



## Submission Template

### Design of the Carbon Farming Initiative

#### Overview

This submission template should be used to provide comments on the consultation paper outlining the proposed design of the Carbon Farming Initiative.

#### Contact Details

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#### Submission Instructions

Submissions should be made by **close of business 21 January 2011**. The Department reserves the right not to consider late submissions.

Where possible, submissions should be lodged electronically, preferably in Microsoft Word or other text based formats, via the email address – [CFI@climatechange.gov.au](mailto:CFI@climatechange.gov.au).

Submissions may alternatively be sent to the postal address below to arrive by the due date.

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## Scheme design principles

It is recognised by the Australian dairy industry that any proposed carbon trading scheme must be underpinned by integrity standards that ensure the approved methodologies result in the removal, reduction or avoidance of greenhouse gas emissions.

The industry believes the proposed Carbon Farming Initiative (CFI) legislation should be enhanced to enable higher levels of participation by Australian dairy farmers. This can be achieved without weakening the integrity standards.

The draft *Carbon Credits (Carbon Farming Initiative) Bill 2011* as it is currently interpreted in the consultation paper offers few options for dairy farmers to effectively participate.

- The high value of dairy land (approx \$12,000 - \$17,500/ha) makes carbon sink tree planting prohibitive except on areas that are too steep for grazing or are adjacent to riparian areas. On most dairy farms these areas have already been revegetated.
- Flaring of methane is also likely to be cost prohibitive except for a few total mixed ration dairy farmers.
- Soil carbon sequestration is also unlikely to be an option.<sup>1</sup>

Broadening the integrity standards to include the concept of *emissions avoided (per unit of output)* credits would create opportunities for a far greater number of dairy farmers to contribute.

### **The case for greater flexibility in design**

*Emissions avoided (per unit of output)* credits would require a producer to generate the same unit of product at an agreed reduction in emissions intensity (similar to a baseline and credit system). Dairy industry abatement strategies are already available that if implemented could reduce emissions intensity per unit of product by 15-22%<sup>2</sup>. Example abatement strategies include;

- Feeding oils in summer
- Nitrification inhibitors
- Feed optimisation

However abatement strategies that reduce the emissions per unit of product can increase productivity and may result in increased profit. The consultation paper suggests such practices would be ineligible under the additionality test as they *could result in material increases in agricultural productivity or business profitability* (7.1 Additionality) and if there was additional production on the farm, this could be seen as creating additional emissions (7.3 Leakage).

The Australian dairy industry feels this is a narrow interpretation of the additionality test and if the plain English interpretation of the *Additionality test (draft Carbon Credits Bill 2011: 39 (2) Additionality test)* is used as a guide;

1. Would it have happened anyway?
2. Would it keep happening?

There is considerable scope to consider projects based on *emissions avoided (per unit of output)*.

In practice many of the abatement strategies currently available to the dairy industry have a low adoptability rating, based on the Adoptability Tool<sup>3</sup> rating scale. The CFI has the potential to drive faster rates of adoption of existing abatement strategies by providing an additional incentive. Factors such as

<sup>1</sup> McKenzie, D (2010); Soil Carbon Sequestration under Pasture in Southern Australia, *MCK13538 Review paper, Dairy Australia*

<sup>2</sup> Christie et al (2008); Discussion paper on the outcomes of the investigation and analysis into greenhouse gas abatement strategies, modelling and decision tools for the Australian dairy industry *UT12945 Milestone Report, Dairy Australia*.

<sup>3</sup> The Adoptability Planning Tool is an output of the Future Farming Industries CRC and is based on earlier work by Pannell et al (2006) Understanding and promoting adoption of conservation practices by rural landholders *Australian Journal of Experimental Agriculture* 46(11) 1407–1424

cost of adoption, complexity of the practice change, level of risk and requirement for new skills and knowledge are significant barriers to adoption. For example - dairy farmers feeding oils over summer could (on paper) expect an increased return of \$50.25/ha<sup>4</sup>. Yet few dairy farmers currently supplement with dietary oils over summer for the reasons listed earlier.

The industry has undertaken some initial examination on how an *emissions avoided (per unit of output)* approach could align with the CFI. More extensive analysis needs to be done to determine whether the likely carbon price generated through the CFI would be sufficient to overcome existing adoption barriers. The following design parameters are put forward as a means of illustrating how the generation of emissions avoidance credits could be incorporated into the CFI.

