 for which there is documentary evidence that demonstrates, to the satisfaction of the Administrator, that the primary purpose of the plantings was generation of carbon offsets.

Livestock management and other activities

- The capture and combustion of methane from livestock manure.
- The reduction of emissions from ruminants by manipulation of their digestive processes.
- The reduction of methane emissions through the management, in a humane manner, of feral goats, feral deer, feral pigs or feral camels.
- The application of urease or nitrification inhibitors to, or with, livestock manure or fertiliser.
- The application of biochar to soil.
- Early dry season burning of savanna areas greater than 1km^2.

Relevant approved carbon credit generating methodologies

This section provides a review of methodologies that have been approved, are under consideration or may be adopted from other schemes elsewhere. For each methodology, there is a judgement call made as to the likelihood of at least five proponents looking to implement the methodology within the region ("*Likely application in the region by 2014"*) and the "l*ikelihood of uptake within the region*" (how many land holders may reasonably look to utilise the methodology, based on the assumption that carbon prices are high enough to influence land management decisions and that land managers are able to make informed choices regarding market value of current and planned future land use activities). For example, for carbon sequestration projects, the relative value of agriculture or grazing versus

permanent environmental carbon stores. For emission avoidance projects, the assumptions regarding carbon project development cost of implementation and operations and any influences on enterprise productivity are lower than the value that can be achieved by the sale of the carbon credits.

Emission avoidance: Savanna burning.

The methodology involves the use of controlled fire management across savanna in the fire prone tropical north of Australia to:

- Reduce the area of a project that is burnt each year, and/or
- Shift the seasonality of this burning from the late dry season (LDS) towards the early dry season (EDS).

The result of a shift from predominantly LDS to predominantly EDS fires is a net reduction in fuel consumed per unit area and area burnt. This generates a corresponding reduction in methane (CH4) and nitrous oxide (N2O) emissions released by fire per unit area.

Applicability

The approved methodology will not be applicable to the region as the vegetation classes identified in the methodology are not found in the SW QLD NRM region. There is currently a research program underway that is seeking to stretch the extent of the utility of the current methodology, and this is expected to be applied down to the 600mm rainfall band in the future. This current methodology does not allow use of stock animals to reduce fuel loads and thereby create strategic fire breaks through planned fuel utilisation.

Regional applicability for SW QLD: this methodology is unlikely to be applicable, and neither is the proposed modified >600mm rainfall methodology likely to be applicable. This is due to the lack of regular fire outbreaks and lack of regular wet season grassland system productivity. For example, many of the properties in the tropical north that may be able to use this methodology often are more than 50% burned every year by hot fires late in the dry season. It is understood that this level of extensive fire impact does not occur in the SW QLD NRM region.

Likely application in the region by 2015: 0%

Potential uptake: the importance of fire management in this region will be more focused on protection of standing carbon assets, rather than being able to claim emissions avoidance from changed fire frequency.

Carbon sequestration: Environmental plantings

This methodology involves the establishment and management of permanent native forests that increase removal of carbon dioxide from the atmosphere. The abatement activity includes planting and/or seeding native species on cleared or partially cleared land.

Applicability

The approved methodology may be applied in the SW QLD NRM region, although it is likely to under-estimate carbon sequestration rates of native species planted. The project proponent will need to ensure that the water entitlements identified by the CFI legislation are managed as required. This methodology was created with the view of revegetating lands that had previously been cleared mechanically of native vegetation.

Regional applicability for SW QLD: There is expected to be significant areas that were mechanically cleared of native vegetation in this region. Given the natural response of vegetation in the region to clearing is eventual regrowth from lignotubers or root stock, the cost of undergoing direct environmental plantings makes this an unlikely pathway to landscape scale rehabilitation in the region. From a carbon credit generating perspective, carbon permanence obligations as currently envisaged by the CFI legislation do pose a risk for the land manager. However, this risk is higher where there is no natural regeneration potential, as would be seen where someone looks to actively plant. A "planted" carbon store is likely to be more expensive to re-establish after a carbon loss event than a carbon store that has been caused through a return to a more "natural" environmental condition through management of fire, hydrology and grazing pressure.

Likely application in the region by 2015: 10%

Potential uptake: unlikely to be widely adopted due to risk associated with cost of planting.

Relevant methodologies under consideration/development

Emission avoidance: Reduction of emissions of methane through the application of a feed supplement to dairy cows

This methodology proposal is for a project that provides a feed supplement to dairy cows. The methodology proposes this will reduce the methane emitted by the animals. The claimed abatement occurs as a result of a reduction in the amount of methane emitted per unit of milk produced.

Applicability

The methodology has not yet been approved. However, the concept of methane reduction per unit of animal production may translate to livestock production systems, such as the extensive cattle production systems of SW QLD. Activities that lead to a decrease in methane production (at the farm level) per kilogram of live weight (or some other measure of system productivity) could conceivably be developed and turned into a methodology. Activities could be as simple as increasing reproductive efficiency, increasing weight for age and improving herd genetics for better reproductive capacity, as well as potentially using feed additives, or changed paddock management to increase the amount of food on offer. This would require that a relevant property, project or regional baseline is established that describes what the emissions profile per measure of system productivity is. The project level emissions before and after the implementation of the activity would then be compared against the baseline to determine the emission reduction benefit that could generate credits under the scheme.

An emissions avoidance project such as one that looks to claim abatement from improved herd efficiency will likely require an increase in the level of stock management. This changed management regime may lead to an increase in vegetation or soil carbon stores, and it may be possible to generate carbon credits through changed grazing management, if a methodology is created and approved (see below).

Regional application in SW QLD region: If a methane avoidance through stock efficiency improvement can be achieved, there is a reasonable likelihood of application in the region, all else being equal.

Likely application in the region by 2014: 60%

Potential uptake: Potentially 30% uptake, however this will be strongly dependent on the financial status of property owners, and their ability to undertake expenditure and implement changed grazing management regimes which may include significant infrastructure costs and data and management recording..

Carbon sequestration: Measurement-based methodology for farm forestry projects

The methodology covers the establishment of trees on agricultural land that was previously clear of woody vegetation. The methodology is designed for use in farm forestry and this activity may involve the periodic removal of commercial and non-commercial above-ground biomass from the site.

Applicability

This methodology applies an "average biomass of carbon storage on-site" which may allow for a plantation forest to be able to generate carbon for the long-term average increase in carbon storage. It is generally expected that plantation forestry would apply to single species (monoculture) plantations. The challenge for NRM planning is to make a decision as to where single species plantings, where they are able to meet the requirements for relevant local, state & Federal planning regulations and water affecting activities, would be allowable in the region, if at all.

Regional applicability for SW QLD: There may be potential for a "harvest / regrowth / harvest / regrowth" model in the region, especially if the harvested material is able to be turned off for fuel use or other higher value utilisation, such as biochar. In this region, unlike others, natural regrowth of monocultures is a natural condition, and the regrowth, particularly of mulga may allow for the harvest/regrowth cycle to occur without incurring the significant costs of direct planting.

Likely application in the region by 2014: 30%

Likely uptake in region: will be a potentially valuable opportunity for landholders to cost effectively produce a permanent series of harvest plots to produce biomass for alternative uses, such as biofuel or renewable power production, or through pyrolysis for biochar. This option however requires the establishment of a partner value chain for value adding to harvested wood products, and it is currently

unclear where or how such a market may develop. It is acknowledged that certainty in a carbon price may spur innovation in the "value adding to harvested wood products" in the region.

Carbon storage: Native forest protection projects

This methodology proposal involves the protection of native forests through the prevention of clearing and clear felling harvesting activities. This includes reduction in logging rates, and creation of credits for avoided deforestation, where a project proponent chooses to not clear fell a forest where they hold the legal right and permit to do so.

Applicability

This methodology could allow those with clearance permits to voluntarily elect to permanently protect the lands by not utilising the clearance permits in return for carbon revenue. While there are lots of landholders that hold "green on PMAV" and "white on PMAV", it is unclear how a future CFI methodology may allow landholders to create carbon value by not utilising those clearance rights.

Regional applicability for SW QLD: almost every landholder in the region still holds the right to undertake managed clear felling (white on PMAV) and restricted felling ("green on PMAV"). If a native forest protection/avoided deforestation methodology can be developed, it will be hugely important for the SW QLD NRM region. This point is made given the relatively low prices for land and the opportunity costs for not clearing are likely to be matched by the value of carbon at a relatively low break-even point. This is mostly due to relatively low cattle production per unit area, and the high cash cost of actually creating the deforestation (i.e. machinery and fuel costs are very high per hectare to clear and maintain clearance).

Likely application in the region by 2015: 50%. Note this timeline is longer than the others in this report, given the recognition that there may be some significant challenges with both QLD and national legislation, and the slow development of methodologies under the CFI.

Likely uptake in region: will be a function of how many landholders have vegetation clearance permits. Difficult to determine, but expected to be relatively large contributor to the total number of CFI projects in the region, and nationally in the early years of the CFI scheme.

Carbon storage: Native forest from managed regrowth

This methodology estimates greenhouse gas abatement achieved by human-induced native forest re-growth. The principal carbon pools estimated are in the tissues of woody plants, and include coarse woody debris on the forest floor.

Applicability

This methodology was developed with mulga lands and Brigalow country in western NSW and Queensland that had been extensively mechanically cleared. These native forests respond to a series of wet summers by producing masses of new stems from lignotubers. In some places, this is seen as "invasive native scrub" or "woody weed thickening" as the regrowth or thickening negatively impacts

the tree: grass balance necessary for productive grazing. In some cases the thickened regrowth stops formation of soil cover, which can lead to further land degradation processes. On other cases where the stem density is lower, pastoralists can graze animals, and soil processes are protected and enhanced by the presence of perennial grasses. This methodology proposes the use of a specialised data set to determine carbon storage rates unique to the SW QLD region by DERM.
However, given that this methodology has been developed by a "private" proponent (i.e. not the Department of Climate Change & Energy Efficiency), and it is reliant on data sets that are most definitely inconsistent with the method for reporting regrowth in the National Inventory Report, and that DCCEE have developed a much more conservative methodology (see below: *Human induced*...), it must be considered that this methodology has a severely limited potential to become approved in the short term. It may be that in time the approach proposed in this draft methodology is integrated in time into the National Inventory Report. This will lead to much higher (and more realistic) rates of sequestration to be estimated by project proponents, making carbon storage through changed clearance and land management process more economically valuable as they will produce more carbon credits. However, at this point in time, it must be acknowledged that this approach will not be approved for at least the first 3 or so years of the CFI.

Likely application in the region by 2014: 0

Potential uptake: it is not expected that this methodology is going to be approved in the next 3 years.

Carbon sequestration: Human-Induced regeneration of a permanent even-aged native forest
This methodology proposal involves the sequestration of carbon in permanent forests of native species. The methodology uses the Reforestation Modelling Tool to determine carbon sequestration in tree biomass. The forest is established by human induced regeneration through the cessation of activities causing the suppression or destruction of vegetation regrowth. This methodology holds significant economic promise, given preliminary assessment of the relative balance between land value, opportunity cost of permanence obligations under the CFI and other economic returns for other existing land use options for the region. As such, some significantly more detailed assessment of the methodology detail is entered into here.

Applicability
This methodology is very similar to the "Native forest from managed regrowth" methodology, differing mostly by the use of the Federal Government's Reforestation Modelling Tool (RMT) which can be used nationally to determine carbon sequestration rates. Again, this methodology is focussed on lands that have been intensively cleared, generally through mechanical means.
Type of GHG mitigation action: carbon sequestration

Abatement activities: changed land use management practice, such as activities highlighted in the positive list, such as exclusion of livestock, management of the timing and the extent of grazing, management, in a humane manner, of feral animals, management of plants that are not native to the project area, and the cessation of mechanical or chemical destruction, or suppression, of regrowth.

Applicability condition and project activity notes

The baseline for all projects using this methodology is a zero carbon stock change, based on the assumption that regrowth would continue to be suppressed annually under current practice e.g. continued grazing or pasture management. The activity could include the cessation of regular suppression of regrowth of native invasive plant species, but only if they naturally occur in a monoculture. If, however, monoculture regrowth only occurs as a result of previous habitat disturbance, cessation of regular suppression is not suitable.

Critical to the use of this methodology in the SW QLD NRM region would be that the proponent could prove that:

- The land had not been a "forest" for the previous five years, potentially before 1 July 2010 if the methodology is approved by 1 July 2013 to allow for project activity backdating. (This is expected to be a likely scenario).
- That the regeneration can be a monoculture if they "occur naturally" and "not as a result of previous habitat disturbance".
- One issue that needs to be tested for the SW QLD region is can it be shown that there are "natural" monocultures of mulga? It is currently unclear as to how this would be tested by the Clean Energy Regulatory when attempting to register a project under this methodology, if the methodology proceeds to be approved with the previous point still a requirement. It may be possible that a letter from the SW QLD NRM region CEO or Chairman may be used as a form of proof for validation against the methodology that such monocultures are naturally occurring.
- The activity is about cessation of historical practices that would have stopped regrowth from being able to achieve a "forest". This would include keeping out grazing stock that would graze the plants and stunt their growth, and cessation of chaining if that was the regular suppression technique.
- The abatement does not count until the vegetation achieves the status of "forest" i.e. 2m tall and 20% canopy.
- The age of regeneration is considered to be zero until there is "reasonable confidence" the growth will attain "forest" conditions (that is, greater than 2m tall and greater than 0.2ha in area at 10m wide). This may be based on a technical report provided by a competent consultant, or regional NRM representative.
- The activity could have been undertaken back in time. The creditable activity can only be backdated to 1 July 2010 (assuming the methodology is approved before 1 July 2013). Forest growth prior to 1 July 2010 does not count, however the CFI FullCAM model does allow for determining growth rate curves since project start, and the crediting of the growth curve.
- There must be some form of evidence that "the dominant land uses in the project area for the five years prior to the change in land management that promotes regrowth were grazing, pasture maintenance, cropping, settlements, nature conservation or no use".
- A set of example model outputs from Reforestation Modelling Tool (RMT) are provided in Figure 1 below.

