Australian Government
Clean Energy Regulator

The Australian Carbon Credit Unit (ACCU) Scheme

Soil carbon projects – audit focus

Savanna, Agriculture and Soil Carbon Team

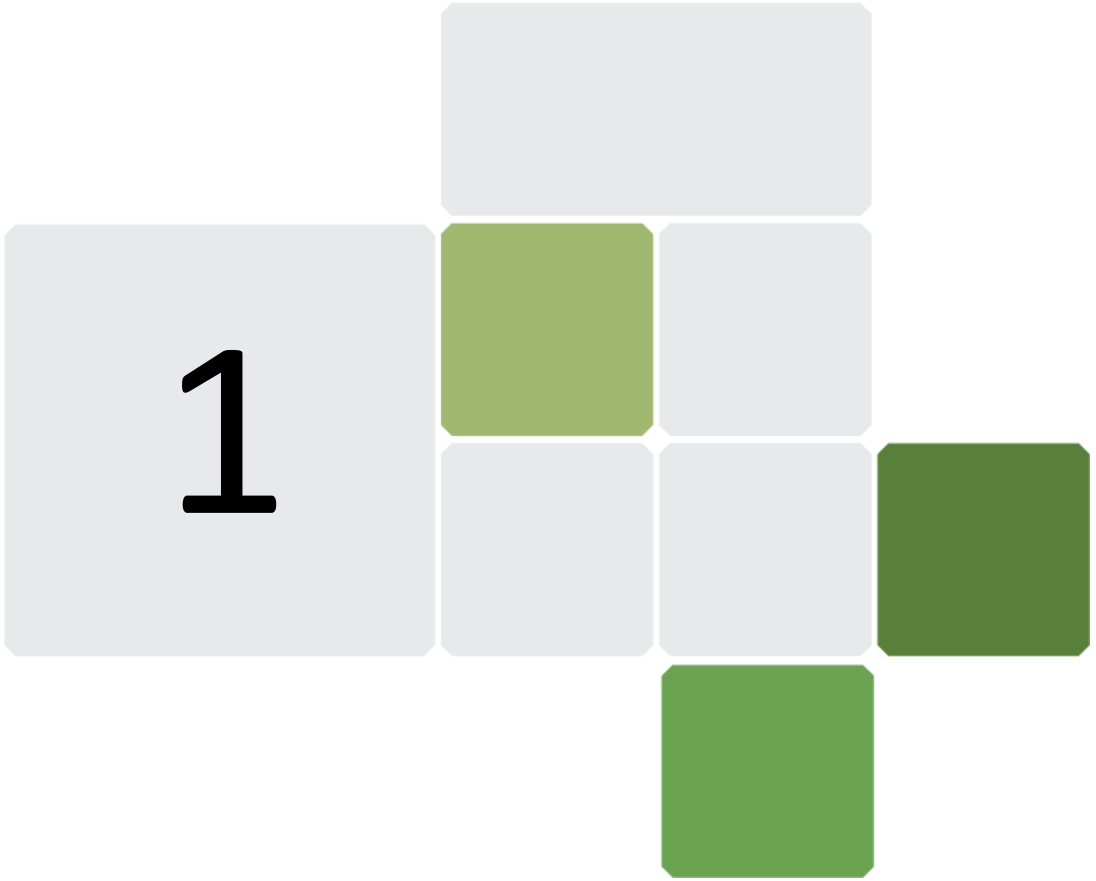
13 and 20 November 2025

Agenda

01 Soil – state of play

02 Sampling plans and sampling

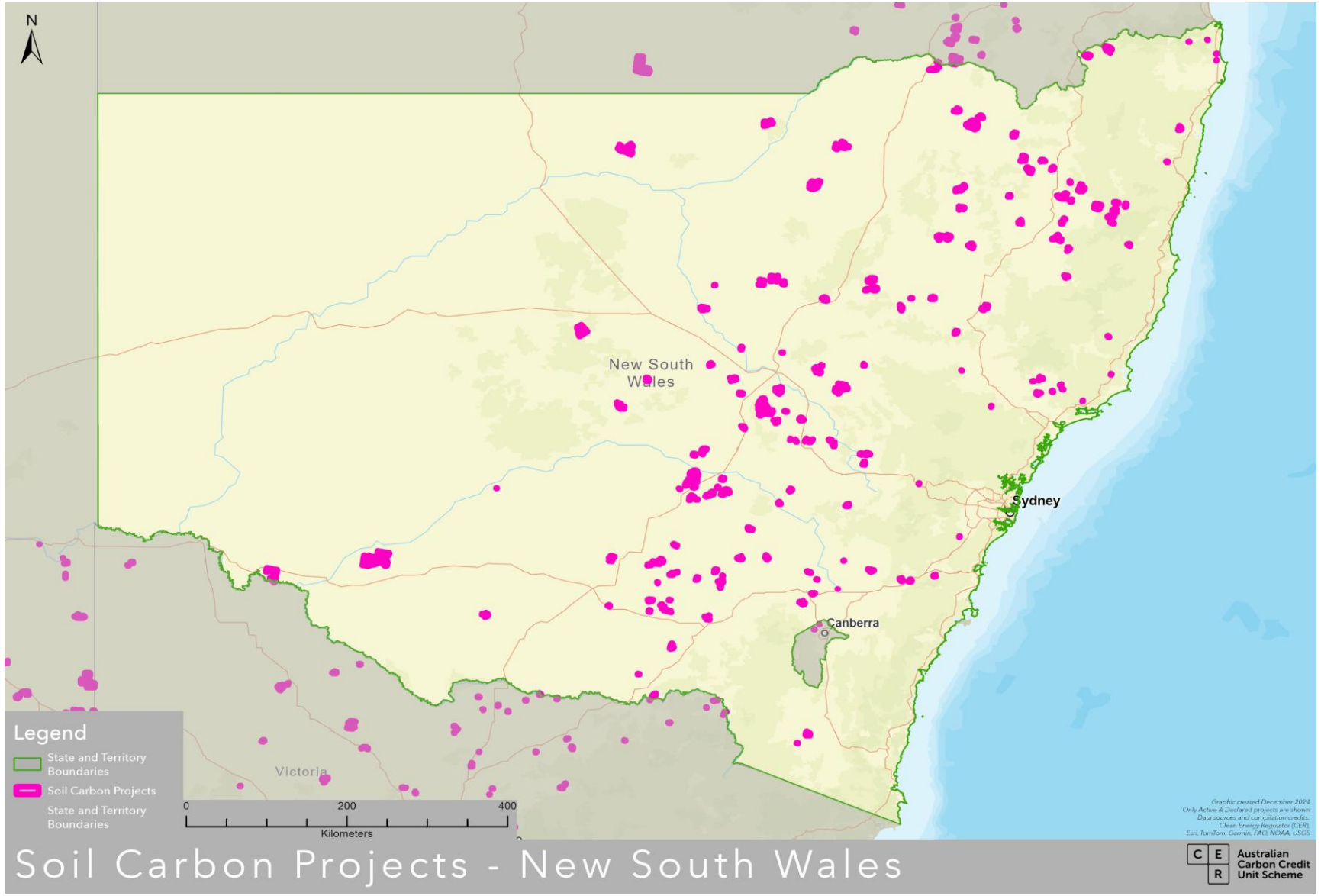
03 Processing and analysis of samples



State of play

How many projects did you say?