- Validation of an industry agreed methodology farmers can use to calculate their emissions intensity baseline, for example the Dairy Greenhouse Gas Abatement Strategies calculator.
- Identification of currently available abatement activities supported by 'peer reviewed science' that can be verified through 'practice adoption' rather than measurement of emissions (similar to the approved quantification protocols of the Alberta Offset System<sup>5</sup>).
- Assessment of identified abatement strategies for their level of adoptability based on the Adoptability Tool (or a similar profit/risk assessment tool). Those strategies deemed to have a low level of relative advantage could be considered to meet the additionality test. That is they are unlikely to be adopted, or widely adopted without additional drivers such as the ability to generate carbon credits.
- Producers who subsequently achieve a reduction in emissions intensity from their baseline through adoption of CFI approved strategies would be able to sell their emissions avoided credits into the voluntary offsets market.

The approved abatement strategies would be reviewed every five years (with the option of a five year extension) to ensure they still met the additionality test (on-going implementation is dependent on the sale of carbon credits).

The Australian dairy industry believes the Government must ensure the CFI has enough flexibility in design to enable broad participation by all farmers. A narrow interpretation of 'additionality' will fail to capitalise on the full level of carbon abatement available and the potential for a well designed CFI to drive change in farming practices.

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<sup>4</sup> Grainger et al (2008) Australian Journal of Experimental Agriculture 48 (2) 73 -76

<sup>5</sup> Alberta- based Offset Credit System; <http://environment.alberta.ca/0923.html>

## Scheme coverage

The Australian dairy industry believes the legislation as currently drafted fails to clarify two key issues critical to its success.

1. **Total GHG emissions reduction versus emissions intensity per unit of output.**

The CFI discussion paper appears to favour absolute reduction in GHG emissions rather than widening the scheme to explicitly support a reduction in *emissions intensity (per unit of output)*.

As discussed in the section on scheme design failure to include credits *for emissions avoided (per unit of output)* will significantly weaken the ability of the CFI to deliver substantial levels abatement. It may also lead to leakage as strategies that reduce productivity, for example reducing fertiliser use or reforestation of prime agricultural land risk shifting dairy production from Australia to other regions.

The international carbon reporting frameworks being adopted by major food and drink companies recognise the tension between reducing total greenhouse gas emissions and meeting the need for growing world food demand. International companies such as Unilever, Danone and Nestle are requesting data on dairy products *emissions intensity (per unit of product)* and information on how industries are planning to reduce this over time.

This is an issue the dairy industry would like to develop further in collaboration with DCCEE.

2. **Comprehensive education campaign**

A comprehensive education campaign is needed to explain why there are differences between the two types of carbon credits: *Kyoto compliant* and *non-Kyoto compliant* and why the price is expected to be different between the two types.

Without clear communication articulating the differences, it will be very easy for misperceptions about the value of *non-Kyoto compliant* credits to develop to the detriment of the credibility of the CFI.

## Sale of units

The carbon market is in its infancy and there is little to indicate how it will develop nationally and internationally and the failure of the Chicago Carbon Exchange provides a clear warning that if supply outstrips demand markets cannot cope.

Given the serious challenges associated with climate change and greenhouse gas mitigation are a result of market failure, there is justification for government intervention. In this case, government intervention (i.e. the CFI) must focus on creating a platform that allows a carbon market to be established and to function in an on-going way. The emerging (and uncertain) nature of national and international carbon markets makes it appropriate for the Government to establish the CFI. It is also sensible for the Government to put in place measures to ensure the processes can weather the establishment difficulties, the supply/demand balance and the potential for significant rule changes. Commercial operators are likely to find these initial challenges daunting, in particular the high costs of developing an offset project.

In the National Farmers Federation (NFF) CFI submission, the NFF states “*While the global and domestic market for carbon offsets may certainly develop in the future and various international carbon markets may well at some point accept CFI credits, the CFI risks lacking a genuine financial incentive to underpin the scheme, at least in its infancy.*” That is, short term challenges associated with establishing a market in advance of clear market signals has a strong possibility of undermining an attempt at a long term solution.