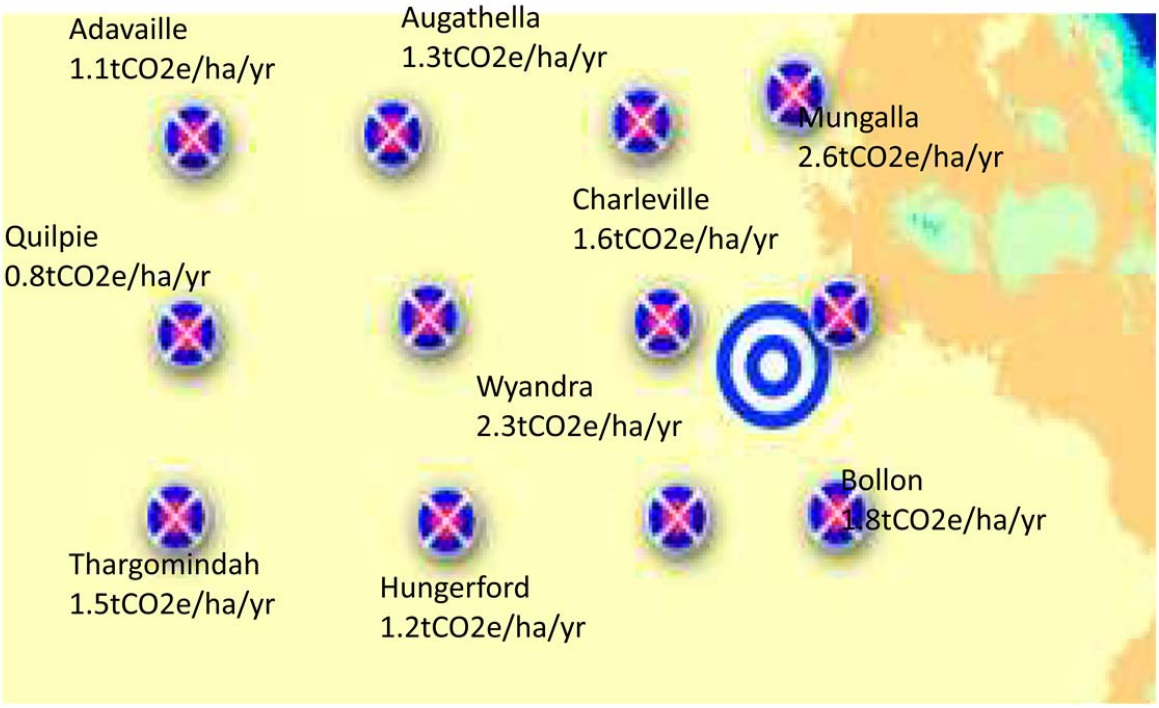


Figure 1. Possible annual carbon sequestration rates expressed as tonnes carbon dioxide equivalent/hectare/year across the SW QLD NRM region.

Kyoto/non-Kyoto lands, Kyoto accounting rules and CFI scheme rules and interactions with the proposed methodology

- For Kyoto accounting, reforestation specifically refers to conversion of land that was not forest land at the end of 1989 (i.e. land clear of forest at January 1, 1990).

- The CFI regulations see "revegetation through human induced management" as a Kyoto offset activity, without specifying the point in time at which the land was initially cleared of a forest. Managed regrowth on land deforested since 1990 is a reversal of an emission and should therefore attract Kyoto compliant carbon credits. In particular, Regulation 3.35 defines regeneration projects as Kyoto offsets projects, distinct from reforestation projects. As the outcome is a forest in both instances, the rationale for this distinction is obscure and may cause some challenges for landholders and other potential project participants difficulty in determining whether the methodology and their lands are eligible entering into the CFI as a project. Similarly, Regulation 3.36 may require some testing with the Clean Energy Regulator to determine exactly how they will interpret the "excluded offsets project" rule that states it is an excluded offset project if:

"the establishment of vegetation on land that has been subject to clearing of a native forest, or draining of a wetland (that was not an illegal clearing or draining) within:

(i) 7 years of the lodgement of an application for the project to be declared an eligible offsets project."

- Initial examination of the rule suggests that a project may avoid this rule, if it can be shown that the clearance that was undertaken within seven years was not the first time the land was cleared of forest.
- GIS analysis of regionally available data will produce information regarding which areas and catchments within the SW QLD NRM region will be able to provide the greatest level of abatement that could result from human induced regeneration.

Project activity checklist:

1. The area had been clear of "forest" (i.e. the trees in the area were not greater than 2m tall for that period).for the previous five years before the establishment of the project (the change in management that promotes regeneration).
2. Natural regeneration from lignotubers or root stock (or seed bank) causes an increase in carbon store as a forest (i.e. greater than 0.2ha, greater than 2m tall, 20% crown cover).
3. Prevent grazing for the first three years to allow re-establishment, after which time grazing can occur in the project area.
4. 10% of carbon can be harvested for personal use at a maximum rate of 10% of biomass debris per year. Thinning to improve forest health can occur, as long as biomass remains within the forest area.
5. The forest should be made up of a mix of tree and understory species, all native to the area, and may be a monoculture if they occur naturally.
6. Use the Reforestation Modelling Tool (RMT) 'mixed species environmental planting' as the 'Species' selection and 'Non-harvested regime, planting density: direct seeding' as the managements to generate estimates of abatement (see previously occurring Figure 1). This will need to be done initially to estimate abatement potential, and as part of reporting to the Clean Energy Regulator as part of project report requesting issuance of carbon credits.

Likely application in the region by 2014: 80%. This very high rating is given on the understanding that most of the initial low cost, immediately available regeneration based abatement will be delivered by the lands that had been previously cleared in QLD. This is described by the Parliamentary Library of Australia thus:

"Article 3.7 of the Kyoto Protocol has come to be known as 'the Australia clause' as it was campaigned for by Australian Senator Robert Hill in the final stages of negotiations. It allows Annex I parties to include greenhouse gas emissions from land use change in 1990-base year calculations. This is important for Australia because, in 1990, national forestry and land clearing activities represented net sources of emissions. Reducing these activities from what they were in 1990 therefore counts as an emission reduction, without actually reducing direct emissions."

http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BN/0910/KyotoAccRules#_ftn25 accessed 6/11/12

Potential uptake: expected to be relatively high (i.e. up to 40% of landholders engaging in this opportunity over the first 10 years of the scheme) owing to many properties meeting eligibility

requirements. This is assuming that the economic value of previously cleared land is lower under current land use conditions than what it would be under a carbon forest, and that lands that have been cleared will naturally regenerate.

Emission avoidance: Management of large feral herbivores (camels) in the Australian rangelands

The methodology involves the removal of feral camels with the emissions reduction benefit based on the difference between the estimated age of the animal at removal and the predicted average age of natural mortality. There are four main activities of feral camel removal that will result in emissions reductions under the methodology.

Applicability

There are unlikely to be many feral camels within the region. A modification of this methodology could be developed for other feral pests in the region, such as feral goats. It is highly unlikely to be applicable to feral species such as pigs, horses or donkeys as they are mono-gastric and produce very little methane. The value of any feral goat methodology will be highly dependent on technical details that cannot yet be forecast, but will include estimates of baseline and annual abatement potential.

Likely application in the region by 2014: 40% possibility of being applied within the region.

Potential uptake: will be highly contingent on the baseline and applicability conditions set in any feral goat methodology. It must be remembered that a "baseline" emission reduction number of animals (equal to, say, annual average number of goats removed over the past five years) will need to be removed before any further removals activity is creditable. This will strongly influence the commercial viability of a landholder being able to utilise a "feral goat" methodology if one is produced.

Changed grazing management

It is known that there is a Department of Climate Change & Energy Efficiency supported methodology under development that aims to allow land managers to generate carbon credits through changed grazing land management, as foreseen by the positive list. It is expected that the methodology will recommend a baseline determined to be the average amount of carbon in living and dead vegetation (trees, shrubs and grasses), in both the above and below ground carbon pools. These are known as "Article 3.4 sinks", as they are identified in Article 3.4 of the Kyoto Protocol. Australia has chosen not to account for changes in Article 3.4 carbon stocks under its obligations to the Kyoto Protocol, so until this accounting rule changes, any credits generated by the proposed methodology will be "voluntary" standard carbon credits. This means they will not be able to be used by an entity with an obligation under the Clean Energy Futures legislation, and can only be used for voluntary offset purposes. It is generally understood that "voluntary" standard carbon credits have a lower value in the market than compliance units.

To achieve increases in Article 3.4 carbon stocks, project proponents will need to manage hydrological processes, reduce fire intensity and frequency as well as modifying grazing practice to cause increases in standing carbon stocks above a baseline carbon store amount.

Applicability

It is difficult to forecast precise information regarding likely applicability conditions, however it is likely to include the requirement that the project activity is undertaken on rangelands that have are generally regarded as mostly intact native vegetation, where the primary land use purpose has been grazing of livestock, and that it can be shown that historical land use has caused the landscape to hold less carbon than it naturally would have. This area may occur within the SW QLD NRM region as lands that were never cleared mechanically of native vegetation, but have been degraded due to historical land management practices

Likely application in the region by 2014: 60%

Potential uptake: 15%. This will be strongly dependent on the financial status of property owners, and their ability to undertake expenditure and implement changed grazing management regimes which may include significant infrastructure costs and data and management recording, and the relative level of carbon stock response to changed management. This methodology approach will be closely correlated with properties that are implementing methane avoidance through changed herd efficiency projects, assuming a methane avoidance methodology can be developed.

4. Adapting South West NRM to be "climate and carbon" ready

Regional Natural Resources Management Planning for Climate Change Fund ($44m)

Along with the opportunities and risks of the emerging carbon economy, there are going to be challenges for Australian NRM organisations. Adaptation to climate change is no longer a question of *if* but rather of *how much, where* and *how fast*. Climate change is likely to impact NRM organisations' and their stakeholders' ability to deliver on their core business of protecting and enhancing environmental assets, and strengthening community and economic structures that depend on those environmental assets such as agriculture, mining and tourism. In addition to economic activity, ecosystems provide essential services that benefit humans such as regulating climate, purifying water, absorbing and transforming wastes, and providing a focus for spiritual and cultural pursuits.

The Australian Government's *Regional NRM Planning for Climate Change Fund* (RNPCC) recognises the need to protect and enhance ecosystem services. This Fund is being rolled out so that NRM regions can plan for changed climates, identify where in the landscape CFI projects should occur, and identify the types of CFI project types that are most likely to deliver on the goals of the plan. Examples include deciding where biodiverse plantations are going to deliver the best NRM outcome in a particular region, or where changing grazing management is going to deliver improved alignment with the NRM plan.

The RNPCC fund is divided into two streams. Stream 1 consists of $28.9 million over 4 years to assist regions to plan for climate change impacts. Funding was due to become available in July 2012 and is administered by the Department of Sustainability, Environment, Water, Population and Communities. It

is expected that all 56 NRM regions in Australia will have completed the climate and carbon layer revision of their plans by 2016.

Stream 2 is for research coordination to produce regional-level climate change information to support medium term, natural resource and land use planning. This is administered by the Department of Climate Change and Energy Efficiency.

It is important that regional NRM plans use the most current and up-to-date climate change scenarios and information in their regional land use planning and management. While it is not intended that the fund be used for a complete re-write of the regional NRM plans, it is appropriate that it is used to develop "climate" and "carbon" layers for the plans. This will involve a detailed analysis of the existing plan, identifying whether the projects associated with key environmental assets are going to be positively, negatively or neutrally affected by possible CFI projects.

The most up-to-date projections, and regionally relevant climate forecast models need to be used in the re-working of the NRM plan and that individual CFI project benefits are weighed against the broader regional responses to climate change. Where CFI projects are likely to support regions adapting climate change, for example improving groundcover, watershed protection, agricultural productivity, or biodiversity values by providing stepping stones or corridors to allow movement, they should be given regional priority. CFI projects likely to exacerbate the negative impacts of projected change will drop down the regional priority listing. These negative impacts may be on water access or availability, agricultural productivity, or biodiversity.

In the future consistency with the NRM plans will be required for both CFI projects, and Biodiversity Fund investments. For CFI projects, proponents must identify if, and how, their projects align with the regional NRM plans. The Biodiversity Fund will fund priority projects identified in the regional NRM plan. Consequently the NRM plans should not be seen as a "fixed story", but rather an evolutionary document continually updated as new carbon projects develop, regional priorities change and new information on regional climate change becomes available.

Using this iterative and adaptive process NRM organisations will ensure that carbon funded projects occur where they deliver best environmental outcomes, and best support adapting to climate change within the region. This planning should also give consideration to the value of the NRM plan to deliver on other national environmental initiatives, such as improving ecosystem resilience to change, and improved connectivity between and across systems.

The Department of Sustainability, Environment, Water, Population and Communities has developed a set of "Principles" to guide the process of updating the regional NRM PLAN or NRM plans. These Principles are shown in Table 2 below.

Table 2. Principles for updating regional NRM plans

The Department of Sustainability, Environment, Water, Population and Communities 2012

Principle	Attributes
1. Plans identify priority landscapes for carbon plantings and strategies to build landscape integrity and guide adaptation and mitigation actions to address climate change impacts on natural ecosystems	a) Planning processes identify opportunities and management strategies to maximise environmental benefits and landscape resilience, including biodiverse plantings, wildlife corridors, landscape connectivity and protection of remnant vegetation
	b) Planning processes recognise, provide guidance to avoid and mitigate potential risks and adverse impacts associated with carbon sequestration in the landscape, including impacts to biodiversity, water resources and production systems
	c) Planning processes identify priority landscape for potential carbon sequestration opportunities, mitigation and adaptation in the context of improving landscape connectivity, resilience and wildlife corridors
2. Planning process is logical, comprehensive, and transparent	a) Planning process consider previous planning and are consistent with relevant jurisdiction specific planning requirements
	b) Planning process are informed by a clear understanding of the regional stakeholder and community aspirations and objectives
	c) Planning process demonstrate a clear understanding of the regional bodies' business, roles and responsibilities
	d) Planning process show evidence of cooperation for cross-regional climate change impacts and land use planning
	e) Adaptive planning responds to new information and guide improvements as knowledge improves
	f) Planning process use information at an appropriate scale to spatially identify priority areas in the landscape for carbon sequestration projects and environmental co-benefits
	g) Planning process demonstrate adaptive planning that responds to current and anticipated climate change research and additional information
3. Plans use best available information to develop actions and are based on collaboration with government, community and other stakeholders	a) Plans demonstrate strategic alignment with relevant state and Commonwealth NRM policies (such as urban and regional planning, matters of National Environmental Significance, National Water Initiatives and the National Wildlife Corridors Plan)
	b) Plans meaningfully engage community and stakeholders
	c) Where relevant plans identify and agree roles and responsibilities for partners in the region
	d) Plans integrate biophysical, socio-economic and climate change information to fine tune strategies for improving landscape connectivity, function and resilience

These Principles give high level guidance as to how to undertake NRM plan revisions to make them "climate and carbon ready", however they lack sufficient detail as to how to actually undertake the work. In addition "CFI/carbon" components of the Principles only address carbon storage projects but do not address emission avoidance projects such as the removal of feral animals, reduced emissions from fire management or reduced emissions from improved fertiliser application.

