

# Profitable Carbon Farming

## Human Induced Regeneration



### How it Works

The Climate Solutions Funds builds on the Emissions Reduction Fund (ERF) to offer opportunity in Australia to reduce or remove greenhouse gas emissions from the atmosphere.

The **Human-induced regeneration of a permanent even-aged native forest (HIR)** is one of the vegetation carbon farming methods to generate abatement by removing carbon dioxide from the atmosphere and storing it as carbon in plants as they grow.

Australian Carbon Credit Units (ACCU) are gained from the HIR method on the basis of area, which has no forest cover, regenerating back to native forest cover through undertaking an approved activity or activities.

The Western Australian State Government sees potential application of HIR methodology across the Southern Rangelands. The Carbon Estimation Area (CEA) for a HIR project must be significant across the landscape for it to be viable as the value of carbon is low per hectare. For example, current projects in Western Australia range in size from 100,000 to over 800,000 ha.

The grey border in Figure 1 shows the Potential Extent of HIR Suitable Vegetation for WA projects.

Carbon farming in the rangelands faces significant cost, price and biophysical uncertainties. These variables must be carefully considered and costed when undertaking a feasibility study for the project. Assessment of a carbon farming project should consider:

- Returns on capital
- Administrative costs
- Permanence obligations
- Land use change and how it fits in the overall business
- Scrutiny of fixed delivery contract carbon prices (see FAQs)

### Eligible Consent

Any person or organisation listed on the land title as having an interest in the land is an eligible interest holder (EIH). This includes financial institutions that hold a mortgage over the land, and holders of easements, reserves or sub-leases, and certain Native Title holders. In Western Australia, pastoral leases are located on Crown land, and the State also needs to provide consent as an EIH.

The Department of Planning, Lands and Heritage assesses applications for the State's EIH consent on behalf of the Minister for Lands under the *Land Administration Act 1997 (WA)*.

In assessing a project a number of criteria need to be met:

- The HIR project's nominated permanence period is 25 years
- The project needs to be on an existing pastoral lease with a remaining term long enough to cover all project obligations
- The project's HIR activities must be consistent with the definition of "pastoral purposes" as defined in the Land Administration Act 1997
- The project must only use eligible activities under the HIR methodology
- Where project areas are located within a determined native title claim for which there is one or more Registered Native Title Bodies Corporate (RNTBCs), each RNTBC is an eligible interest holder
- Project proponents must demonstrate that they have either gained, or at least commenced the process of gaining, eligible interest holder consent from any relevant RNTBCs
- Evidence of either the receipt of RNTBC eligible interest holder consent, or the commencement of the process to gain eligible interest holder consent, must be provided to the State