In Australia, there has been a long history of governments establishing (or underwriting) activities and investments that it believes will become commercially viable over time. There are no ‘long term, established operators’ in the CFI space but we are expecting farmers to sign 100 year contracts, undertake significant changes in practice, and expend significant investments up front with relatively unknown operators that do not have a ‘Government Guarantee’. This seems totally unrealistic.

The Government should consider two steps to firmly establish a carbon market, and therefore provide the level of certainty that will be required for broad participation by farmers:

1. Determine (in consultation with the range of interested groups) a ‘fair’ price for carbon, and set that as the minimum price for a period of time – say 5 years. This would allow farmers to do budgets based on minimum prices but would allow upside if the carbon market price exceeded the set minimum.

It would be sensible to delay finalising the rules for the CFI until the Government determines if there should be a price on carbon in the broader economy, and how/when that price should be introduced. This would give some clarity to the demand side and some clarity on at least the short term carbon price.

2. Establish a ‘corporation’ or a process to ensure the orderly purchase and marketing of the CFI credits, again for a set time of say 5 years. This would not only signal determination by the government that we need to be putting a price on carbon (both emissions and sequestrations) but it would also provide the certainty that new commercial players in this space could not. It would give confidence for example, that the market process would not follow the long, slow decline of the Chicago Carbon Exchange.

While the minimum carbon price might initially be set by the Government, in the longer term, the carbon marketing corporation/process needs to distribute to contributing farmers the profits it achieved from selling their credits. While the ‘corporation/process’ would initially be the sole aggregator and marketer as soon as the Government had confidence that the market was sufficiently established, then commercial operators could be encouraged to develop into and compete with the established market.

In the absence of a carbon tax or equivalent the Government should consider investing in the market to underwrite demand. Without this stimulus, the Australian dairy industry (like the NFF) feels “*the scheme risks collapsing, jeopardising the future of the CFI and damaging the perception of farmers’ capacity to contribute to the carbon mitigation challenge*”.

## Regional Communities, Water and Biodiversity

The history of Managed Investment Schemes (MIS) highlights the difficulty of preventing perverse outcomes especially when there are a wide range of socio-economic, biophysical and policy variables that need to be considered. The dairy industry supports the requirement that all projects should “*have obtained all regulatory approvals and met regulatory requirements from all levels of government*” but is concerned this requirement may not be sufficient on its own.

Rather than a review period every three years the combined effect of multiple projects should be monitored on an on-going basis across a range of socio-economic and biophysical outcomes. This will ensure the CFI is able to respond to perverse outcomes as they are identified. Given the complexity and interrelated nature of many of the variables it is highly unlikely all perverse outcomes will be identified through the initial project approval process.

Approving small areas of reforestation by individual landholders across a landscape may meet regulatory requirements but collectively it could significantly reduce total food production from high value catchments, resulting either in leakage (as forests or grasslands are cleared elsewhere in the world to produce alternative sources of protein) or in someone, somewhere in the world going hungry. This is a particular risk in the high rainfall coastal catchments with a high percentage of non-primary producer land owners. The worked example below illustrates just how difficult it is to identify all the impacts of CFI supported changes at both a catchment and global scale.

### **Example: The practicality of assessing outcomes from relatively simple practice changes**

A peri-urban beef cattle farmer with 80 hectares is interested in establishing conservation plantings (reforestation). Changing from 100% production (all pasture) to 80:20 with the conservation plantings.

Though reforestation is probably the simplest of the practice changes that are implied under the CFI, there are implications at the whole farm level and beyond. The challenge for the CFI is how does it account for the possible flow on impacts of a relatively simple practice change, and which implications should the land manager consider/account for when applying for CFI accreditation?

Below is the direct impact (followed by some of the indirect impacts) that could be expected from reforestation:

- The main impact is a reduction in emissions through sequestration (160t CO<sub>2</sub>/year for 25 years), and emissions avoided (through reduced stock numbers and a reduction in fertiliser usage) because this is productive land being fenced off and the land manager hasn't changed the management on the rest of the farm.
- If the beef production loss is made up elsewhere in the world (and it has to at the macro scale or someone else is going to go hungry) then the reforestation has potentially created leakage, additionally so if the new production has a higher emissions intensity per unit of product. Does the land manager have to account for that leakage?
- It's well established that there will be reduced water yield from those revegetated areas and so the local town, and associated river systems will receive less water. Should the land manager have to offset claimed carbon gains for this certain water loss?
- Presumably the reforestation will increase biodiversity (a key reason for undertaking the practice change) so can the land manager claim an additional benefit from that?