In response to the generalised nature of the Principles there are six key elements that are required to make modifications to an NRM plan to make it accommodate adapting to future climate change and the development of carbon projects. This approach is outlined below.

Step 1 Collect climate change predictions and review all their impact on the region being investigated. Stream 1 funding is targeted at the development of regionally relevant climate change predictions.

Step 2 Develop a technical working group with relevant industry and environmental management experts to develop information package/s about climate, carbon and how these affect environmental assets and production systems. These information packages should be a "broad" or "general" level. SW NRM should collate data on environmental assets such as land use and land systems data, catchment and water quality data, water resource and availability vegetation condition indices, identity and location or expected occurrences of threatened species and threatened ecological communities. Consideration in the information package should be given to how these assets are likely to be impacted by possible climate change outcomes in the future. It will also be important to give consideration at this point to the type of CFI projects that could be undertaken in the area of those assets, and whether the CFI project types could positively, negatively or neutrally impact the environmental asset.

Step 3 Run "Risk Assessment" workshops with stakeholders to analyse and use information provided through the information packages (Step 2). The Risk Assessment workshops would review impacts of climate change on current and historical land use management, and the current actions as specified by the NRM Plan. It will also estimate how the environmental assets of the region may respond or adapt to the expected or predicted changes.

The Risk Assessment may be based on the Australian Standard for Risk Assessment (AS/NZS 4360:2004) a process based on "the systematic application of management policies, procedures and practices to the tasks of establishing the context, identifying, analysing, assessing, treating, monitoring and communicating risk" (From Risk Assessment Standard AS 4360). In this case the risk is the impact of climate change on environmental assets and socio-economic systems reliant on those assets. Once the assets have been established risk likelihood is established and consequence descriptors and definitions should be undertaken. Risk likelihood defines the probability of the event occurring, and may range between "rare" or highly unlikely, (score of "1") through to "highly likely" or will almost definitely occur (score of "5"). The risk descriptors, or impact, may range from "insignificant" - minor impact on environmental asset, consequently minor impacts on socio-economic systems, (score of "1"); through to catastrophic or complete loss of environmental asset or service provided by environmental asset with consequent impacts on socio-economic systems reliant on the asset (score of "5"). Multiplying the score of the likelihood of an event, by the score of its consequence gives the specific risk. Low numbers indicating low risk, and high numbers indicating high risk.

Once a risk score is known NRM groups can evaluate what projects could be undertaken to reduce the impact of climate change on the environmental asset under consideration. The greatest challenge in the

development of the new climate and carbon impact layers for the Plan will be ensuring that outcomes effectively integrate bio-physical, socio-economic and climate change information to deliver the outcomes that should lead to landscape connectivity, function and resilience.

An alternative approach to the "risk based" assessment is to use a process that has specifically designed to prioritise NRM investment, and to use professional consideration of the risk of climate impacts, as well as potential positive or negative impacts of the carbon economy in prioritising the project. One such prioritisation program is the INFERR process. in the words of the developers (www.inferr.org) :

> "INFFER™ is a tool for developing and prioritising projects to address environmental issues such as reduced water quality, biodiversity, environmental pests and land degradation. It is designed to help environmental managers achieve the most valuable environmental outcomes with the available resources."

It may be possible to use expert judgement in the prioritisation process to determine how the impacts of the carbon economy and climate change are likely to positively or negatively impact project's likelihood of success, and thus change its viability relative to the other projects identified as being worthy of deeper consideration.

Step 4 This framework also gives NRM groups the opportunity to identify new carbon projects (either emissions avoidance or carbon storage) that may help to mitigate the impacts of climate change on the environmental asset under consideration. This requires that NRM groups understand different types of potential carbon project types (avoidance or storage) and these projects capacity to positively maintain or improve the underlying environmental assets.

Step 5 Publicise the revisions to the plan to allow land managers and project proponents to make informed decisions for what activities are consistent with the revised NRM Plan. It will be important to clearly document the process that went into the development of the "climate" and "carbon" layers of the plan so that if any novel project is proposed, its value in terms of delivering on the goals of the broader NRM plan can be transparently and clearly identified. Processes will need to be developed to guide NRM Boards and relevant staff how to evaluate such projects.

Step 6 Use an iterative review process to build an adaptive management approach to respond to changes in risk profiles, the development of new climate models and as new innovations and project types are developed. The policies and programs developed at the first iteration will need to be adjusted as the knowledge base of environmental and social-economic impacts increases. Successful adaptive management recognises that timely revision of plans is required; focussed and deliberate experimentation with new approaches occurs, and all stakeholders learn from what they do.

Given the importance of the revision of NRM plans to accommodate climate change and carbon, their capacity to advise proponents on "what projects to go where", the potential for significant landholder interest in the CFI, and the benefits to the environment; these funding programs are of critical importance for SW NRM. Regional NRM bodies have an important and a clear role advising CFI project developers and proponents on CFI projects within their region. Placing a clear explanation of what projects within a region (and consistent with the NRM plan) will assist proponents apply to develop and register future CFI projects. Consequently SW NRM is and will likely remain the key regional body in NRM planning in the implementation of the CFI. The task of readying the NRM plan for climate change and CFI is a challenge, but an important one in terms of the long term and ongoing opportunity for SW NRM to engage with a novel (and potentially valuable) funding stream for enhanced natural resource management outcomes in the face of an increasingly variable climatic regime.

5. Market Analysis

Carbon price considerations

It is important to have some understanding of carbon price forecasts, demand and supply when deciding to enter into the market, or to provide assistance and advice to landholders and land managers. One of the primary drivers for stakeholders to decide to enter into the carbon market through CFI projects will be the opportunity for financial gain as a result of undertaking changed land management activities.

The CEF legislative bundle effectively creates a pathway to a free market in emission permits and carbon credits, starting with a fixed price ("carbon tax") period from 1 July 2012 to 1 July 2015. The starting price is $23, indexed to rise at the expected rate of inflation. In 2015, the carbon price mechanism will move to a market based pricing, with a price ceiling set at $20 above the expected minimum carbon price . From the announcement of the CEF to late August 2012, there was a legislated carbon price floor set at $15, indexed to rise at 4.5% to 2018. The purpose of the ceiling and floor is to restrict dramatic price movements and is seen as a "safety net" to allow investors, project developers and emitters with a carbon price obligation some security with regards to their exposure to changes in the price of carbon. However, owing to significant political pressure to better calibrate the Australian floor price to the prevailing low carbon prices in the EU, the Government has amended the legislation to allow the use of up to 50% of an organisation's compliance needs with acceptable international units. This can be made up of 12.5% of international Kyoto credits from the Clean Development Mechanism, and up to 50% of emission permits produced under the European Union Emission Trading Scheme (EU ETS). The upshot of this is that the Australian price will be directly driven by the cost of compliance units from the EU scheme until organisations have filled their maximum allocation of acceptable international units. After the 50% allocation has been filled, Australian permit and credit prices will be set by the value of permits at the Australian Government's emission permit auctions.

After 2018, the carbon price mechanism will move to a fully market driven pricing arrangement. These pricing structures are shown graphically at Figure 3. It is important to note however, that the price forecasts into the future beyond the prices in the fixed and floating periods out to 2018 are very difficult to forecast with any degree of accuracy. The general understanding from Federal Treasury forecasts, provided during the formulation of the CEF, is that the carbon price is expected to continue increasing until such point as human caused greenhouse gas emissions have stabilised at a point which the scientific and political communities agree the risk of human induced climate change is minimised. This is likely to occur when global energy production is mostly delivered by renewable or non-emitting sources, as energy production is the single largest contributor to human greenhouse gas emissions.

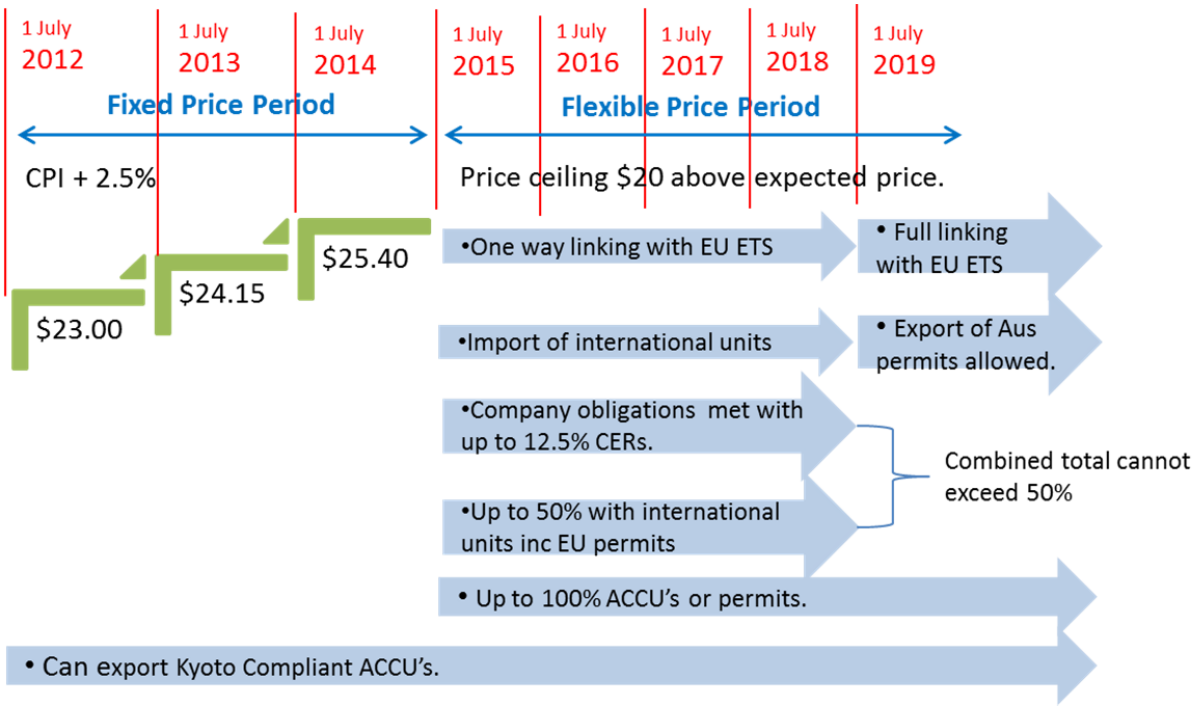


Figure 3. Carbon price bands as defined by the Clean Energy Future legislation. The initial fixed price period ("carbon tax") ends in 2015, moving to a floating price period, with "price ceiling" and international linkage.

Cost implications

Landholders who have an interest in engaging in the carbon market through changed land management practices will need to have a clear understanding of the benefit: cost ratio and the practical, commercial and legal risks associated with market engagement before committing to changed practice and developing a CFI project.

For emissions avoidance projects, the costs of project development will come from feasibility studies that will look at technical and methodological feasibility (i.e. what is the likelihood of the project producing a viable number of carbon credits), and what is the cost of implementing and ongoing management of the project (including up-front costs of new technologies or input materials for changed management practice). For carbon sequestration projects, the above considerations will have to be made, as well as the evaluation of the opportunity cost of effectively locking up land to meet the 100-year permanence obligations under the CFI in projects where no other commercial land use alternatives are available on that land.

Further, carbon sequestration project must give consideration to Recognised Native Title Body Corporate interests (if Native Title has been deemed to be in existence where the carbon sequestration project is proposed to be undertaken), and any other stakeholders with an interest in the land (i.e. the Crown, if a pastoral lease and banks with a mortgage interest in the land), which may involve some commercial considerations.

It is also currently unclear how long it will take to get projects approved with all relevant reporting and paperwork accepted by the CFI Scheme Administrator, with obvious increases in effort (and subsequent costs) associated with longer project application process times. All of these cost considerations will have an impact on landholders deciding to participate in the CFI.

Supply and demand for ACCUs

Demand

The demand for compliance ACCUs in Australia will be driven by the allowable levels of use of these credits in the early years of the CEF. In the fixed price period, liable entities will only be able to meet a maximum of 5% of their liability with ACCUs. Assuming a total demand for permits or emission rights of 350 million tCO_2e in the early years of the scheme, this translates to an approximate annual demand from 2012-2015 of around 17.5 million compliance ACCUs per year in that period, assuming the ACCUs can be sold approximately at or slightly below the fixed price. In the floating price and free market phases after then, emitters will be allowed to meet 100% of their obligations with compliance ACCUs. This puts the potential demand for ACCUs by Australian companies in the order of 350 million tCO_2e of compliance ACCUs per annum, assuming the compliance ACCUs can be created and sold for less than the price of carbon permits from the Government. Assuming acceptable international unit prices are cheaper than the equivalent in Australia and companies utilise their full allocation of international units, then the likely maximum demand for ACCUs will be around 175 million tCO_2e per year

The demand for voluntary ACCUs is expected to be strongly driven by the way in which the Federal Government administered Non-Kyoto Fund, of $250m from 2013 onwards, operates. The voluntary carbon market in Australia is considered to be generally weak compared to the compliance market in terms of price and volume. However, “specialised” voluntary ACCUs created by projects that are able to demonstrate significant biodiversity or social benefits may achieve premium prices for buyers who wish to be seen to be investing in the ancillary benefits of particular projects as well as the carbon offset value. However, as stated, the voluntary market is driven extensively by the demand driven by companies wishing to improve their “environmental” credentials.

In general, the demand (and price paid) for ACCUs in Australia will be driven by their relative availability, their price relative to the fixed carbon price, and then the availability and price of compliance credits from overseas once international units can be used to meet compliance obligations under the CEF (significantly impacting prices after 2015, when the market links directly with the EU ETS). Given the expectation that there will be a significant demand for international credits due to them having a lower price that Australian units, the likely price for compliance ACCUs will be driven by the international carbon price, although this will be moderated in the years 2015-2018 by the limits on credit and permit imports.

Supply

In April 2011, the Department of Climate Change & Energy Efficiency released a discussion paper that outlined its expectations of supply from a variety of possible CFI project that would deliver both

compliance and voluntary ACCUs. This paper suggests a range of possible amounts of compliance and voluntary ACCUs could be produced under the CFI out to 2020. For compliance ACCUs from all the project types identified, the DCCEE suggestion was that at 2020, CFI credit production could range between 5-15 million compliance ACCUs per year (or up to around 5% of total scheme potential demand), and between 2-7 million voluntary ACCUs per year (where it is almost impossible at present to forecast demand). However, these estimates make a variety of conservative assumptions, especially with regard to the potential of voluntary CFI carbon projects. In general, it is considered that supply will be the limiting factor in the availability of ACCUs in the compliance market, identified by the potential demand of 350 million tCO2e per annum compared to the predicted supply of less than 20 million tCO2e.

