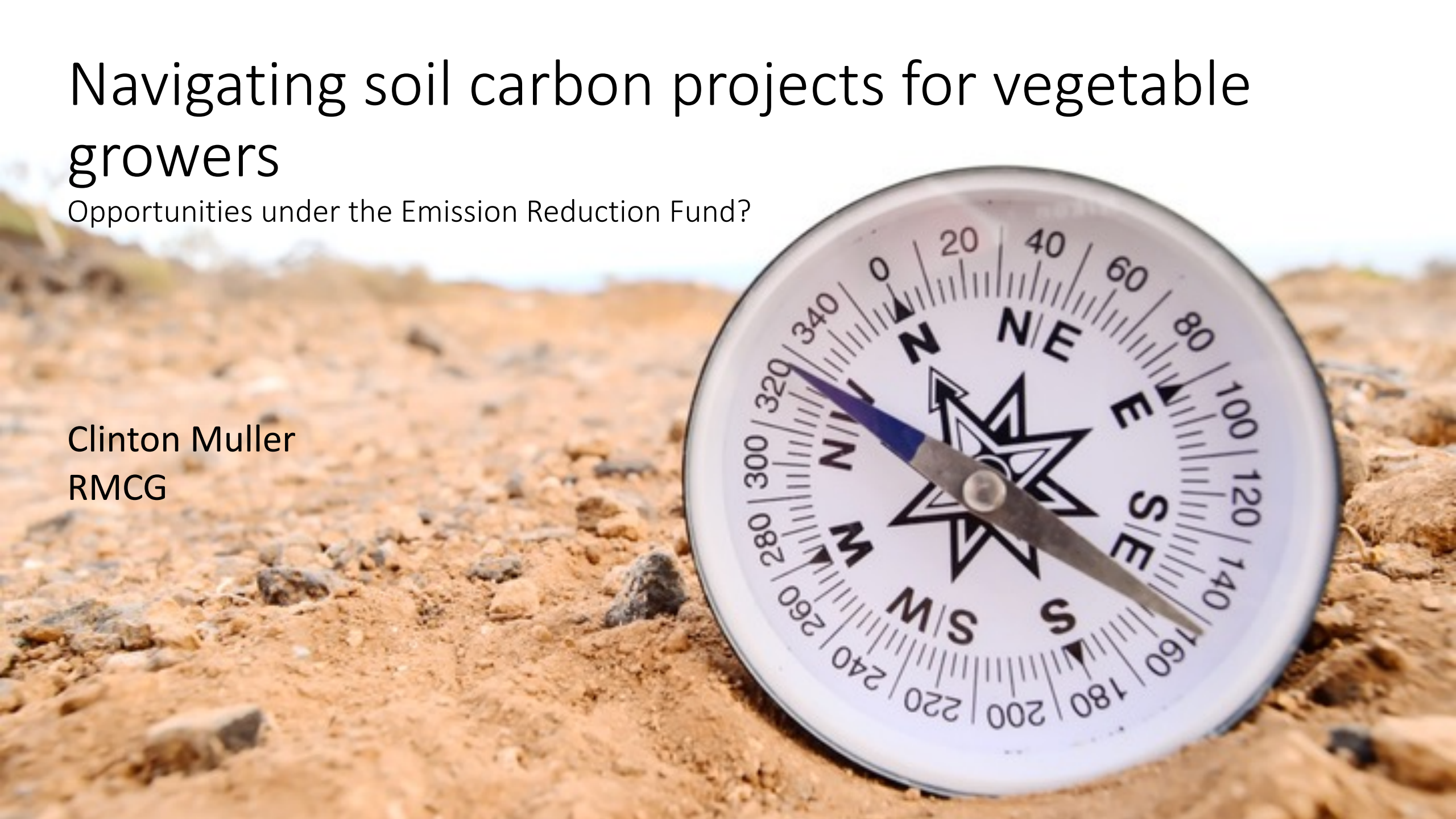
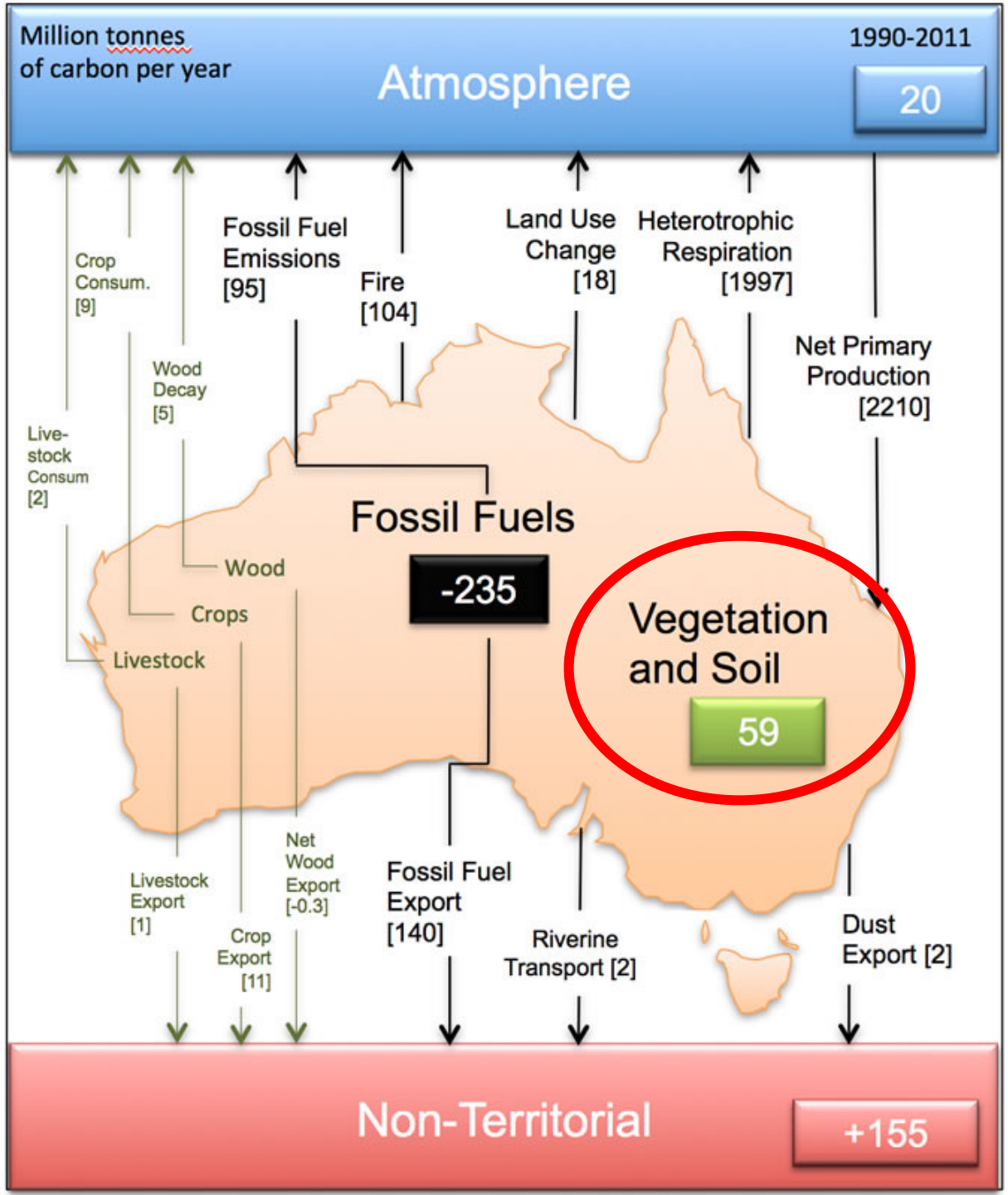
Navigating soil carbon projects for vegetable growers