On an individual basis the perverse impacts are insignificant but multiplied up they may not be. Like the NFF the Australian dairy industry is concerned that a rigid interpretation of the additionality requirement will favour carbon sink tree planting as one of a limited number of opportunities for land owners to participate. The challenge is to ensure the CFI can support a wide range of abatement options including participation on the basis of *emissions avoided (per unit of output)*, not just options that involve land use change. We are not opposed to carbon sink tree planting per se, but we believe the more important challenge is to reduce the GHG emissions from productive (i.e. food producing) systems, and boost their productivity in line with increasing world food demand.

## Integrity standards

The Australian dairy industry acknowledges any proposed carbon trading scheme must be underpinned by integrity standards that ensure the approved methodologies result in the real and verifiable removal, reduction or avoidance of greenhouse gas emissions. We support the approval of methodologies being dependent on 'peer reviewed' science.

As discussed in the scheme design section of the template the industry feels the CFI should explicitly support the sale of credits for *emissions avoided (per unit of output)*. This will be the primary determinant as to whether dairy farmers participate or not. Support for a reduction in emissions intensity will also align the CFI with international efforts to reduce carbon emissions from agriculture without compromising food security.

At an international level emissions intensity (i.e. carbon footprint) is the criterion being used to demonstrate carbon abatement. The international dairy industry has made a commitment to reduce the emissions intensity of all dairy products<sup>6</sup>. To this end it has established common guidelines to determine the industries carbon footprint and individual countries are developing action plans detailing how they intend to reduce emission intensity over time.

Provided the integrity standards are kept relatively high, allowing the sale of credits on an *emissions avoidance basis (per unit of output)* will encourage a far higher level of participation and drive faster adoption of abatement practices.

## Additionality

The Australian dairy industry concerns re the *additionality* requirement have been articulated under the 'Scheme Design' section of the template. To summarise the arguments raised earlier the industry supports:

- Recognition of the fact that many abatement strategies have a low adoptability rating. The fact that adoption of the practice may lead to an increase in productivity should not be the basis for excluding it from the CFI.
- CFI offsets being credited on a practice change basis rather than an outcomes basis where there is peer reviewed science available to verify the reduction in emissions will occur.

The industry feels a wider interpretation of *additionality* will be critical to the long term success of the CFI. A narrow interpretation of the *additionality* requirement will fail to capitalise on the full level of carbon abatement available and the potential for a well designed CFI to significantly reduce greenhouse gases over time.

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<sup>6</sup> Global Dairy Agenda for Action – Climate Change. Signed September 2009, Berlin. Signatories: IDF, SAI, GDP, EDA, IFAP & FEPALE.



## Permanence

The Australian dairy industry is concerned the risks associated with *permanence* may not be clearly communicated to potential participants. It is important that land owners fully understand their obligations, particularly with respect to the relinquishment obligations for bio-sequestration and the carbon maintenance obligation. Project applicants should be provided with case study scenarios that clearly articulate their obligations and discuss the possible implications of a rise in the real price of carbon over time or the implications of a carbon caveat when they wish to sell their land.

The discussion paper suggests project owners will take out insurance to cover the potential costs of re-establishing carbon stores where they have been destroyed through natural disturbances. The CFI should consider making insurance cover mandatory for schemes above a certain value as it is entirely possible the risks associated with natural disturbances will be underestimated, especially as extreme weather events are likely to increase in frequency in the future.

Finally the language in the CFI discussion paper is potentially misleading. The paper stresses that it's a voluntary scheme, and that participant's can terminate the project at any time by relinquishing those credits already issued. This seems reasonable, as the definition of relinquish is - *hand over, abandon or renounce*. However none of these definitions implies the participant has to buy back the credits rather than just renouncing them.

## Leakage

Accurately assessing leakage as part of the project approval process will be critical. However like perverse outcomes it will be difficult to stop and almost impossible to account for as consideration moves away from the project boundaries. For example the CFI discussion paper suggests reducing fertiliser use as a possible abatement strategy. As discussed earlier if reducing fertiliser use results in a net reduction in food production in Australia then it is likely increased fertiliser will be used elsewhere in the world – creating leakage.