Market participants and dynamics

Currently, there are not a significant number of operators in the CFI sector, owing to the "newness" of the scheme. However, carbon markets in various forms have been operating in Australia since the mid-2000's, including the New South Wales Greenhouse Gas Abatement Scheme and the Federal Government voluntary Greenhouse Friendly program. As a result of some market activity and some major emitters looking to manage potential future liabilities, several listed companies operate in the plantation forestry/carbon market. There are a suite of unlisted operators, environmental consultants, legal services providers and a developing number of carbon offset service providers.

There is significant corporate interest in developing significant carbon project operations, with several existing and new entrants in the market raising capital and developing business plans for operations in the aggregation, project proponent and carbon project funding sectors, as well as intermediaries and financial institutions looking to create new hedging products to assist companies in managing exposure to future carbon prices.

Following the changes made to the Corporations Act (2001; C'Wealth) and the ASIC Act (2001; C'weatlh) that certain specified carbon units are "financial products" and therefore regulated by ASIC financial services licenses, there is now a register of those organisations that intend to be able to provide advice, market making or dealing in those carbon units. There are only 178 on the list at present (http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/carbon-register-240712.pdf/$file/carbon-register-240712.pdf) where ASIC had the expectation of around 800 participants. It is not clear how much expertise sits within those organisations in terms of specific product knowledge, as most appear to be traditional accountancies, or power companies, with only around 40% as knowledgeable carbon brokers (20%) or carbon project developers (20%).

It is expected that the range and number of service providers and models operating around the CFI will develop significantly over the next five years, assuming carbon prices and market future expectations draw new participants and capital into the market. This will include a significant growth in the number of brokers, commodity traders and other intermediaries that will take positions in the marketplace, and will provide significant liquidity in the "secondary" market that is expected to exist once credits have been created, issued and sold by the primary project proponents. Generally, project proponents will

look to sell their credits at a guaranteed price, but without committing to a guaranteed volume of credits. Credit buyers will buy from the project proponents or originators at the agreed price when the credits are issued by the CFI Scheme regulator, on the provision by the project proponent of an authorised project report and independent verifiers report. The secondary market is generally expected to be based on guaranteed supply and price terms, and would trade at higher prices than contracts in the primary market where delivery volume is not guaranteed.

6. Survey of NRM Managers across Australia

There is considerable activity in regards to climate change and the emerging carbon economy, and this activity is increasing as the policy and program environment develops more clarity. To investigate the activities and approaches of other applicants a survey was developed and distributed to 56 regional NRM Bodies. The purpose of the survey was to gain a more detailed understanding of the expectations potential participants had of their likely roles in the carbon economy, and how they were strategically positioning their organisations to manage risk and maximise opportunities presented by the carbon economy. Initially, 44 responses were received from 36 different regions, from a variety of staff. These data were refined so that there was only one response for each participating region. To do this the response from the CEO was prioritised over other responses from each responding NRM region, where more than one response was received.

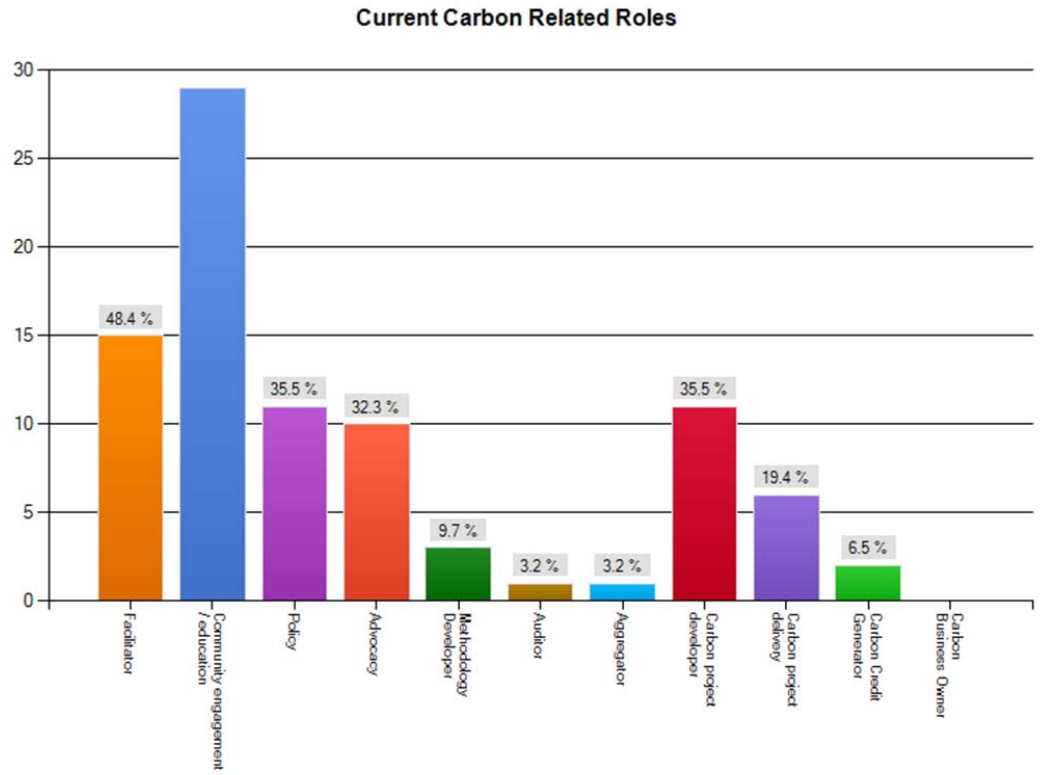


Figure 4. Number of survey respondents nominating current role in the carbon economy.

There is a high degree of consistency across Australia, with the roles that regional bodies are currently undertaking in regards to the carbon economy (see Figure 4). By far the most prominent role is that of community engagement / education with 96% of regions participating and 48% playing a facilitation role. From the comments received in the survey this concentration on community engagement and facilitation is supported by the early financial support provided by the Australia Government for this activity, however it also plays to the current strengths of the regional bodies. Beyond community engagement there is a second grouping of activity which includes policy development and advocacy with both areas being nominated by approximately one third of respondents. This is matched by project development (35.5%) and project delivery (19.4%) while the remaining areas have little or no current participation.

In general terms this can be summarized in three key roles that regional bodies are currently undertaking. Community engagement is by far the most common role currently, followed by a policy/advocacy and a project development/ delivery role, with very few undertaking a commercial carbon related role. This is reflective of the early stages of development of the carbon market and the traditional strengths and activities of regional bodies.

There is considerably less consistency in roles that are being considered for future involvement (see Figure 5). The number of regions intending to provide community engagement almost halves, while the provision of a facilitation role drops 10%. While there is a potential drop in these areas, there is a marked increase in the number of regions looking to take on the role of an Aggregator (45% increase) as there is across the range of the more commercial roles within the market including as a carbon business owner (14% increase from 0%). Importantly 10% of regions indicated that they have not considered any future roles while another 20% indicated in comments that they were not sure or are still determining their future roles in the market. This indicates a high degree of uncertainty and an area for potential collaboration amongst regions.

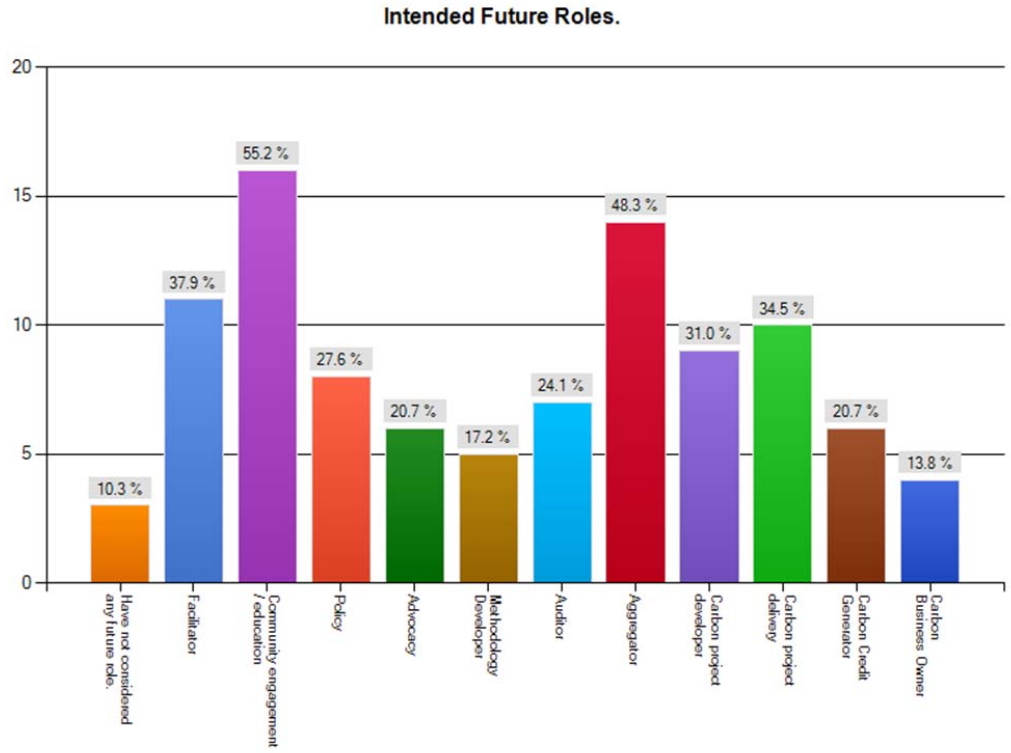


Figure 5: Intended future roles in the carbon economy.

Carbon project development and delivery is in the early stages of development, given the relative "newness" of having some level of regulatory certainty, with most organisations having the expectation of developing and delivering carbon financed or carbon credit generating projects in the future. This is reflected in the current activity within regions with 36% of respondents aware of private projects currently being delivered in their area and of those 30% were contacted for advice. This raises an interesting point for the role of regional bodies in planning for and managing the impacts of projects within their regions; 95% of respondents have considered how project proponents might use the regional plan for guidance.

Responses to queries regarding awareness of Australian Government carbon / climate change related programs indicated that all regional NRM bodies were aware of the programs. 31% of respondents considered themselves to be well informed with a high level of understanding of the Carbon Farming Initiative with a further 58% considering they were informed and broadly understanding the CFI. Similarly 20% of respondents considered themselves to be well informed with a high level of understanding of the Clean Energy Futures program with a further 67% being informed and broadly understanding the program. This level of understanding is reflected in the participation rates for the various programs. Figure 6 outlines the participation in the elements of the Clean Energy Futures program, with 91% of respondents indicating that they had applied for the Biodiversity Fund. This

outweighed all other programs as some had not been opened or where not seen to be as relevant to regional NRM activities.

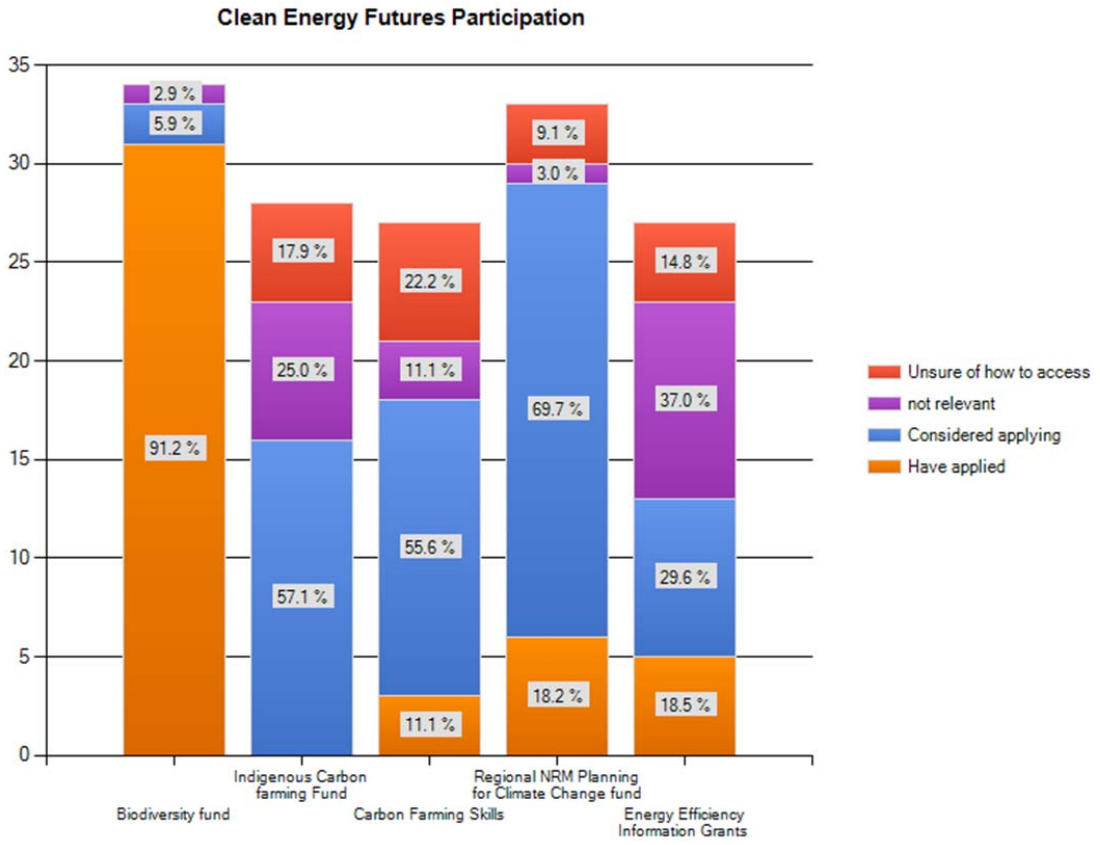


Figure 6: Participation in the Clean Energy Futures program

The results of the applications for Round 1 of the Biodiversity Fund show that there was a total of 317 projects funded, totalling $271 million. The majority of the projects funded were for multiple years with 90% being for 3 years or more and almost half being funded for 6 years. Overall, regional NRM bodies were very successful in this funding round as were local groups such as Landcare and catchment groups.

Forty regional NRM bodies (71% of all regional bodies) were successful in gaining funding for 68 projects as the project proponent and there are possibly more projects where the regional body is a partner but not the proponent. When the funding is split by sector, regional NRM bodies received approximately $110 million, which far outweighed any other sector. There were 6 projects valuing more than $3 million with the single largest being $5.7 million. Following this were 20 projects valued at $2 - $3 million and 13 projects valued at $1 - $2 million. The largest number of projects was in the range less than $1 million dollars with 29 projects descending relatively consistently down to the lowest project amount ($75,000).