Opportunities under the Emission Reduction Fund?



Clinton Muller
RMCG



Carbon Budget for Australia
Source: CSIRO Carbon Water Observatory (2013)

Let’s talk business…

Australian Government
Clean Energy Regulator

EMISSIONS REDUCTION FUND

Australian Carbon Credit Units

ACCUs – key measurement unit and asset under the Emissions Reduction Fund

1 Tonne CO2-e Reductions = 1 Australian Carbon Credit Unit

Emissions Reduction Fund
13th Auction 13-14 October 2021

Released 22 October 2021

6.8m tonnes of CO_2-e
contracted abatement

Average price per tonne of abatement
$16.94

$115.9m
committed at the 13th Auction

$2.6b
committed in total

Method types contracted
Vegetation
Agriculture

24
projects contracted

$2.2b has been committed to rural and regional areas

Did you know?

Emissions Reduction Fund
Contract portfolio

13th Auction
13-14 October 2021
Released 22 October 2021

$115.9m
committed at the 13th Auction

$2.6b
committed in total

$916.5m
paid*

*As at 13 October 2021

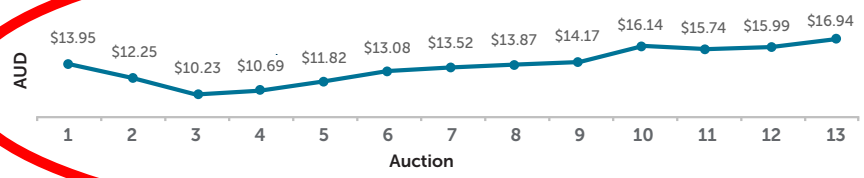
209m
tonnes of abatement across all methods

