

# Carbon Farming Implications

14<sup>th</sup> Murrumbidgee Landcare Forum

Gus Sharpe

Managing Director - Carbon Innovation Pty Ltd  
President - Yass Area Network of Landcare Groups  
Director - Zero Waste Australia

# Carbon Farming

- Opportunities
- Managing the risks
- Aspirations and hopes
- A balanced perspective
- Regional Issues
- Land use issues
- Approaches

# Opportunities

- The Federal Government will regulate the generation of tradeable carbon credits under the CFI by foresters, landholders and farmers
- It is a voluntary offset scheme
- It is intended to provide long-term certainty for participants, ensure environmental integrity and enable broad participation
- It will sit alongside the domestic carbon emissions trading scheme under an Emissions Trading Scheme titled the Clean Energy Future bill

# Opportunities

## *Coverage*

Potential eligible abatement activities under the CFI include:

- reforestation and revegetation;
- reduced methane emissions from livestock;
- manure and fertiliser management;
- reduced emissions from landfills in certain circumstances;
- reduced emissions from burning of savannas, grasslands, stubble/crop residue and sugar cane;
- reduced emissions from rice cultivation;
- increased carbon sequestration (soil carbon); and
- avoided deforestation.

# Opportunities

## Eligible CFI projects

Eligible offset projects must meet the following criteria:

- be located in or carried out in Australia;
- be covered by a methodology determination;
- meet the relevant methodology requirements;
- meet the additionality test; and
- the applicant must be a recognised offsets entity.

# Aspirations

To what extent will the CFI help:

- Adaptation to the impacts of global warming
- Resilience to enhance food security and prosperity in regional Australia
- Incentive for improved/appropriate land management systems
- Potential to remove legacy atmospheric carbon ie back from the current 385ppm to pre industrial revolution 260ppm

# Managing the risks

## Sovereign

- Coalition unraveling price on carbon legislation (CEF)
- the CFI will rely on CEF for growth  
$$\text{CFI} = \text{supply} - \text{CEF} = \text{demand}$$
- Changes to the rules - fine tuning is inevitable – impacts unknown
- Definitions surrounding land management practices such as “Additionality” versus “Business As Usual” will it be around 5% adoption?
- Transaction costs too high – depends on price and measurement system of carbon

# Managing the risks

## Weather and management

- Drought and fire - national 5% buffer - insurance against losses  
“Terrestrial Systems Feedback” land switches from sinks to sources of emissions during dry/drought periods
- Mismanagement – ie can lead to soil carbon losses
- Achieving the right land management systems to ensure sequestration - this particularly applies to soil carbon

# A balanced perspective

## New Opportunities

- New opportunities for rural and regional Australia to participate in the evolving carbon markets
- Valuing Natural Resources  
These are the first attempts to put a value on natural resource use and loss
- Level Playing Field  
Like all new initiatives it will require fine tuning and ultimately benefit from an international level playing field!

# A balanced perspective

## However:

- Be Aware of Risks

Individuals and communities must be wary – remember that a credit can become a debit – a debit can be worse if the price rises

- Confidence

It is advisable that land managers are confident of their management systems before selling credits – particularly soil carbon

# Regional Issues

## Food security:

Ensure that land use change enhances food security:

- population of the world will exceed 7 billion in 5 days
- Minimise land-use-change impacts on agricultural land:
  - much has been lost to urban, industrial, forest and mining interests

# Regional Issues

## Business and employment:

- Strive for local and regional interests to benefit
  - will multinational interests get the lions share?
- What steps can communities take to help make this equitable?
- Such steps must minimise bureaucracy and be realistic

# Regional issues

## Local and regional economies:

- Provide opportunities for all – including SME's and regional communities
- Landcare and other not-for-profit interest groups keep abreast of the issues and develop systems to benefit their communities
- ✓ Identify relevant issues
- ✓ Seek solutions
- ✓ Gain support across communities
- ✓ Develop systems and infrastructures as appropriate

# Land Use Issues

Projects can be excluded from the CFI scheme if they would have a significant impact on access to land for agricultural production, or have a material impact on water, biodiversity, employment, or the local community Source: Dept Climate Change and Energy Efficiency

## Catchment management:

- A concentration of forests and plantations may reduce run-off impacting on stream flows and storage in reservoirs
  - Are there ways to increase permanent biomass systems with such impacts?

## Fire management:

- An expansion of young forests all of a similar age could increase bushfire impact and ability to recover
  - Can we develop plans that reduce these impacts?

# Approaches

## Land use change

A preferable outcome would be:

- a mosaic of land uses based in part on land capability
- all landholders able to participate
- aggregation of appropriate sized areas (gov't training)
- Reduced transaction costs
- Develop local systems to assist with these challenges?