The remaining funds were spread over 249 projects with land management groups (Landcare groups, local community groups etc.) receiving $36 million over 69 projects. Private landholders/ organisations were also successful with a large number of projects (68) however the total value was considerably less at $13 million. Indigenous groups had 17 successful projects totalling $23.5 million; however this figure is considerably different to those contained within Australian Government media releases. This is possibly due to errors in the groupings used here being based on the organisations name. NGO's, state agencies and local governments were reasonably consistent in the number of successful projects (28, 21 and 27 respectively) and also the total value of projects ($24 million, $21.6 million and $20.5 million respectively). The remaining projects were proposed by research organisations, industry groups and commercial carbon entities and totalled $21.6 million.

Participation in the Carbon Farming Futures program is outlined in Figure 7 and shows that the program of most interest to regional NRM groups is the Action on the Ground program. This also highlights that none of the respondents have been involved with seeking funds for methodology development. While there was some interest and application to the Filling the Research Gap funding, no regional NRM groups were successful as lead proponents. However due to the nature of this program it is more likely that regional bodies were partners in larger projects proposed by research institutions and state agencies.

The outcomes of the Action on the Ground Funding show that regional NRM bodies were successful with 11 projects across 10 regions. These projects totalled $4.7million in value and ranged from $550,000 to $270,600. This is within the context of a total of 59 projects valued at $25.2 million being allocated across the range from $550,000 to $152,000.

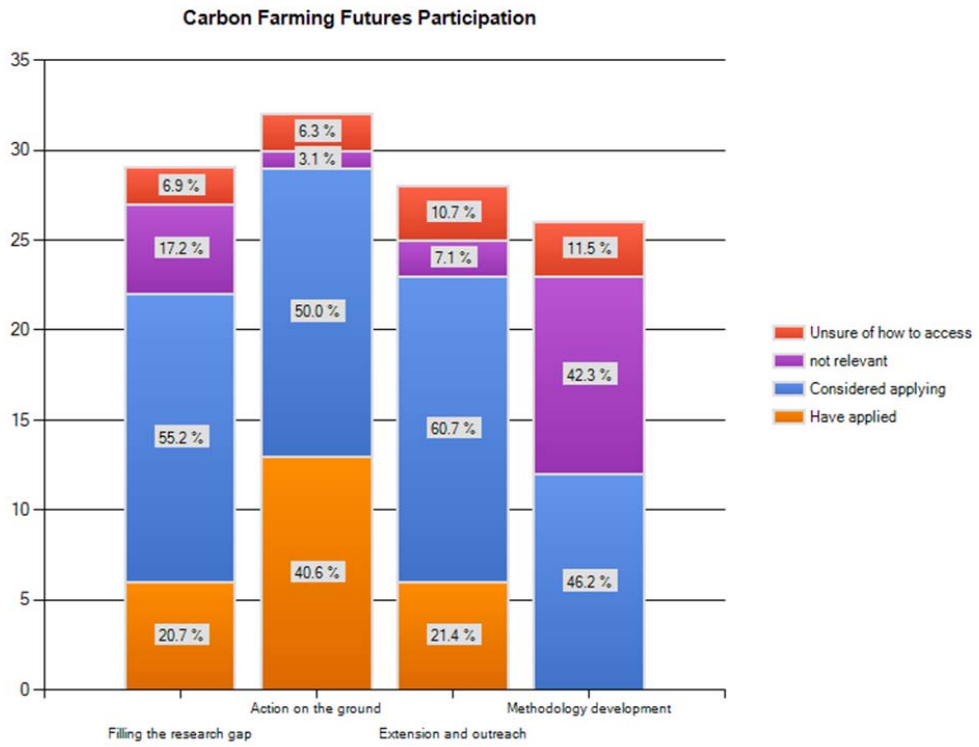


Figure 7: Participation in the Carbon Farming Futures Program.

Overall the responses indicated that the majority of Regional NRM groups have a current focus of activity developing from the fundamental roles of community engagement and facilitation. This is expanding into project development as funding programs and guidelines become available. A number of respondents could clearly see themselves becoming carbon crediting generating project developers and deliverers. Almost half of respondents are considering a future role as an aggregator and while only four respondents were planning to become a 'Carbon Business Owner', there is considerable interest in taking on more commercial related roles in the market, as it can be seen that carbon projects that deliver improved natural resource management outcomes are effectively "commercial NRM', or provide an additional alternative revenue stream to undertake and maintain changed and improved land use management and practice.

7. Stakeholder Review.

Due to the nature of SW NRM and its operations across the broader community, there are a number of stakeholders and interactions relevant to the carbon economy. These stakeholders have been broadly classified into core relationships and potential partners.

The stakeholders within the core relationships are critical to successful engagement in the carbon economy and participation in the range of Australian Government programs. These stakeholders require a concerted effort to ensure that effective communication pathways exist and are utilized.

The potential partners are the broader group of stakeholders who can influence or impact on the activities of SW NRM. These partners need to be engaged at differing frequencies, and at differing levels. While they may not be central to achievement of desirable outcomes, relationships with these stakeholders have the potential to contribute significantly. The potential partners are either able to participate jointly in activities, provide supporting services or influence funding and project models.

Interactions.

In the emerging carbon economy, it is important for SW NRM to identify where they sit relative to all the other potential operators in the market, and to make strategic decisions and actions so that where they actually sit will enable them to achieve their long term, ongoing organisational goals. One of the primary considerations SW NRM must give to the development of its role in the carbon economy is how will the proposed role influence its relationships and engagement with key regional stakeholders.

Obviously, the primary beneficiaries and users of the CFI will be the land holders and land managers within the region in the first instance. This will be because they stand to be able to develop a new form of revenue that may assist in defraying the cost of improving land management process and practice, through undertaking projects that can create carbon credits that can then be sold into the market. These new practices will provide support to actions that improve the condition of environmental assets in the region. By improving the condition of the environmental assets, the economic and social conditions of the regional will be likewise expected to be at least maintained, if not improved.

In some cases the deployment of carbon projects may even be profitable as a stand-alone investment opportunity for land managers. In the event that these types of projects are consistent with the regional NRM plan in that they are likely to improve the management of the environmental assets of the region, or to improve the potential for adaptation to future climate change within the region, it can be seen that the carbon market will be able to fund (or partially fund) important NRM outcomes.

However, the critical relationship that must be fostered and maintained is between the NRM organisation and its' land managers. The way in which SW NRM seeks to participate in the carbon economy will have the potential to influence its relationship with other regional stakeholders. While a more detailed set of considerations are given to potential roles later in this document, it is important to identify the current relationship with the following set of stakeholders. When making a decision on future roles, it will be important to reflect on how the new proposed role will influence the following set of relationships.

Core Relationships.

Regional land managers

The regional land managers represent the single most important stakeholders for SW NRM. It is the positive and ongoing working relationship SW NRM has with the land managers that enable it to achieve improved NRM outcomes. The current relationship with land managers is that SW NRM provides several forms of financial assistance for catchment management activities, and to undertake land management

works under contract, with a view to assisting landholders to achieving the outcomes of the NRM plan, as well as providing an education and outreach service. Whatever roles SW NRM takes on in the carbon market, it will be critical to ensure that those roles that are currently successfully undertaken and delivered are not compromised by future "carbon" related activities.

Native Title Body corporates

In addition to the importance of current relationships with the traditional owners within the region, the carbon economy establishes a new relationship with indigenous bodies. For carbon sequestration projects to occur on crown land or land subject to Native Title, where Native Title has been determined, the permission of Native Title Body corporates is required.

National NRM Carbon Working Group and National Carbon Business

This is a strategically important relationship for SW NRM to foster. The national NRM working group has been active in ensuring that the regional plans and Regional NRM bodies are central to delivery of the Australian Government programs. In addition to this, there is likely to be a number of issues and opportunities that will be strengthened by a collective approach. Further, it is important for SW NRM to remain aware if not engaged with current discussion regarding a national commercial model for NRM bodies. Regardless of the decision SW NRM makes regarding participation in the national commercial model, it has the potential to be an important partner in delivery of projects and funding of NRM outcomes.

State and Australian Government Agencies.

A productive ongoing relationship with the key State and Australian Government agencies is an obvious interaction for SW NRM to maintain. These organisations are central to policy and program development that will have significant impact on how SW NRM may engage in the market and also how they will capitalise on the current programs and developments.

Potential Partners.

Financial and legal service providers

It is not expected that there are not many interactions between SW NRM and commercial or legal service providers at present. However, in the future, this may change as commercial investment opportunities become available, and commercial investors start to investigate potential carbon project investment within the region. With potential investment comes risk, and hence obligations to undertake actions are often specified in commercial contracts. There are not a great deal of specialized legal service providers in the carbon sector in Australia, and even fewer with a strong understanding of NRM. It may make sense for SW NRM to start to seek out possible legal service e providers who understand NRM. SW NRM may find itself being approached by financial and legal service providers looking to engage with landholders, and there may be a role for SW NRM to facilitate meetings based on a need or opportunity basis between service providers and land managers looking to participate in the carbon market.

Carbon industry service providers

Carbon industry service providers may provide a large variety of possible service roles in the emerging carbon economy. Typically, some will be limited to policy advice, while others will be more deeply involved in scheme operations, providing services such as:

- Pre-feasibility and feasibility, planning and development, that will include making estimates of total abatement potential of project, based on the application of a specific methodology, taking into account location specific details, developing potential investment structures that allow direct investment and diversified returns to stakeholders, stakeholder consultation, determining social and biodiversity co-benefits assessment approaches
- Design and deployment of carbon baseline surveys
- Development of integrated whole of property planning
- Project financing: identifying project investors and financing models
- Project implementation: assistance in delivery of project implementation actions
- Project cycle actions, such as project registration and validation, development and delivery of carbon accounting systems, to ensure regulatory compliance, including data recording templates, management of project reporting and credit issuance requests and engagement and management of independent verifying auditor, project credit sale advertising and engagement with buyers, project credit sale negotiation and contract development
- Holding credits on trust in the Australian National Register of Emission Units (ANREU; custodial services) or assisting project proponents to establish and manage their own ANREU accounts
- Aggregation of small bundles of credits from several projects to get the credit bundle to marketable size.

Depending on how SW NRM looks to position in the market, it may look to deliver some of those services as a carbon industry service provider; it may seek to advise and support local service providers to ensure that there is locally competent services available to the region's landholders who understand the landscape and the people. SW NRM may seek to form commercial relationships with one or a few carbon service providers to commercialise the projects SW NRM has engaged in. One of the roles SW NRM may take on is to educate carbon service providers regarding their expectation or environmental and social outcomes seen as desirable by regional stakeholders, and as reflected in the Regional Plan. It is important to note the need for any organization that looks to do any of the following activities, they are required to hold the relevant Australian Financial Services License, or to be the authorised representative under another organization's license.

- Provide Financial Product Advice in relation to
    - Derivatives, Carbon Unit, Australian Carbon Credit Unit, Eligible International Emissions Unit
- Deal in a Financial Product in relation to the following
    - Issue, apply for, acquire, vary or dispose of a financial product, Apply for, acquire, vary or dispose of financial products on behalf of another
- Make a Market for a Financial Product.

- This is defined in the Corporations Act (2001, C'wealth) Section 766D defines the activity as "a person through a facility, at a place or by any other means, regularly stating the prices at which they propose to acquire or dispose of financial products on their own behalf. In addition, other persons must have a reasonable expectation that they will be able to regularly effect transactions at the stated prices."

Research organisations

Research organisations will play a potentially important role in the development of new measurement techniques to determine reductions in emissions or increases in carbon storage that could be applied in new methodologies. NRM groups may look to establish deeper relationships with research organisations that are able to provide the necessary research backing to the development of any new methodologies that are relevant to SW NRM.

Local community and industry groups

As with land managers, the relationships with local community and industry groups are critical to the achievement of the organisational plan. Any move to modify what SW NRM does, and how it operates will require both consideration and education for regional groups as to how the new mode of operation will impact the relationship, and what the rationale for the changed mode of operation was undertaken. These groups include but are not restricted to community groups, industry bodies such as MLA, and the AgForce all of which will play an important role in delivery of projects through both the NRM and Australian Government programs.

Partner NRM organisations

Engaging in relationships across regional borders, and creating strong relationships within the region with other NRM partner organisations will be an ongoing role for SW NRM. There may be an important advisory and education role played by SW NRM with regards to the carbon market, and how NRM outcomes can be delivered by effectively targeting carbon projects that are consistent with the NRM plan. There may be a role for collaboration between NRM organisations with regards to the development of technical CFI methodologies to deliver regionally important or relevant carbon methodologies or to jointly develop and explore projects of a similar nature across regions.

Local and State government partners

Local governments within the region will have significant land areas to manage and land management responsibilities, so in that instance they will be like other land management partners within the region. Obviously maintenance of these relationships will be very important for NRM success and each of the Local governments will have varying capacities to participate in or capitalise on the carbon economy. Providing assistance and coordination through the Local Government relationships already in existence, may provide greatly improved NRM outcomes across the region. Also, local Shire government may take an important policy position from a planning perspective in the delivery of the development of carbon projects, if that is within their planning remit. In terms of the State Government, there is an important set of interactions between SW NRM and various State agencies that will cover policy, education& awareness and research.

State government agencies will likely continue to assist with on ground delivery, and agricultural research departments like DERM & DEEDI will be potentially important partners in research and commercialisation projects. This role was well evidenced in the relative level of success that research agencies achieved in the first funding round of Filling the Research Gap.