Million tonnes

145.2	25.9	15.1	13.6
Vegetation	Landfill & waste	Agriculture	Savanna burning

3.4	3.4	1.7	1.2
Energy efficiency	Facilities	Industrial fugitives	Transport

Average price per tonne of abatement

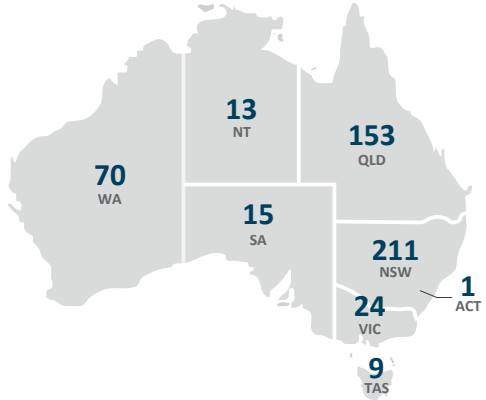


$16.94
13

Contract portfolio

509
projects under contract

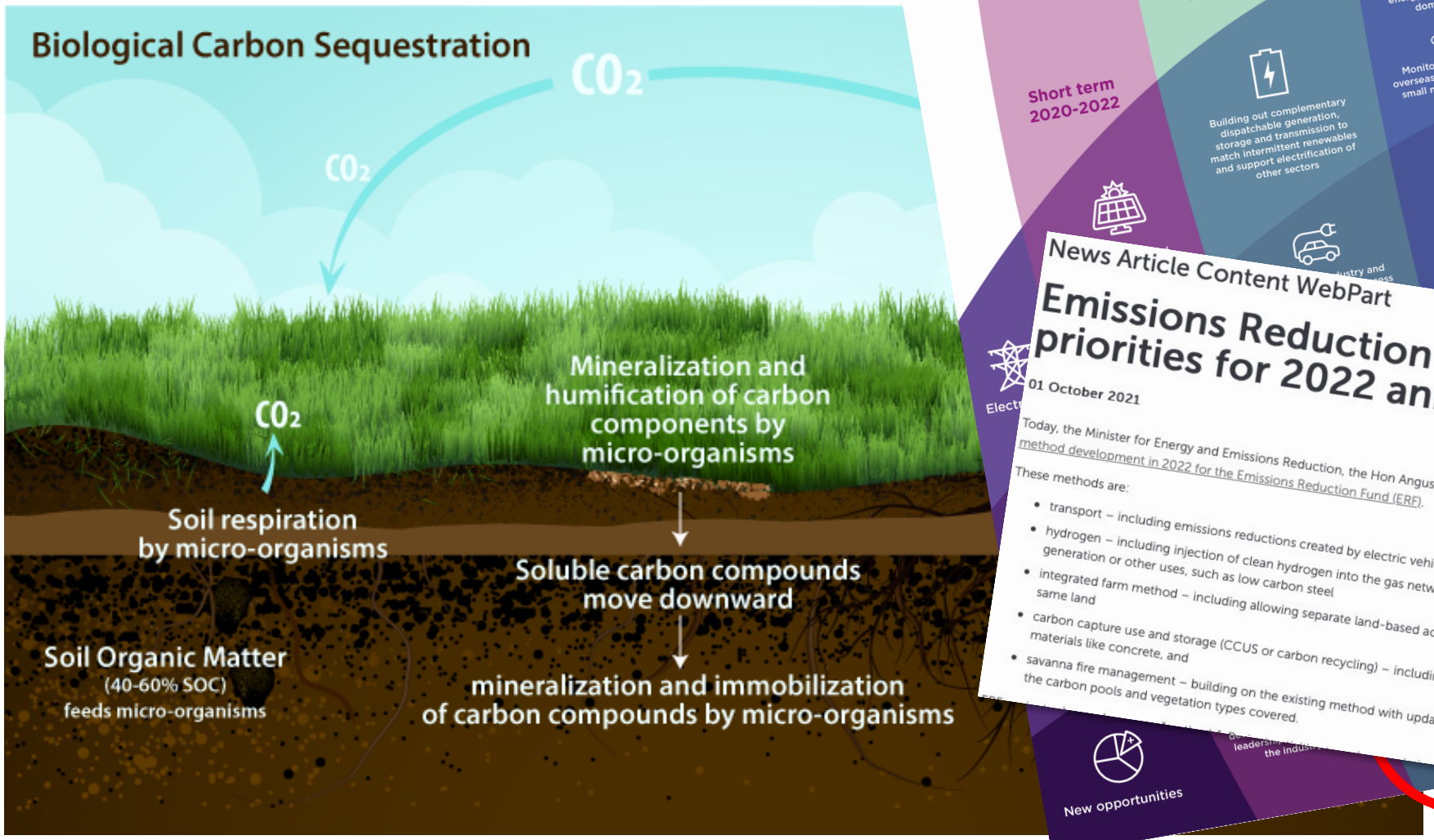
Projects under contract

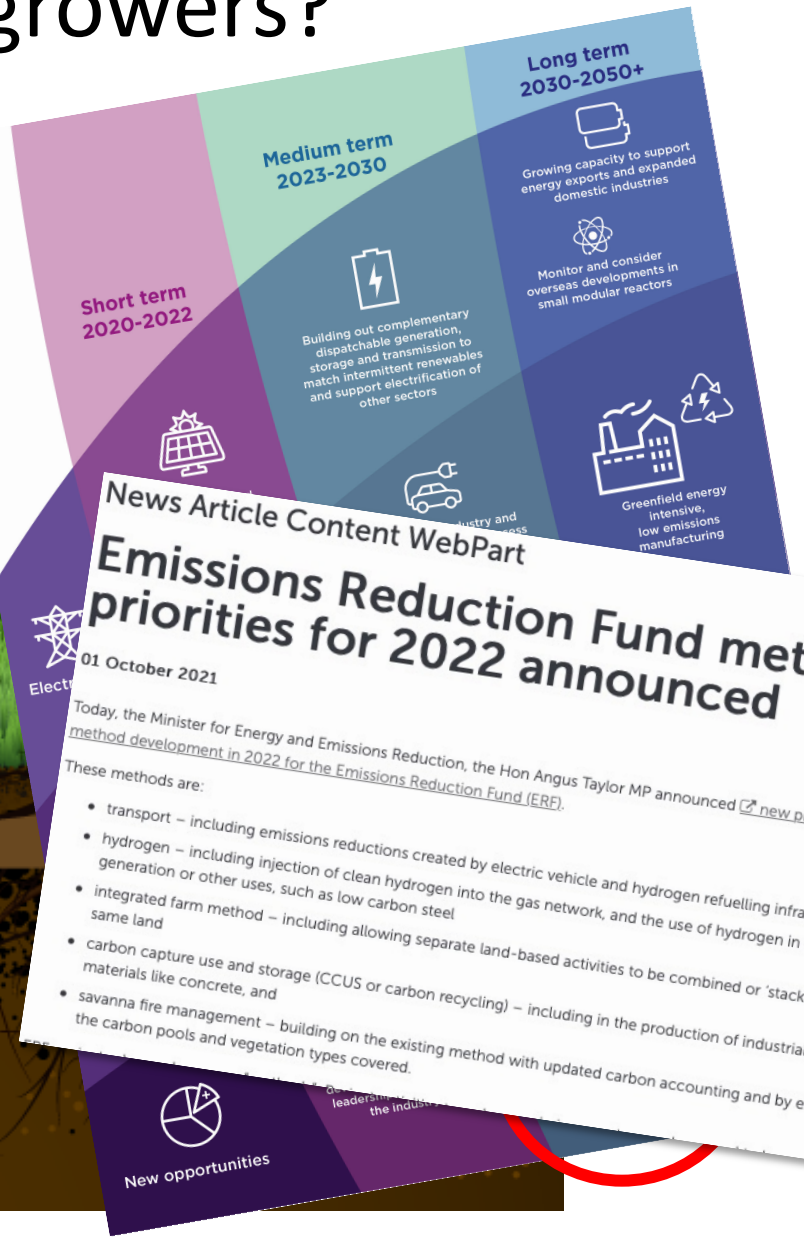


6 Multi-state projects

7 National projects

Carbon project options for vegetable growers?
– above vs below ground





News Article Content WebPart

Emissions Reduction Fund method priorities for 2022 announced

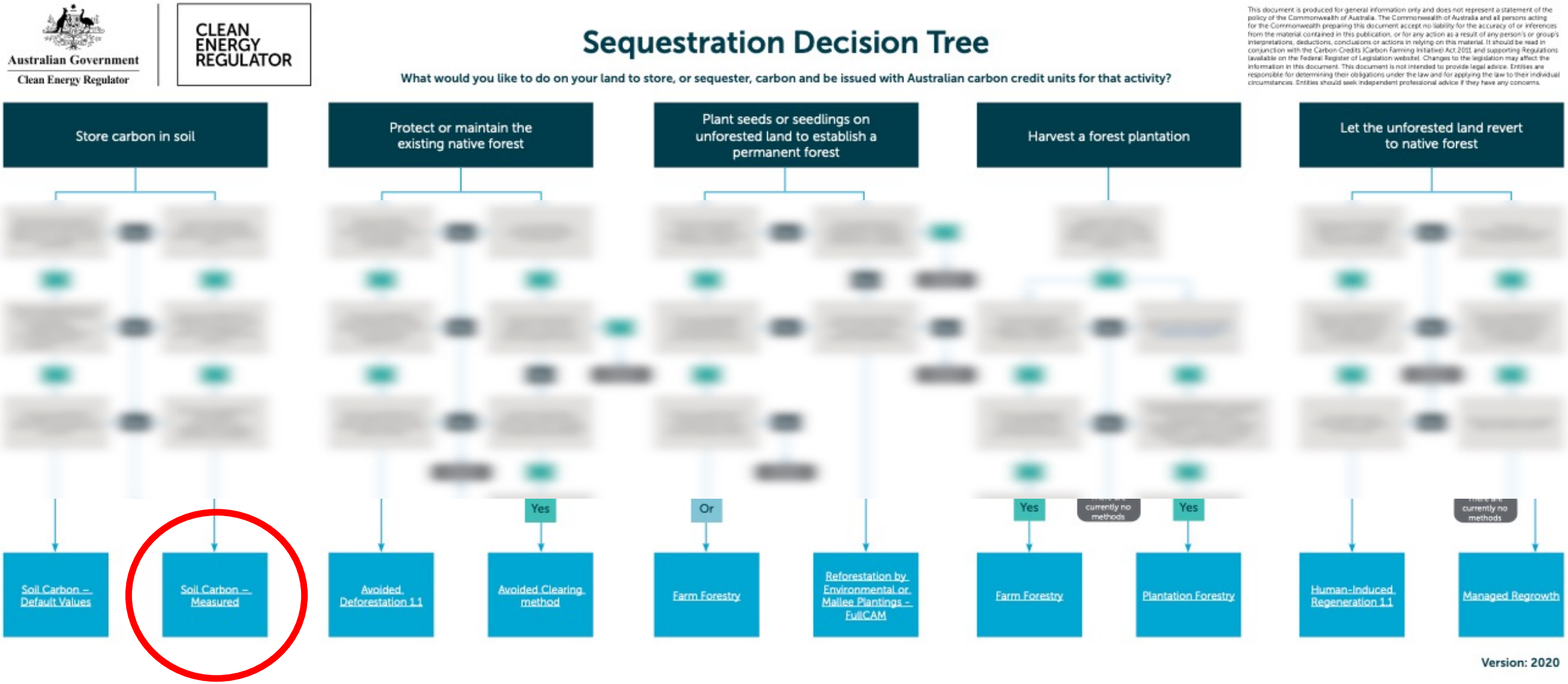
01 October 2021

Today, the Minister for Energy and Emissions Reduction, the Hon Angus Taylor MP announced new priorities for method development in 2022 for the Emissions Reduction Fund (ERF).

These methods are:

- transport – including emissions reductions created by electric vehicle and hydrogen refuelling infrastructure
- hydrogen – including injection of clean hydrogen into the gas network, and the use of hydrogen in electricity generation or other uses, such as low carbon steel
- integrated farm method – including allowing separate land-based activities to be combined or 'stacked' on the same land
- carbon capture use and storage (CCUS or carbon recycling) – including in the production of industrial and building materials like concrete, and
- savanna fire management – building on the existing method with updated carbon accounting and by expanding the carbon pools and vegetation types covered.

Current options within the ERF?



http://www.cleanenergyregulator.gov.au/ - Opportunities for the land sector

Questions to ask yourself

Is the measurement of soil carbon sequestration in agricultural systems method suitable for your business?

- Are you looking to store carbon in soil in a grazing or cropping system, including perennial woody horticulture?
- Are you willing to undertake one or more new land management activities to increase soil carbon?
- Are you willing to measure the increase in soil carbon?
- Are you willing to maintain stored carbon for at least 25 years after the first Australian carbon credits units are issued?

If you have answered yes to these questions, the measurement of soil carbon sequestration in agricultural systems method **may** be suitable for you.