# Approaches

## Land use Change

To achieve such outcomes we need to involve:

- Government but particularly local gov't
- CMA's, Ngo's such as landcare, Farmer/commodity organisations and other interest groups
- Catchment Plans and local gov't land use plans etc.
- Keep bureaucracy down but factor in the risks

# Additionality

## 'Business As Usual' versus 'Additionality'

- **Why does the CFI have a 'Positive List'?**
- 2 ways to assess additionality: the project-by-project approach, and the standardised or "positive list".
- The project-by-project can be time-consuming and expensive to administer
- The standardised or "positive list" approach is more streamlined and cost effective
- It involves assessing the additionality of activities, rather than individual projects
- By consulting the Positive List and see whether their activity is additional

# Additionality

Source: Dept Climate Change and Energy Efficiency 2011

<b>RATIVE EXAMPLE OF THE POSITIVE LIST – ADDITIONAL ACTIVITIES</b>	
<b>Activity that goes beyond common practice</b>	<b>Explanation</b>
<b><i>Biosequestration activities</i></b>	
Establishment of permanent environmental (mixed native species) forest greater than 1 ha after 1 July 2007 <sup>1</sup> .	Large permanent environmental plantings are not common practice anywhere in Australia. Establishment of permanent environmental plantings for wind breaks (typically less than 1 ha) is common practice.
Management of vegetation to increase carbon by promotion of residual seed sources, coppicing or animal management.	
<b><i>Emissions avoidance activities</i></b>	
Capture and combustion of methane from legacy waste.	
Early season burning of large areas of savanna (greater than 1 km <sup>2</sup> ) to reduce the intensity and frequency of fires in savanna regions.	Broad scale, early season savanna burning is not common practice. Burning of savanna for asset protection is common practice and typically occurs in patches less than 1 km <sup>2</sup> .
Culling of feral camels.	
Reduced enteric fermentation - using tannins as a feed supplement for cattle.	
Reduced enteric fermentation - incorporating <i>Eremophila</i> into feed for livestock.	
Reduced enteric fermentation - manipulation of gut flora in livestock to reduce methane Rumen manipulation.	
Reduced enteric fermentation - selective breeding of livestock to reduce residual feed intake.	
Capture and combustion of methane from manure.	
Application of urea inhibitors to reduce nitrification to manure.	
Application of nitrification inhibitors to fertiliser.	
<b><i>Other</i></b>	
Projects that have been assessed as additional under the Australian Government's Greenhouse Friendly Program.	Projects under the Greenhouse Friendly Program have undergone a rigorous additionality assessment as part of the application process.

# Additionality

Source: Dept Climate Change and Energy Efficiency 2011

<b>ILLUSTRATIVE EXAMPLE OF THE NEGATIVE LIST – MANAGING RISKS</b>	
<b>Excluded projects</b>	<b>Reason or risk</b>
<b><i>Biosequestration activities</i></b>	
Establishment of vegetation on land cleared of native vegetation (other than a weeds) since 1 July 20072 or within three years of project commencement (whichever is more recent).	Significant risk that clearing vegetation in order to establish a carbon planting would have adverse impacts on biodiversity.
Establishment of a known weed species.	Significant risk that weed species planted for carbon sequestration could spread, create adverse environmental impacts on their local environment.
Cessation or avoidance of harvest in monoculture plantations ('avoided deforestation'). This does not apply to improved forest management in monoculture plantations.	Significant risk that the forest could become a net source of emissions. Monoculture forests degrade over time as biomass moves to the debris pool and then decays. If not managed, these forests can become a net source of emissions. Plantation was established on the basis that harvest would occur.
Cessation or avoidance of harvest ('native forest protection') after removal of a conservation covenant.	Significant risk that landholders may seek to have covenants revoked in order to receive carbon credits. This would lead to crediting of non-additional abatement, and create risks for the environment.
Establishment of forest as part of a Managed Investment Scheme.	Significant risk of distortions to markets for agricultural land, resulting from the additive effects of up-front tax incentives and carbon revenue for commercial (harvest) plantings.

# Additionality

Additional

Management practices

Based on % of land managers who have yet to adopt new practices

Will 5% adoption be the tipping point?

BAU

% of land managers who have adopted a management practice

Eg no-till-cultivation 1990 - 10% adoption  
2011 - 90% adoption

therefore BAU!

Eg field evidence required for rotational grazing effects on soil carbon sequestration

# Additionality

## Incentive for change

Carbon credits may be an incentive for improvements in management practices, but how will we determine:

- know the right time for a practice to change from ‘Additional’ to ‘BAU’?
- Who’ advice?
- Develop the right sets criteria to apply?

## Timing Issues

- A shift from “additional to BAU” too early could remove a useful incentive for change towards sustainability
- Is there an opportunity for landcare to play a role here?

# Additionality

**The proposed additionality deeming provisions which suggest that projects that increase business profitability will generally not be eligible under the scheme have engendered a great deal of criticism**

**To what extent should the scheme support activities that do not lead to real emission reductions and adaptations to climate change.**

**The CFI is due to commence on 1 December, however some of the rules have yet to be determined due to extensive public consultation processes particularly additionality rules.**

# Summing up

- Opportunities for regional Australia to participate in a new market
- Incentives for positive change in land management practices
- There are potential risks to be addressed by both individuals and communities (**buyer beware**)
- Risks to food production, catchment management and fire control if inappropriate land-use-change occurs may be solved by the “Positive and Negative lists”?
- The landcare movement can participate to help ensure that the application of the rules around “Additionality’ work in favour of our goals relating to food security and sustainability and land-use-change issues.

Thank You