Potential carbon credit buyers and industry partners

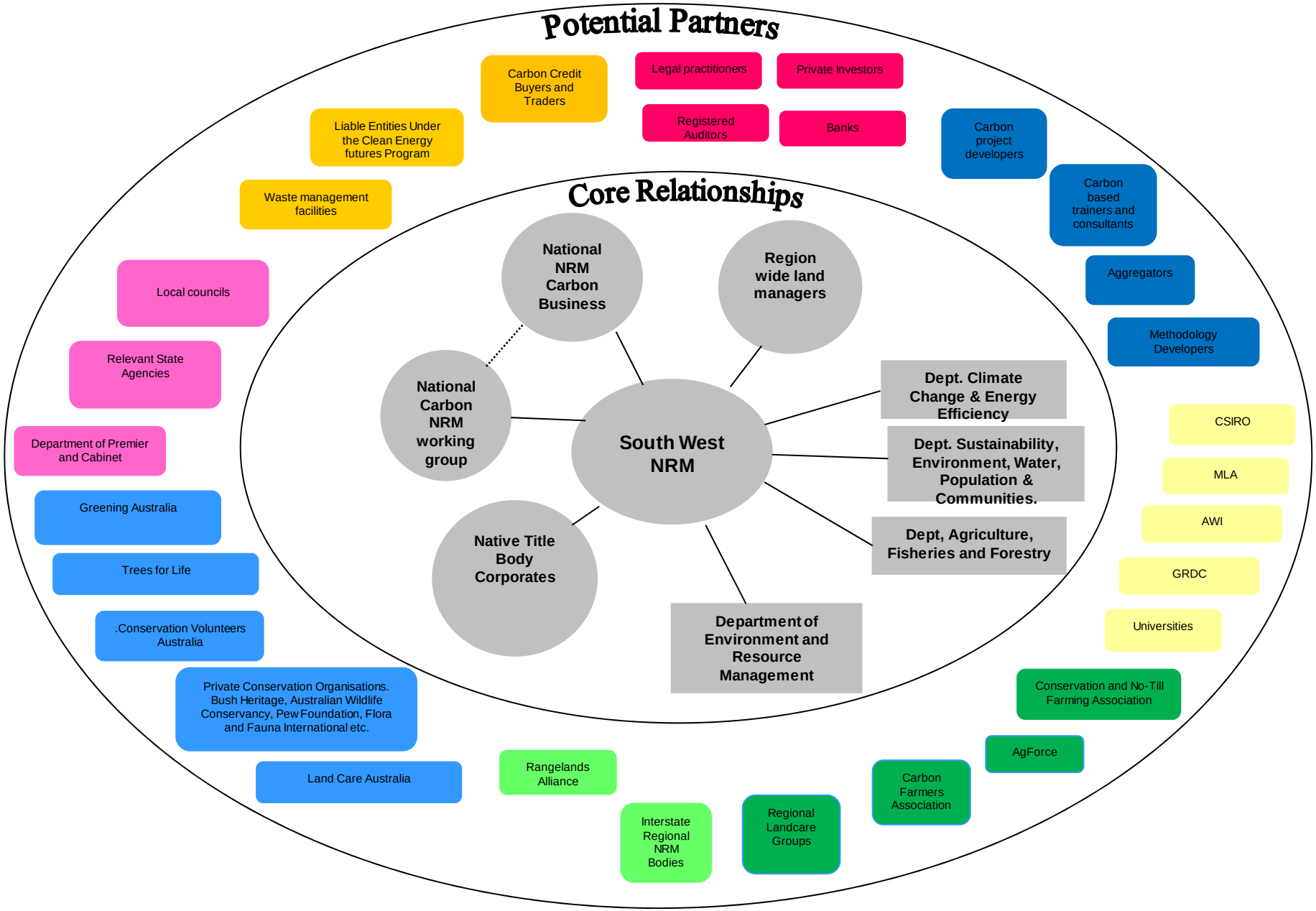
While from a purely economic perspective, any carbon unit (permit or credit, regardless of whether the credit was produced locally, regionally or even from a different country) that is able to be used for compliance purposes will be seen as any other credit or permit. However, entities that operate locally that have an obligation under the carbon price mechanism may be able to engender improved local relationships by "buying locally produced credits", as long as all other value considerations are equal. It may be that entities with a liability under the CPM may already have project specific relationships with SW NRM. The relationship between the NRM and any identified large emitters within the region may be deepened through SW NRM being able to assist the emitter to access CFI credits from within the region of operation. This may require new relationships to be formed or, build on existing partnerships.

SW NRM has a number of Liable Entities under the Clean Energy Future program within their region. These are the entities that are required to purchase permits initially and then ACCU's and offset or reduce their emissions. The full list can be found at the Liable Entities Public Information Database (see web links in Appendix 1) and the NRM should also check this list as a better knowledge of local industries and the regional boundaries may highlight other emitters. Known operators within the region that are liable entities include the Maranoa Regional Council and this provided a significant opportunity for partnerships to be developed.

The network diagram below categorises this group of stakeholders by colour into eight broad groupings to differentiate the broad differences in engagement and potential partnership role.

- Financial and legal service providers
- Carbon industry service providers
- Research organisations
- Local Community and industry groups
- Partner NRM organisations
- Relevant Non-Government Organisations
- State and Local government partners
- Potential carbon permit buyers and industry partners.

SOUTH WEST NRM - CARBON STAKEHOLDER NETWORK



8. Opportunities and Roles

In addition to outlining the emerging carbon market in Australia and the roles the SW NRM could play in that market, there is the opportunity for NRM agencies across Australia to invest in commercial arrangements to deliver regional natural resource management plans, and deriving financial benefit from these arrangements.

This section presents an overview of a range of potential ways that NRM organisations could engage in the emerging carbon economy in Australia, and considers some of the implications for NRM organisations for the delivering these services. The approach taken is to assume that NRM organisations will be starting from their existing staff and management structures, then explore different directions that could be taken to engage with the carbon economy. These directions will be determined by opportunities provided by the carbon economy, the interests of specific landholders in developing carbon projects and opportunities identified in the regional plans. The approach taken is shown in Figure 8 below. The details of each option and their pros and cons are discussed below.

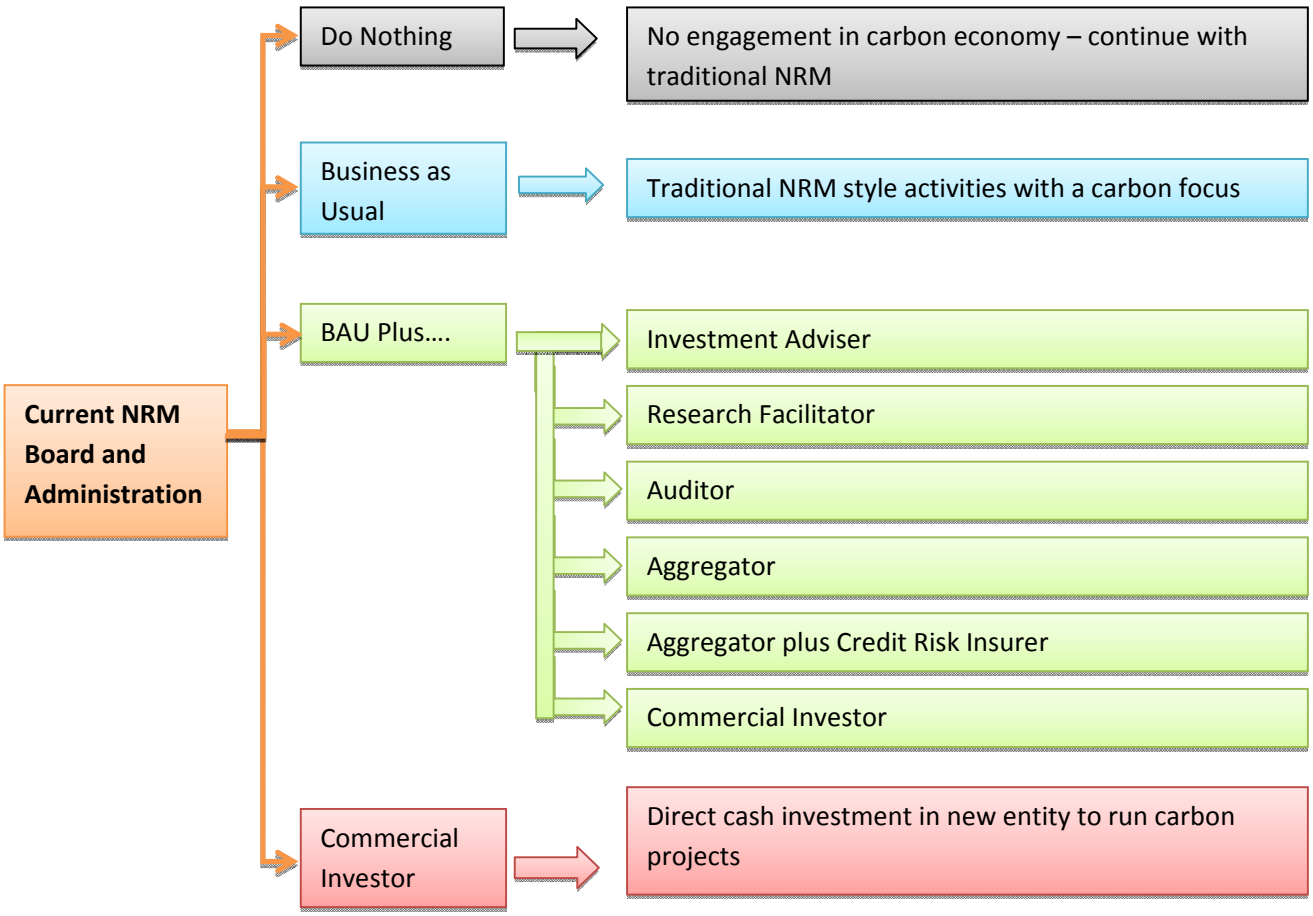


Figure 8 Possible options for NRM engagement in the Carbon Economy Future

As Figure 8 shows NRM organisations have the opportunity to engage at different levels in the carbon economy. As a generalisation the options shown in Figure 8 also increase in complexity from the top "Do Nothing", to the bottom with an NRM organisation becoming a fully-fledged "Commercial Investor". Each of these options has their own specific opportunities and risks, some of which are discussed below.

Do nothing

Given the activity, and pace of change, in the carbon economy, "do nothing" is actually an active decision rather than the default option. Selecting to "do nothing" means that NRM organisation will miss out on significant investment of revenue from the "carbon price mechanism", regional projects under the Biodiversity Fund which could be used to "seed-fund" or kick-start projects that are expecting to generate carbon credit revenue will not occur, and investment in preparing regional NRM plans for climate adaptation and the carbon economy would be extraordinarily hard to difficult to justify.
Pros and cons are not considered for this option.

Business-as-usual (BAU): Traditional NRM style activities with a carbon focus

The next lowest level of active engagement in the carbon economy is for SW NRM to utilise the Federal NRM Planning Fund to prepare their regional NRM plan to determine where to locate carbon projects, identify what adaptation to climate change means for their region, and continue as grant writer and project bid partner with regional participants and landholders.

In this scenario SW NRM would only generally advise where carbon projects should be located and carbon project participants and investors would be required to determine if their project was consistent with the regional NRM plan to become a Carbon Farming Initiative project. In addition to Caring for Our Country projects, SW NRM could also attract project funding through the carbon-price-funded Biodiversity Fund. Apart from this the NRM would have no other significant role in the carbon market.

In this role SW NRM has a critical role as an "honest information broker" to regional interests, targeting where carbon projects would occur and ensuring that they would not negatively impact NRM outcomes.
Pros:

- Not a lot of new effort would be required by SW NRM
- All regulatory and legislative needs can be met just by efficient expenditure of Federal Government funds to modify the regional plan.
- The regional NRM plan should be prepared from a "planning" perspective for clearly predictable carbon project types coming online in the next few years.
- SW NRM could be a buyer of carbon credits to become carbon neutral under National Carbon Offset Standard. This would create an opportunity to show leadership with respect to development and implementation of "carbon future" readiness, investing in the region, and showing landholders the carbon economy is real.

Cons:

- Not able to fully engage with landholders as an understanding and well informed carbon economy partner

- May be surprised or blind-sided by unexpected activities by carbon project developers that seek to make significant commercial benefit at the cost of the regional biodiversity, community or economy through exploitation of regulatory, planning or other legal loopholes.
- May not be prepared if there is significant reduction in government NRM expenditure after the next round of Caring for Our Country. This may occur if the Government makes a policy decision that NRM organisations should gain their financial support from engagement in the carbon economy.
- May not be prepared for future innovative carbon projects that develop as new technologies, processes and methodologies are rolled out with the risk that the regional NRM plan quickly becomes dated.

BAU plus…

The next set of alternative engagement models are not necessarily exclusive of one another and should be seen as a sequence of activities of increasing technical and commercial difficulty. Each represents an incremental step away from traditional NRM grant funded activity. All of them are capable of delivering the goals of regional NRM plans if the carbon projects align with regional NRM goals, however the funding source is from the buyers of carbon credits, rather than government grant funding.

BAU plus investment advisor

It is highly likely that carbon market investors will approach SW NRM, as a respected and well-connected regional NRM partner, wanting advice on regional carbon projects that would be suitable for investment. Assuming that the regional NRM plan is "climate and carbon ready" SW NRM could charge a fee-for-service matching arrangement linking the carbon market investor with landholders or land managers who are looking to undertake "carbon project activities".

Pros:

- Additional revenues for SW NRM for "making the introduction".
- Not a huge level of up skilling required within the organisation.

Cons:

- SW NRM may be seen as favouring some landholders over others.
- Significant time and staff resources will be needed to create viable and transparent mechanisms for this new kind of activity
- Transparent process will need to be developed for how to spend any revenues achieved under this model.
- Managing the risk of SW NRM making an introduction but the projects not being successful. This risk would include damage to SW NRM reputation and potentially commercial litigation.
- It will take time to undertake due diligence on landholders and prospective investors.
- SW NRM may not have sufficient skills to understand and evaluate innovative projects.
- May trigger the legal requirements to hold an Australian Financial Services License with the associated costs and regulatory burden.

BAU plus research facilitator

While new carbon projects can be screened against CFI scheme integrity principles and methodology requirements, currently there is no recognised, detailed, methodology against which the carbon projects can be easily evaluated to determine their capacity to generate carbon credits and support NRM outcomes. In addition, most of the current carbon projects being developed are encountering significant research gaps in certain areas which are slowing their implementation.

Given that NRM organisations are close to the ground and have the potential to understand both carbon and NRM outcomes there is a significant role for SW NRM to facilitate and guide research programs. NRM staff can guide research to deliver the "missing elements" required for the development of carbon credit methodologies because, as is discussed above, without accredited CFI methodologies there will be no financial gain from carbon projects. This issue has also been recognised in the recent rounds of *Filling the Research Gap (FtRG)* and *Action on the Ground (AotG)* funding through the Federal Department of Agriculture, Forestry and Fisheries. These programs were specifically developed to "fill in" research knowledge gaps to allow CFI methodologies to be produced.

Pros:

- By being aware of all the innovation that is going on in the research and development community, SW NRM and regional land managers can take advantage innovation and new development in the carbon industry
- Supporting research enables SW NRM to seen to be pro-actively supporting the development of new industries that meet community and regional needs.

Cons:

- A lack of skilled staff might not allow SW NRM to engage with commercial providers working in the R&D space.

BAU and auditor

The CFI legislation requires most carbon projects undergo independent third party verification of the contents of the project abatement report. Most auditors currently approved under the National Greenhouse & Energy Reporting Act are generally experts in accounting, or have technical expertise in energy or industrial emissions accounting. There is a very significant lack of people accredited in independent verification carbon projects who also have an adequate understanding of the technicalities of NRM and how it is delivered in the regions.