In addition, adoption of a practice that increases total farm production (such as feeding oils in the dairy industry) can result in lower GHG emissions per unit of product, but higher total farm emissions. If this were the case, all the gains from adopting the practice are lost through leakage unless the accounting is done per unit of product.

Significantly, allocating credits based on a reduction in emissions intensity offers a key opportunity to avoid leakage due to displaced food production.

## Scheme processes

### ***Becoming a recognised entity***

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### ***Project approval***

The proposed project approval process is very cumbersome and whilst the industry acknowledges the need for a high level of integrity it is highly likely very few projects will be approved by July 2011. For individuals wishing to put forward projects there is considerable risk involved and the government may need to consider supporting the development of project proposals in partnership with industry bodies.

Despite the high cost, private individuals, consultants etc should not be allowed to patent offset protocols. They should be developed in the public domain only.

### ***Register of offset projects***

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### ***Crediting periods***

The Australian dairy industry considers a three year crediting period is too short and supports a minimum time frame of five years. Many carbon abatement strategies, particularly new technologies, will require significant changes in management practices and skills. Farmers are unlikely to make the investment of time and /or capital necessary if there is a risk the strategy will no longer be credited in three years time.

It is critical to the uptake of the CFI that approved practices cannot be discredited within the time frame of the crediting period. Participants will require certainty that they will not be penalised in the future if new science emerges that challenges accepted carbon abatement practices. Removal of a carbon abatement strategy from the CFI approval list should be communicated 12 months before it is removed.

### ***Reporting***

In line with the NFF the Australian dairy industry is keen to ensure the administrative burden of reporting, monitoring and auditing is minimised.

One possible option to cut monitoring and verification costs is to allow for different levels of reporting. One could be based on actual measurements and another based on peer reviewed science averages (industry agreed standards). Participants could elect to go with industry agreed standards which would give estimated reductions rather than having to measure and monitor on a regular basis. For example if modelling based on peer reviewed science suggests a new management practice will reduce methane production by 3% participants should only have to provide evidence that they are implementing the practice, not evidence of outcomes. Participants could elect to use actual figures if they felt the extra measurement and verification costs were justified.

Independent auditing of all projects is potentially excessive and for small projects the cost could easily negate the return from carbon credits. One suggestion is to conduct a percentage of random audits on small projects on an annual basis (similar to the tax system). Projects generating carbon credits above a certain level could be required to be independently audited each year. .

### ***Crediting***

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### ***Transfer or termination of projects***

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**Methodology approval**

**Taxation treatment of credits**

## Any additional comments

### Education

If the government genuinely want farmers to engage in the CFI, it will need to be supported by a communication program that clearly articulates the risks and opportunities as well as the rationale for requiring a high level of integrity.

There is a perception among some farming communities and other interested parties that carbon farming has the potential to generate sizable levels of alternative income. In reality this is unlikely to be the case. An example is nitrification inhibitors which are often cited as a potential abatement strategy. Without any productivity benefits initial budgets would suggest the carbon price required to cover the cost of nitrification inhibitors is \$1000 per tonne of CO<sub>2</sub>e (Richard Eckard, per.comm).

### Supporting R&D

Significant R&D support will be required to develop some of the more complex methodologies such as feed additives or fertiliser management for consideration by the Domestic Offsets Integrity Committee (DOIC).

In addition considerable levels of R&D funding will be required to identify and develop new technologies for carbon abatement. The Climate Change Research Program has provided initial impetus in this area but on-going funding for research will be needed through Department of Agriculture, Fisheries and Forestry (DAFF) and the Rural Research Development Corporations (RDCs). Both to validate strategies identified in the first phase and to identify new strategies.

Consideration should also be given to how the CFI itself might be able to provide an ongoing R&D stimulus, perhaps by providing whole of industry credits for whole of industry changes, that while small and perhaps inconsequential on individual farms could sum to major industry wide gains. An example might be the incorporation of higher levels of plantstones<sup>7</sup> into dairy pastures.

### Consideration of a Government CFI stimulus.

As discussed earlier in the section on *Sale of units* in the absence of a carbon tax or equivalent the Government should consider investing in the market to underwrite demand.

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<sup>7</sup>A plantstone is just like a glass jar that has the carbon inside it. It gets deposited into the soil when the plant dies and, it's very stable, it's there for thousands of years