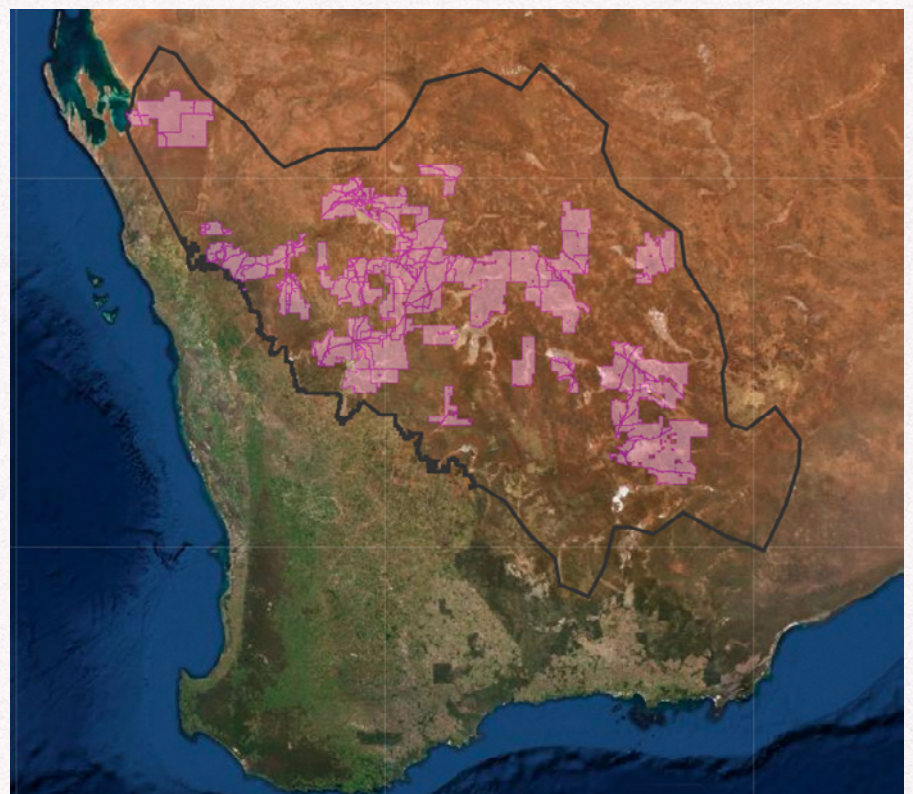


Figure 1: HIR Project Distribution Source: HIR Carbon Farming WA Information Portal

## Eligibility

Human Induced Regeneration (HIR) projects are designed to change pastoral practices to manage the distribution of livestock and their impact on native vegetation regeneration through grazing management, water access points, nutrition and animal behaviour. HIR does not necessarily require additional infrastructure beyond that normally required by pastoral activities.

The HIR method applies to projects in which land has been cleared of native vegetation and where regrowth has been suppressed for at least 10 years prior to project commencement. The project activity involves establishing and maintaining permanent native forest by encouraging seed stores in the soil or from remnant native plants, and/or rootstock already present and native to the site, to sprout and germinate.

The human-assisted regeneration under this methodology means undertaking one or more of the following eligible activities:

- Excluding livestock and taking reasonable steps to keep livestock excluded
- Managing the timing and extent of grazing
- Managing feral animals in a humane manner
- Managing plants that are not native to the project area
- Ceasing mechanical or chemical destruction or suppression of native regrowth

The CEA must have the potential to regenerate forest cover, and demonstrate continuing regeneration over time, as a result of undertaking eligible project activities.

## Rangelands NRM

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## Measurement

The Human Induced Regeneration (HIR) method is modelled and carbon stored in the forest is calculated using a modelling tool. However, field sampling can improve the detection of regeneration.

The HIR method credits are made on the basis of an area, which has no forest cover, regenerating back to forest cover through undertaking an approved activity or activities.

Land must have potential to achieve forest cover at the time of CEA stratification to be considered eligible when applying for ACCUs.

Landsat satellite imagery and mapping are core tools in assessing forest cover. Evidence requirements for HIR project assessment start from a broad area, moving to a smaller area. The narrowing down reflects the difficulty in detecting small trees using medium resolution remote sensing data as infilling of vegetation occurs. As a project progresses finer measurement scales are applied. In the first instance, remote sensing is used to evidence forest potential in the project area. Field validation is used to support or replace remote sensing at appropriate points in the project cycle. Only the full canopy of trees or shrubs that are two metres or more will contribute to canopy cover thresholds. The same procedures used to identify pre-existing forest are expected to be applied to evidence attainment of forest cover.

A full explanation of the processes are outlined in the Australian Government publication [Guidelines on stratification, evidence and records](#).



## FAQs

### What is the permanence period?

The Clean Energy Regulator (CER) allows projects to be registered for 25 or 100 year periods. Carbon must be stored for 100 years to be considered 'permanent'. Projects electing a 25 year period receive a 25% reduction in carbon credits. The WA State require projects to be on an existing pastoral lease with a remaining term long enough to cover all project obligations. On 1 July 2015, the Minister for Lands renewed leases on 435 pastoral stations for periods of 18 to 50 years. This means the 25 year carbon permanence period is auto selected for WA HIR projects, which commences after the first ACCU are issued by the CER.

### What is Stratification?

Stratification refers primarily to demarcating the boundaries of CEAs from ineligible and non-implementation areas within a project area. A CEA is an area of land within a project area where the project activity or activities are being carried out to sequester carbon for example, the cessation of mechanical or chemical suppression to enable regeneration of vegetation to forest and for which ACCUs can be credited.

Proponents need to stratify their initial CEAs and re-stratify them if things change. The Clean Energy Regulator recommends that proponents conservatively exclude potentially ineligible land, to limit the risk that they will later need to relinquish credits.

### What is a CEA?

The Carbon Estimation Area is a part of the project area where the human-induced regeneration activity is run and where native forest is growing because of regeneration. This is the area used to calculate abatement.

### Fixed Delivery Contract

A Fixed Delivery contract (sometimes referred to as a standard contract), means you are agreeing to provide a set number of ACCUs at a set price for the duration of the contract.



natural resource management program



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