SW NRM could be well placed to develop their staff capacity to work as technical auditor specialists on CFI project report verification. This could be in partnership with independent verification and auditing organisations if there is the appearance, or concern, over conflicts of interest where there has been direct NRM involvement in the development of carbon projects as a result of the NRM plan.

Pros:

- SW NRM can access a new revenue stream.

- Organisational involvement in the NRM plans will give auditors a detailed understanding of the impacts of carbon projects on other natural resources, and the role of specific carbon projects in delivering on the goals of the regional plan.
- No major staff up-skilling is required.

Cons:

- Perception of conflict of interest resulting from NRM involvement in NRM plans and auditing carbon projects which will need to be carefully managed
- Qualifying as an auditor requires a significant number of hours of training
- Initiating, developing and maintaining a qualified Audit Team will present challenges for an organisation.
- Initially at least, the demand for auditors may be low and training auditors may not be the seen as the best investment of organisational effort and resources

BAU plus aggregator

The carbon market will be generally expected to require relatively large parcels of carbon credits, typically in the order of a minimum of around 10,000 tonnes CO_2e per trade, based on exchange traded volumes in other markets such as the NZ and EU ETS. Many individual carbon projects will not be generating these volumes of credits, consequently there will be a role for a carbon aggregator to bundle small parcels of carbon credits to marketable size.

In addition, each carbon credit transaction will attract a transaction fee. These costs will come from the time to source credits and undertake negotiations, the cost of contract development, undertaking due diligence etc. Consequently the transaction costs of multiple small transactions will be much higher than one large transaction. If SW NRM is an aggregator then it can provide its members a way of reducing these transaction costs. It may also be possible to use available funds to invest in projects to create carbon credits which can be sold and establish a revolving door fund to invest in further NRM activities.

Pros:

- Potentially significant economic return for effort
- An aggregator can exercise some influence on the carbon market to deliver on regional NRM plan goals.

Cons:

- Significant learning curve
- Exposure to financial and regulatory risk
- Potential that NRM staff will leave the organisation because the organisation begins to take on a commercial focus
- Possible loss of ability to attract government grant funding if model succeeds
- Difficulty in “switching between” grant and commercial models in the event one fails or is compromised
- Will require an AFSL
- Perception by the community that NRM has become a “business”.

BAU plus aggregator plus credit risk insurer

As has been discussed earlier the CFI requires that carbon projects are "permanent" and held in place for 100 years after associated credits have been sold. It is also apparent from NRM experience that there are many natural factors, such as drought, fire etc. that will potentially compromise "permanence" for periods of time during these 100 years. Feedback from landholders who want to participate in carbon projects is that there is concern over permanence obligations and these may stop important projects from proceeding.

There is an opportunity for NRM organisations to provide risk management and insurance services on permanence obligations on carbon projects. This could be through either holding a percentage of credits sold through the aggregation model as an insurance buffer on projects, aggregating credits from geographically dispersed projects, or aggregating credits from projects that include both carbon storage and emissions avoidance methodologies. NRM organisations could also provide a "buy-out" service that allows a landholder to cancel any permanence obligations under the CFI by replacing any project land obligations for permanence with market sourced credits. This would then allow a landholder to utilise land for another purpose other than carbon plantings should this be required.

Pros:

- Reasonable potential for economic returns through careful risk management
- Strong likelihood of ensuring carbon project activities in the region will be undertaken consistent with regional NRM plan goals
- Will lower the barrier for entry into the carbon market

Cons:

- High commercial and reputational risk
- Competing with other commercial service providers that have a long track record and extensive experience with risk management and mitigation
- Perception of government funded bodies operating outside of normal government supported business
- Potential new licensing requirements, such as Australian Financial Service Licence that may cover both wholesale and retail clients.

BAU plus commercial investor

In this case SW NRM would directly own a component of the credits generated from NRM projects in which the NRM has invested. SW NRM would be operating as a commercial participant in the marketplace, and may as such become one of the listed carbon businesses on the Australian Stock Exchange, for example.

Pros:

- Credits and credit revenues are available to fund NRM future activities.
- Projects are delivered in line with NRM vision and the regional NRM plan.
- Commercial arrangements build tighter associations with regional landholders.

- Moving away from "traditional" grant based funding to more commercialised outcomes could give a level of surety to activity. Typically this would be on commercial (20+ year) timescales, rather than the 3-5 year NRM funding cycle.

Cons:

- Significant risks include conflict of interest in participating in carbon markets while providing advice to landholders on carbon projects
- Exposure to risks of organisational failure as a result of inappropriate management decisions, thereby threatening the achievement of NRM outcomes and the goals of the regional plan.
- Requirements of Corporations Act, 2001 that *"people who carry on a business of providing financial services"* have to undertake those dealings under an Australian Financial Securities License.

BAU Plus… Summary Position

There are risks with all NRM activities and, in all the options discussed above in *BAU Plus* there are the usual NRM risks with the additional commercial risks increasing with the shift towards commercial activity.

The converse side of this is that there are significant benefits associated with moving into the commercial opportunities provided by the carbon industry. Taking advantage of these opportunities and managing the risks will require quality information, clear decisions, organisational change, investments of time and resources, developing new skill sets, training, and links to accredited organisations providing these services. Successful progress will simply require appropriate balancing of risk for return, and ensuring that capabilities and skills within the organisation meet the organisation's desire to deliver certain outcomes.

Commercial (Equity) investor: cash investment in new entity

A further option available to NRM organisations is to take a direct equity ownership position in a commercial carbon company that could do some, or all activities, outlined above in the BAU Plus scenarios. The basic concept would be that the commercial carbon company would undertake carbon projects at and manage the risk / commercial activity at "arms-length" from the NRM organisation but still return a financial return to the NRM organisation.

This would still leave SW NRM in the position to deliver the regional NRM plan including the climate change and carbon components, support innovation and so forth but greatly reduce the financial and commercial operational risk for the organisation. It would also leave the organisation free to support important NRM projects that did not generate "carbon revenue" and maintain the ability to apply for and manage grant-based funding programs. However, if investment in carbon projects leads to extra revenue being made available to NRM organisations, then there may be a broader or deeper range of investments made in important projects in the region in alignment with the regional plan.

Pros:

- Very significantly reduced exposure to financial and reputational risk relative to the BAU plus models,
- Most of the upside of commercialised NRM projects would be delivered on long-term finance contracts
- Delivery of projects would be in alignment with regional NRM plans,
- Security of funding for the organisation
- Exposure would be limited to amount of money invested;
- Commercial outcomes are delivered "at arms-length" to the NRM organisation.

Cons:

- Investment may not deliver commercially viable returns,
- Risk of loss of initial capital invested,
- The carbon market opportunity does not deliver on its potential due to regulatory risk e.g. market being dissolved at some stage in the future; technology risk e.g. carbon market prices are very low because of a technological shift to low or no carbon energy production in Australia; or commercial risk e.g. targets are hit at very low cost by importing very cheap international credits.

Commercial (Equity) Investor: Summary Position

The commercial investment model has already had extensive consideration and discussion with the national NRM community. This model has potentially significant positive outcomes, offers a manageable risk profile, gives a direct NRM engagement in the carbon market and still allows some elements of "traditional NRM" projects to be delivered.

Potentially this arrangement would operate under a for-profit or profit-for-purpose model with excess cash returned to local project delivery within the framework of the regional NRM goals based on shareholding. This would free up NRM organisation to be less dependent on government grant based funding. The commercial (equity) investor model is discussed in the following section.

Commercial (Equity) Models - risks and management in commercial NRM investments

There are clear and apparent risks associated with commercial investment and the decision by NRM organisations to move into commercial investment may change the public's perception of its independence.

Any direct investment of capital in a commercial carbon enterprise should be made with the full and complete understanding of the direct commercial risks and a transparent presentation of the specific investment details in a legal prospectus. SW NRM also need to determine if the legal framework under which they operate allows them to invest in commercial enterprises, and similarly if they have the organisational capacity to support their investment decision.

The investment decision should be based on clearly specified parameters, including:

- The expected NRM outcomes for the investment are clearly identified

- The expected return on capital invested is also clearly identified
- There is a quantitative and qualitative assessment of the likelihood of that return being achieved within a specified timeframe
- Any trade-offs made between commercial return and risk are well understood

To minimise commercial risk in the emerging carbon market the "ideal" NRM or regional NRM carbon investment should follow a "portfolio" approach with the investments spread across:

- different market participants,
- different activities accessing projects operating under different carbon credit methodologies,
- a range of widely separated and different geographic locations.

This approach is no different to investment within the traditional economy and SW NRM will be able to reduce the "all-or-nothing" risk that comes from a single large investment that heightens exposure to greater volatility. Just as an NRM organisation does not invest all of their project finances into a single project, but looks to manage improvement of environmental asset conditions across a range of project based investments, so too could NRM investment in a carbon entity follow the portfolio approach. This approach to engagement in commercial investment in carbon projects for SW NRM to pool resources with other like-minded NRM organisations who share common NRM objectives has significant merit. Such an approach may follow the process outlined below:

1. NRMs that put cash into a unit Trust, become unit holders.
2. Unit holders appoint a Board of Directors for the Trust.
3. The Board of Directors creates an investment mandate that all of the unit holders agree to.
    a. The investment mandate should cover minimum requirements of investments, and how the invested dollars can be spent by the investees (e.g. specify it must be in line with regional NRM plan, and actually deliver quantifiable NRM outcomes, as this is what will become the tradable products), the way the investments should be made (equity, debt or combination), the scale of each investment, the timeframe over which the investments should be made, the expected return on investment, the timeframe over which the return on investment should be delivered, amongst other issues.
4. The Board then appoints an investment committee, charged with investing the funds in the Trust in line with the investment mandate.
    a. The Investment committee may also be charged with going out to market to get investors to put in extra cash such that the Trust can fully capitalise the investee company/ies so that they do not have to go back to market to raise cash prior to being able to deliver projects and revenues (a timeframe which could be on the order of several years).
    b. The investment committee of the Trust goes to market or advertises for the market (carbon project developing companies) to approach it.
5. The investment committee makes recommendations for investment to the board based on their due diligence investigations into the proposed investee (management, financial history, market

opportunity, clearly articulated business plan, clear unique selling proposition, clearly and sensibly determined timelines and rate of cash burn, risk management strategies etc.)

   a. The board directs the Trust to make investments.
   b. The investee companies may require more capital than the Trust is prepared to inject, but if they are any good at what they do, then they will be able to leverage matching funds from other investors or from government programs.

6. The investee company/ies then go and invest directly into carbon projects on the ground, in-line with an investment mandate and agreed business plan. They go about doing the business of structuring project specific investment, aggregation, insurance, landholder relations, project registration, project delivery and implementation, project data recording, project reporting, managing auditors, credit issuance, holding ANREU account, dealing in carbon off take contracts with buyers, holding Australian Financial Services License. The investee companies carry all the responsibility, all of the risks and create the returns. Having someone from the Trust on the board of the investee companies' means you get to keep watch, and manage the investment risk, and ensure that the activities are being done in line with the investment mandate. It also means that SW NRM directly doesn't have to go through the headaches and legal issues of dealing with coming up with a business model, appropriate legal licences and staff required to run an NRM focussed, but effectively aggregation, sales, marketing, trading and contract management company.
7. Rewards are returned to the Trust by the investees. The Trust distributes to unit holders, or the unit holders request the Trust to reinvest into their preferred projects.
8. Go back to step 4b, repeat.

In this way, the Trust that NRM organisations invest in devolves the complexity and operational requirements of being a carbon market participant to a separate entity, thereby allowing the organisations who have invested to maintain an arms-length relationship with the commercial carbon companies that it has invested in. In this way, unlike all of the "BAU plus…" models suggested previously, the NRM organisations maintain a level of independence and don't really need to shift their focus too far from the core business of delivery on the plan. The investee companies are selected for investment because they come equipped with all the necessary commercial nous and experience to deal with the commercial realities that NRM organisations are neither traditionally nor currently prepared for. It is just that in this scenario, if the investee companies do create commercial returns, then this makes a new line of income available to the investors. This means that the organisations will not have to undertake the "risky" part of business dealings (i.e. the insurance/aggregating small contracts up to marketable size, insurance, all the other things that are required by carbon market but foreign to NRM project delivery), but are able to enjoy the successes created by the investee companies risk management, business development and delivery strategies.

As an investor, the Trust may appoint a board member/s (possibly members of the investment committee) in the investee company to ensure that governance, risk management, project selection and all other dealings are done in a way that is consistent with the requirements set out by the investment mandate of the Trust.

This model devolves risk to the investee company, such that the Trust is only exposed to risk through investment, not directly. Also, the entrepreneurial, risky, and profit or commercial return focus that is needed in a commercial company can be structured within a targeted, NRM owned investment business. By owning the commercial carbon business, NRM organisations therefore have a say in the activities of the company (as would all other shareholders). The job of the Trust and its investment committee is to sort the "wheat from the chaff", in amongst a likely long line of potential investee companies, and to pick those that really have sorted out the "commercialising NRM" to deliver on both the goals of regional plans as well as commercial economic returns.

Even if the commercial carbon company/ies don't turn into massive commercial successes (which must be considered as possible in an emerging market, regardless of the amount of risk management undertaken), then any projects that they have actually delivered (presumably delivered in line with the investment mandate of the Trust, and according to the agreed business plan) will still be delivering desirable NRM outcomes anyway. So, under commercial bad case loss of the original investment, there is no profit but important NRM works have been delivered. The broader the field of investment, the greater the reduction in risk that failure of one company does not jeopardize the broader aims of the Trust.

The Trust could investigate and participate in policy development, design of new markets and new products (e.g. bio-banks, social engagement credits, water quality credits, improved ecosystem function markets, really any new designer NRM market). Then any new innovators and entrepreneurs in the new emerging markets could approach the Trust for investment. The Trust should maintain a tight linkage with Government such that it has policy ears and voice, but is also able to take money from the Government, for e.g. from the Biodiversity Fund and distribute it according to the Trusts' investment mandate.

The Trust can also operate in a facilitation role by creating introductions from potential buyers to the investee companies, without necessarily engaging directly in any transactions. This way the Trust is value adding and protecting or enhancing its initial investments, without any of the direct exposure to commercial risk.

Commercial (Equity) Model: Summary

The above discussion is likely to be new for most NRM organisations however it is important that detailed consideration be given as to how to engage effectively in the emerging carbon market.

The picture described above has emphasised caution and prudence however this has to be tempered by the fact that the Australian carbon market is being created by Federal legislation, and many other governments internationally have created or are creating national carbon markets. With the emergence of national carbon markets the international trading in carbon will increase. At a local level there is growing interest by landholders in developing and delivering carbon projects in return for economic

benefit. These people are well experienced in delivering "triple bottom line" projects that balance community demands with economic benefits and improving environmental and social conditions.