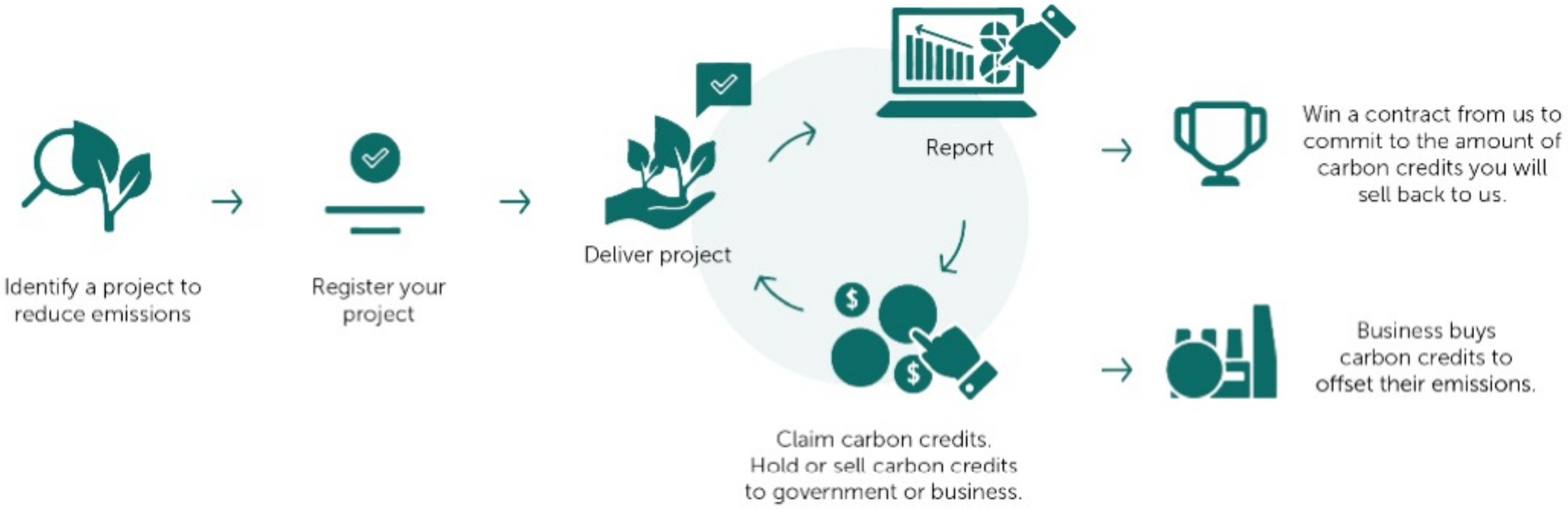
Additionality!

Eligible 'new' activities

- apply nutrients to the land
- apply lime to remediate acid soils
- apply gypsum to remediate sodic or magnesic soils
- undertake irrigation activities from new irrigation efficiency savings
- re-establish or rejuvenate a pasture by seeding establishing, or permanently maintaining, a pasture where there was previously no pasture, such as on cropland or bare fallow
- retain stubble after a crop is harvested
- convert from intensive tillage practices to reduced or no tillage practices
- modify landscape or landform features to remediate land (e.g. undertake water ponding), or
- use mechanical methods to add or redistribute soil.

How to participate?

(more simplicity according to the ERF)



What does it really look like?

(looking over the fence at pasture)

Registration - $0

Baseline - $15-$40/ha
Variability is based on stratification
e.g. Vegetation types, management practices, topography, underlying geology, history of crops

Practice Change - $50-$350/ha

Capacity building & training - $7,000/yr for first five years
Agronomic support, dashboards, training

Issuance 1 (after 5 years then every 5 years)

Sampling - $12-$32/ha
(~80% baseline) / issuance

Audit - $30,000
Once off 1st issuance

Apply discounts!
5% Risk of reversal buffer
50% Discount in methodology

Sale price = $16.94/ACCU

Or sell on voluntary market

Life cycle = 25 years

1 ACCU = 1 tonne CO2-eq

100 credits sequestered = 45% saleable credits

**Method – Measurement of soil carbon sequestration in agricultural systems method*

Weighing up the options

- Compliance costs
- Time commitment
- Permanence obligations
- Complexity
- Likelihood of outcomes (what carbon storage is possible?)
- Changed management practices
- Opportunity cost – does income exceed project establishment cost

- Productivity gains – improved soil health, water holding capacity, cation exchange capacity, soil biological function
- Biodiversity and ecosystem services
- Improved land value
- New market opportunities
- Diversified income stream

Where to start?

Asses the potential of your soils to sequester carbon

Develop a carbon management plan

Register the project with the Clean Energy Regulator before commencing practice change

Complete baseline soil testing and auditing

Review your management plan annually

External independent audit

Sell ACCUs within 3 – 5 years

Adapted from Lorraine Gordon, SCU / Regenerative Agriculture Alliance

Navigating those rabbit holes?

- Possible - yes
- Practical- ?