

# Carbon Farming in WA

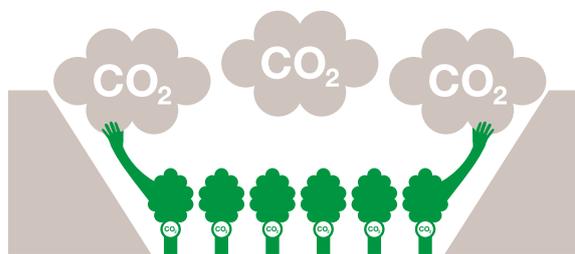
Fact sheet No. 8

## PRACTICE: **Permanent environmental plantings to earn carbon credits**

### Description of practice

Reforestation of previously cleared farming land with Permanent Environmental Plantings (PEP) can potentially earn carbon credits for the carbon stored in the trees and litter. The activity is relevant to

agricultural land. Plantings can be either as blocks or belts of trees but must satisfy the definitions of a forest as outlined in the Emissions Reduction Fund (ERF) Website. Plantings that occurred since 1 July 2007 are eligible, and earlier plantings may be eligible if written documentation can be produced proving that the planting was for carbon sequestration purposes.



### Outline of procedure

A number of steps are required before a PEP reforestation project qualifies for carbon sequestration. Trees can be established by direct seeding or as planted seedlings. There must be no harvesting of wood products, but 10 per cent of the debris can be removed each year for firewood for personal use.

Environmental plantings consist of species that are native to the local area and must be a mix of tree and understory species or a single species if monocultures occur naturally in the area. Grazing by livestock must be excluded for three years to allow trees to establish, and grazing after this time must not prevent tree regeneration in the project area. Plantings must be established on land that has been clear of native forest for the five years prior to reforestation. However only reforestation of land clear of forest on 1 January 1990 is eligible for carbon credits (ACCUs).

If the area would revert to forest without the project, no additional abatement would be generated through reforestation, so no abatement can be claimed. The PEP methodology requires that proponents use the Reforestation Modeling Tool (RMT) to model carbon sequestration. There are also measurement based methodologies that could be used for permanent environmental plantings.

The Department of Agriculture and Food is the lead agency and is working with the Department of Regional Development and Lands to deliver this Royalties for Regions funded project.

For more information please refer to [agric.wa.gov.au](http://agric.wa.gov.au)

### More Information

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## Work done to date

Since 2010, the Department of Climate Change and Energy Efficiency has funded a national program to assess growth rates in environmental plantings in order to calibrate the growth estimates used in the RMT. Some of that work has been undertaken by the Department of Agriculture and Food, Western Australia (DAFWA) in the state's Wheatbelt, resulting in growth estimates that are relevant to Western Australian conditions.

## Current level of adoption

Although environmental plantings of mixed species have been established on many farms, DAFWA is not aware of any plantings established specifically as a result of the ERF.

## Industry activity

A number of industry groups have expressed an interest in ERF environmental plantings.

## Carbon benefits

The commercial benefit offered through the ERF is the trading of Australian Carbon Credit Units (ACCUs) with Australian companies that have a liability under the Australian National Registry of Emissions Units Amendment Regulation 2014 (No. 1).

## Co-benefits

- The co-benefits of tree planting are difficult to quantify but potentially include the following:
  - minimum localised drawdown of the watertable
  - improved lambing percentages due to reduced deaths from exposure
  - reductions in wind and water erosion
  - reductions in spray drift
  - biodiversity benefits by providing habitat.

## Opportunities

- While the returns through the ERF are unlikely to match the returns from cropping arable lands, revegetation using native species may be a viable option for marginal or unproductive lands.

## Risks

- price volatility for ACCUs
- A separate risk is the long-term security of the planting itself. Should trees be burnt or die from drought or if carbon stocks are reduced in any way, farmers may have to repay the carbon credits they hold that are no longer sequestered or re-establish the planting.

## Case study

The PEP methodology demands that carbon stocks are modeled using the RMT. This tool makes it possible to run a scenario and obtain accurate figures on potential carbon credits for a particular paddock. For example, a scenario set at a point randomly chosen between Kojonup and Katanning indicates that one hectare of direct seeded mixed species planting will generate 135 ACCUs over 100 years, including allowing for a 5 per cent risk of reversal buffer.

## Key contacts – Australia

- Dr Kim Brooksbank (DAFWA, Albany)
- Dr Keryn Paul (CSIRO)

## International work

To calculate tree growth rates and therefore the carbon sequestration rates of plantings established in order to take part in the ERF, data must be collected from trees grown in Australian conditions.

Therefore, very little international work will be relevant to this practice.

## Next steps

No further work is funded or planned at this stage.

## Key references

Reforestation Modelling Tool  
[www.environment.gov.au/climate-change/emissions-reduction-fund/cfi/reforestation-tools](http://www.environment.gov.au/climate-change/emissions-reduction-fund/cfi/reforestation-tools)

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