NRM organisations are well placed to understand how different carbon projects, with different land use outcomes, will impact on the delivery of regional NRM plans. Additionally, SW NRM may find themselves with an opportunity to deliver NRM outcomes through a commercial "arm" which they have invested in, albeit at "arms-length" from their core operations. In this way, SW NRM can maintain their traditional style of activities while entering into while commercialisation of NRM activities through separate, commercial entities that specifically focuses on the commercial side of the carbon economy.

9. Other Issues Raised in Consultation

During the report development process, a suite of issued were raised in regards to how projects and activities undertaken by an NRM organisation may interact with other legislation, or other schemes. The following section deals with specific questions raised that may impact SW NRM projects and opportunities under the CFI in the subsequent section.

One issue that has been raised by various NRM organisations is whether carbon credits can be generated off the back of projects that have been funded through Federal grant programs, and then, if so, can the organisation keep some of those credits from projects?

For the initial part of the question, it may be enlightening to look at previous Federal Government policy in this space. Under the former Greenhouse Friendly carbon credit generating program, which has been replaced by the Carbon Farming Initiative, there was a general policy that was termed "proportionality". That is, projects that used Federal grant funds to deliver projects that then created carbon credits had to share the ownership of the credits with the Federal Government on a *pro-rata* basis. The policy purpose of the Government staking an ownership claim over credits was never clear, as all this did was give the Government right to claim credits that were already counted as reducing Australia's net greenhouse gas emissions, and deprived project developers of the ability to leverage climate finance to further drive innovation and investment.

Under Caring for Our Country grant funding, there was never a clear statement as to whether or not that project funder managers or Regional NRM bodies that managed the grants, had the right to claim the ownership of any carbon credits that may have resulted from the implementation of the activities funded by CfOC. While there has been some suggestion that NRM bodies would not be able to keep credits generated by CfoC funded projects there is no clear policy, nor sound policy position as to why this should be the case. Indeed, given that the recently announced Biodiversity Fund program had at least 1/3rd of the successful projects expecting to be able to earn and keep credits from activities funded by the Biodiversity Fund, it would be inconsistent and difficult to justify why CfoC funded projects could not achieve the same outcomes. There is no legislative or regulatory reason as to why any projects that receive funding from Federal agencies would not be able to keep credits from projects. This issue

requires direct clarification from DSEWP&C, however it would seem that the grounds for a response should be consistent with the Biodiversity Fund making government funded rehabilitation projects eligible to generate carbon credits.

The second question that arose, can the NRM organisation keep some of the credits is entirely dependent on there being an agreement between the NRM organisation and the landholder in question as to who "owns" the carbon benefit, and how the distribution of credits or credit revenue should flow. Consideration in this circumstance should include, but not be limited to:

- who owned the land on which the project was undertaken,
- whether all persons with an interest in the land have consented to the project,
- whether the project was a sequestration or emissions avoidance project,
- do any of the project partners have the legal right to own the emission reduction benefit,
- is there any ongoing liability under the CFI (e.g. permanence)
- who will cover the costs of scheme and project registration,
- who is the legally defined owner/s of the project
- who has the legal obligation for project reporting
- who will take responsibility for the costs associated with the sale of credits (marketing, brokerage etc?)
- which party will take responsibility for due diligence
- which party will take responsibility for any failure of the project to deliver on outcomes
- which party is qualified and competent to undertake these actions, including holding an appropriate Australian Financial Services Licence and other obligations as specified in the relevant legislation?
- What policy does the NRM organisation have for what to do with any revenues returned from carbon credit sales?
- What policies does the NRM organisation have in place to ensure that no serious fraud or breach of legislations regarding ownership or offers for sale of the credits occurs?

What are the impacts of heritage agreements/voluntary conservation agreement, native vegetation agreements or being involved in mining offset programs have on a projects ability to generate carbon credits?

It is important to refer to the CFI legislation and to consider the concept of "Additionality" as defined in the legislation. The concept of "additionality" is meant to ensure that carbon credits (and therefore carbon finance) are only available to activities that would only be performed because of the incentive provided by carbon finance, and that the carbon finance is required to implement the activities and to maintain the "carbon" outcome (e.g. permanent change of land use to forest from cropping country). This is meant to ensure that carbon finance is only made available for new activities, and those funds aren't simply diverted to activities that would have been conducted anyway, or as "business-as-usual". The definitive listing of activities that are always seen to be additional are found on the "positive list" contained in the CFI Regulations (*Carbon Credits (Carbon Farming Initiative) Regulations 2011*). The detail of the CFI Act regarding additionality is:

CFI Act Division 6—Additionality test
For the purposes of this Act, an offsets project passes the additionality test if:

(a) the project is of a kind specified in the regulations; and
(b) the project is not required to be carried out by or under a law of the Commonwealth, a State or a Territory.
Regulation 3.5 Eligibility requirement for declaration of eligible offsets project
For paragraph 27 (4) (l) of the Act, a specified eligibility requirement is that the project area, or any part of it, is not used to meet an obligation under a Commonwealth, State or Territory law to offset or compensate for the adverse impact of an action on vegetation.
Regulations Division 3.6 Additionality test; 3.27 Definition. In this Division: ***conservation land*** *means an area that is owned and managed by the Commonwealth, a State or a Territory Government for biodiversity conservation.*

Specifically noticeable through its absence in this identification of "conservation land" are lands that are private lands managed for conservation. That would suggest reforestation and revegetation as specified on the positive list are seen to be additional when undertaken on private lands.

The *Explanatory Memoranda* for the activities referred to in *Regulations 3.28(1)(c) (regarding additionality) and Regulation 3.35(1)(c) (re Kyoto Offsets):*
79. 'Conservation land', for these purposes means an area that is both owned and managed by the Commonwealth, a State or a Territory government for biodiversity conservation, such as a national park (regulation 3.27).

80. Assisted regeneration is an alternative to adding seed or seedlings to a site. Instead, seed stores in the soil or from remnant plants (e.g. trees, shrubs, grasses), and/or rootstock and lignotubers already present at the site, are encouraged to sprout or germinate, usually in areas where regrowth has been routinely suppressed or on cleared areas around existing remnant vegetation. The activity is the management or removal of external pressures that prevent regrowth from occurring.

81. Undertaking these measures in areas that are both owned and managed for biodiversity conservation purposes by the Commonwealth or a state or territory government is excluded from this activity because taking action to encourage regeneration is considered to be common practice in these areas. This exclusion does not apply to areas that are privately or Indigenous owned or managed, as these areas are not commonly managed to promote regrowth.

The explanatory memorandum also states:
"*Requirements resulting from a conservation covenant. Once landholders enter into a conservation covenant with a government body, certain activities may become required by law. However, because landholders voluntarily enter into conservation covenants, activities conducted under them are still potentially additional and should therefore be excluded from the application of paragraph 41(1)(b) of the CFI Act."*

So, referring back to the legislation, and considering the intent of the regulations, any lands that are covered by another state level scheme that required the development of a conservation covenant (as defined in the Income Taxation Act1[1]):

41 Additionality test
(1) For the purposes of this Act, an offsets project passes the additionality test if:
…(b) the project is not required to be carried out by or under a law of the Commonwealth, a State or a Territory.

While the legislation and regulations are somewhat dense, if they are read with an understanding of the intent to reward and provide financial incentive for new practice, then it could be seen that privately managed conservation estate projects could be able to enter the CFI, although the date from which they may be able to earn credits will depend on the methodology that the project looks to become CFI registered under. This may require projects under voluntary agreements taking on more consequential and legally binding obligations for permanence and other legally enforceable requirements under the CFI. This acceptance of a permanence obligation, and lodging such an obligation on the lands title, would be seen as "beyond business-as-usual" and the projects may thus be considered to be additional, even if there is an existing conservation covenant on the lands.

However, if the lands under covenant have already been used as an offset by a project or developer to mitigate offsite impacts for an existing project are ineligible for participating in the CFI.

10. Summary of Recommendations

As a result of an examination of the regulatory and legislative environment at the Federal level with regards to an emissions trading program, and the funding that will be made available in the land sector as a result of the implementation of those policies, and the development of a carbon credit generating framework within the land sector in Australia, and a further examination of demand and supply dynamics, several things become clear. First, carbon bio sequestration, emissions avoidance and changed land management practices may be a financially valuable activity in to the future. Second, the NRM sector will have a key role in advising on the general appropriateness of "what kind of carbon projects should go where". Third, with the interaction of funding support and carbon market development, there exists a key opportunity for the SW NRM to advance the opportunity to develop

[1] The legal definition of a covenant is: "A promise contained in a deed to land or real estate which is binding upon the current owner and all future owners. It defines the limitations, conditions or restrictions on the use of that land". A conservation covenant is a voluntary agreement made between a landholder and an authorised body (such as a Covenant Scheme Provider) that aims to protect and enhance the natural, cultural and/or scientific values of certain land. The owner continues to own, use and live on the land while the natural values of an area are conserved by the landholder in partnership with the Covenant Scheme Provider. Covenant Scheme Providers can be not-for-profit organisations, government agencies or local Councils that can enter into conservation covenants with landholders to protect land with conservation values.

models of engagement that may see market-based financial returns and investment in NRM regional plan outcomes, rather than being reliant on goodwill, volunteers and soft-cycle government funding allocations.

While goodwill and voluntary activity will continue to be critical to ongoing success in achieving the goals of the NRM Plan, market based funding may flow when real and quantifiable outcomes in terms of changed land management have occurred. This will require a fundamental shift in NRM planning and program delivery and modes of engagement. However, it is generally considered that the benefits of the outcomes of engaging in the carbon market can be generally seen to outweigh the risks, as long as careful consideration to risk management and mitigation is undertaken for any course of action decided upon.

The recommendations below have been developed through detailed consideration of the factors outlined above. The recommendations can be broadly classed into those focused on “policy”, “projects” and “support”. There is benefit in delivering a number of these recommendations in partnership with other regional NRM groups.

1. Participate in the discussion regarding the development of a National NRM commercial carbon entity, while maintaining the option to withdraw and play the role of advisors, aggregator or carbon pool manager independently within the region.
2. Develop a program (possibly in partnership with other NRM’s) to support ‘early adopter’ landholder participation in the carbon market through activities funded through current incentives projects.
3. Modify current projects to make them CFI compatible, as further methodologies become available. This requires paying some attention to the methodologies that have been and are being developed, and may include getting involved in methodology development through the Methodology Development Fund, in association with other NRM entities in the region, and state level research bodies. This will also require significant landholder advisory on risk and opportunities of participation in such projects.
4. Monitor the positive and negative lists and apply to alter them as required to ensure positive NRM outcomes for the region.
5. Modify current project delivery contracts so that the money generated through the sale of ACCUs from NRM supported projects (if they are ever developed) are re-invested into NRM activities, thus generating further credits or valuable environmental outcomes. This could be done through establishment of a separate fund or through contract agreement with landholders or through engaging in the national NRM carbon model (if and when one develops).
6. Review and revise the Regional NRM Plan to ensure it comprehensively covers climate change adaptability and is carbon economy ready. This will include providing clear guidance on what type of carbon projects are desirable within the region and where, and accessing resources made available through Federal funding programs regarding local climate change predictions and NRM plan revisions.

7. Facilitate relationships between landholders, carbon service providers and other stakeholders (including Traditional Owners), to encourage participation in the carbon market, where the proposed projects are consistent with the regional NRM Plan. This could include development of a panel of suitably qualified providers so that landholders can have confidence in the advice and support being offered from the commercial sector.
8. Review the outcomes of the current funding rounds to inform future program applicability and applications.
9. Develop a strong stakeholder engagement program so that the region is best positioned to take advantage of current Australian Government programs and future market drivers.
10. Develop an incentives project for changed land management, including changed land clearance activities that are for carbon sequestration and NRM co-benefits. These can target the outcomes outline in the regional NRM Plan and operate across a number of the current incentives projects. This could be done in collaboration with partnering NRM's.
11. Explore the potential for partnering with the large emitters within the region that have an offset requirement for the purchase of carbon credits generated within the region thereby providing a social, economic and environmental outcome of carbon investments remaining within the catchments.

The choice to engage in the development of this report, and consideration of the information presented in it represents a significant step forward in the SW NRM determining what role it will play in the emerging carbon economy.

The opportunities to ensure that the carbon market delivers adaptation to the threats of climate change, as well as improving the financing model for ongoing delivery of improved natural asset management that should lead to improved socio-economic outcomes within the region are compelling. We at Northwest Carbon look forward to being able to work with the SW NRM as it capitalises on its successes to date, and steps on the path towards integration of "carbon" with improved Natural Resource Management.

Appendix 1: useful web links

Carbon Farming Initiative homepage
http://www.climatechange.gov.au/en/government/initiatives/carbon-farming-initiative.aspx

Projects within the scope of the CFI, with links to the positive and negative lists, and guidelines for rainfall and dry land salinity mitigation
http://www.climatechange.gov.au/government/initiatives/carbon-farming-initiative/activities-eligible-excluded.aspx

Approved and awaiting assessment methodologies
http://www.climatechange.gov.au/government/initiatives/carbon-farming-initiative/methodology-development.aspx

CFI project application and registration
http://www.cleanenergyregulator.gov.au/Carbon-Farming-Initiative/Pages/default.aspx

List of companies with a liability under the Clean Energy Futures Legislation- Liable Entities Public Information Database
http://www.cleanenergyregulator.gov.au/Carbon-Pricing-Mechanism/Public-information-databases/LEPID-for-2012-13-Financial-year/Pages/default.aspx

Australian National Register of Emission Units
https://nationalregistry.cleanenergyregulator.gov.au/

Concise description of Australian Carbon Credit Units covering nature of property, taxation treatment and ability to be transferred.
http://www.cleanenergyregulator.gov.au/Carbon-Farming-Initiative/ANREU/Australian-carbon-credit-units/Pages/default.aspx

Regional Natural Resource Management Planning for Climate Change Fund
http://www.environment.gov.au/cleanenergyfuture/regional-fund/index.html

Biodiversity Fund homepage
http://www.environment.gov.au/cleanenergyfuture/biodiversity-fund/index.html

Action on the Ground
http://www.daff.gov.au/climatechange/carbonfarmingfutures/action-on-the-ground

Filling the Research Gap
http://www.daff.gov.au/climatechange/carbonfarmingfutures/ftrg

CFI non-Kyoto Fund
http://www.environment.gov.au/cleanenergyfuture/regional-fund/index.html

Indigenous Carbon Farming Fund
http://www.climatechange.gov.au/government/initiatives/indigenous-carbon-farming-fund.aspx