ACCU Scheme projects – soil methods



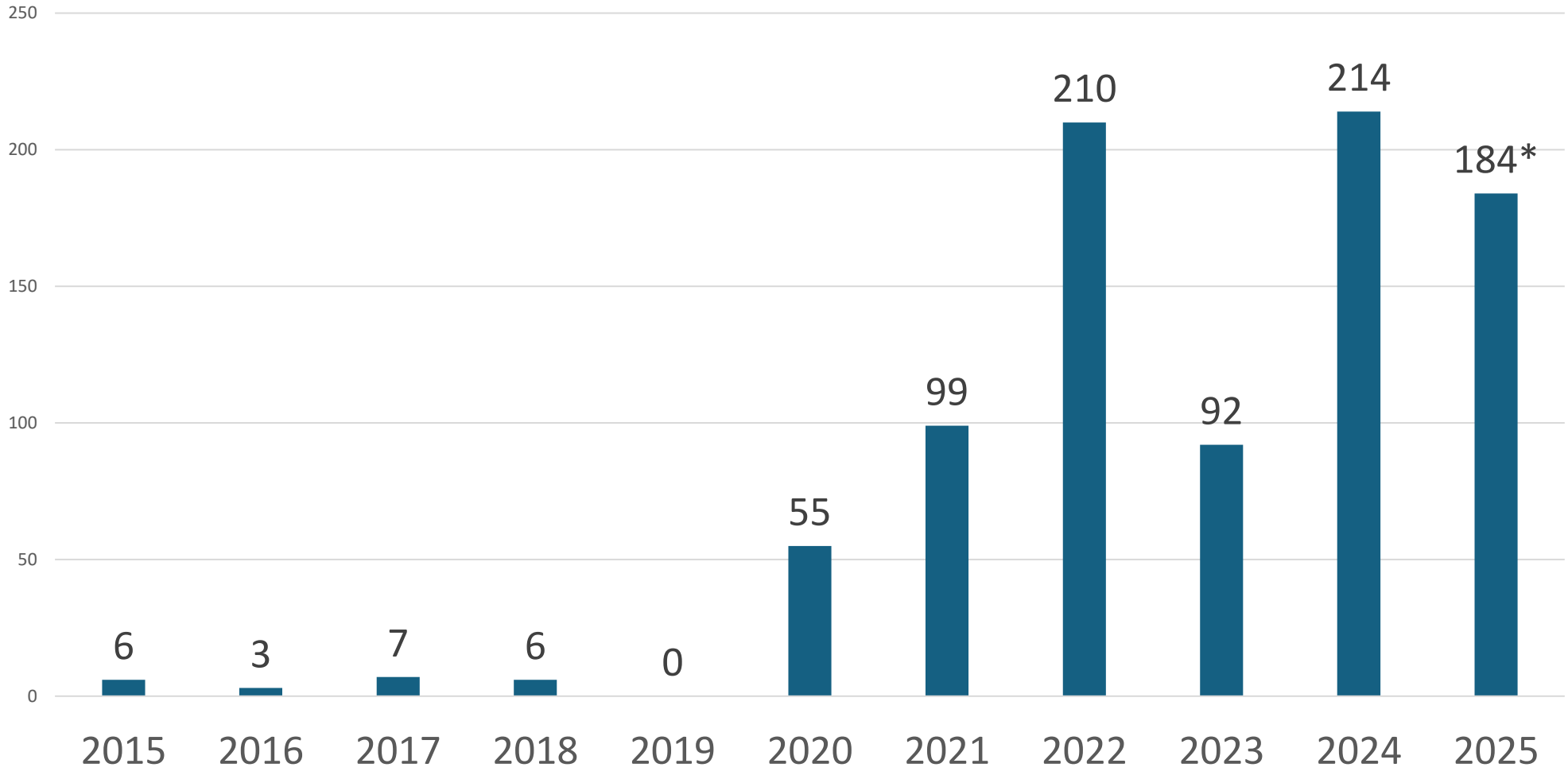
As of 30 September 2025

876 soil carbon projects across 3 methods:

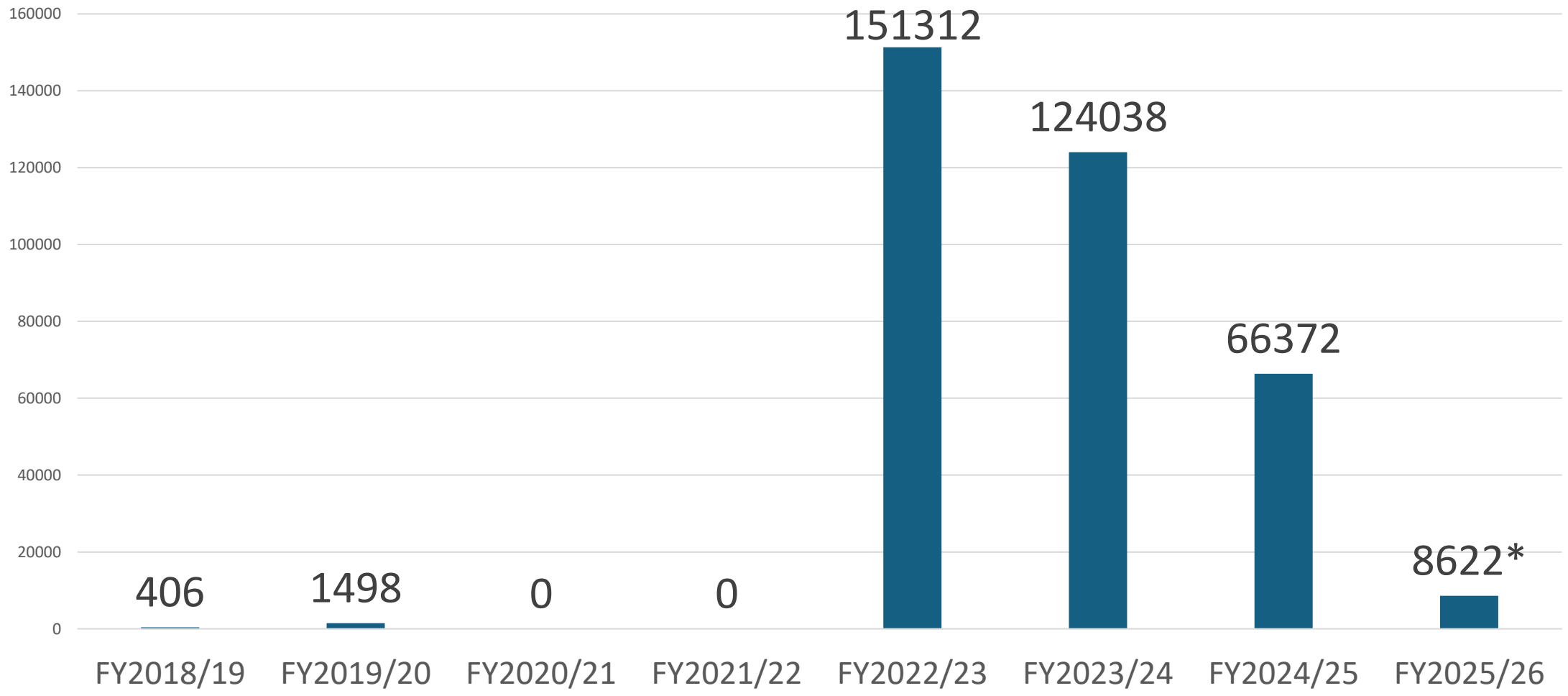
- 2014 Sequestration in grazing systems
- 2018 Measurement in ag systems
- 2021 Estimation in ag systems using measurements and models.

Soil carbon ACCUs issued: 352,248.

Soil carbon projects registered by year



Soil carbon ACCUs issued by financial year



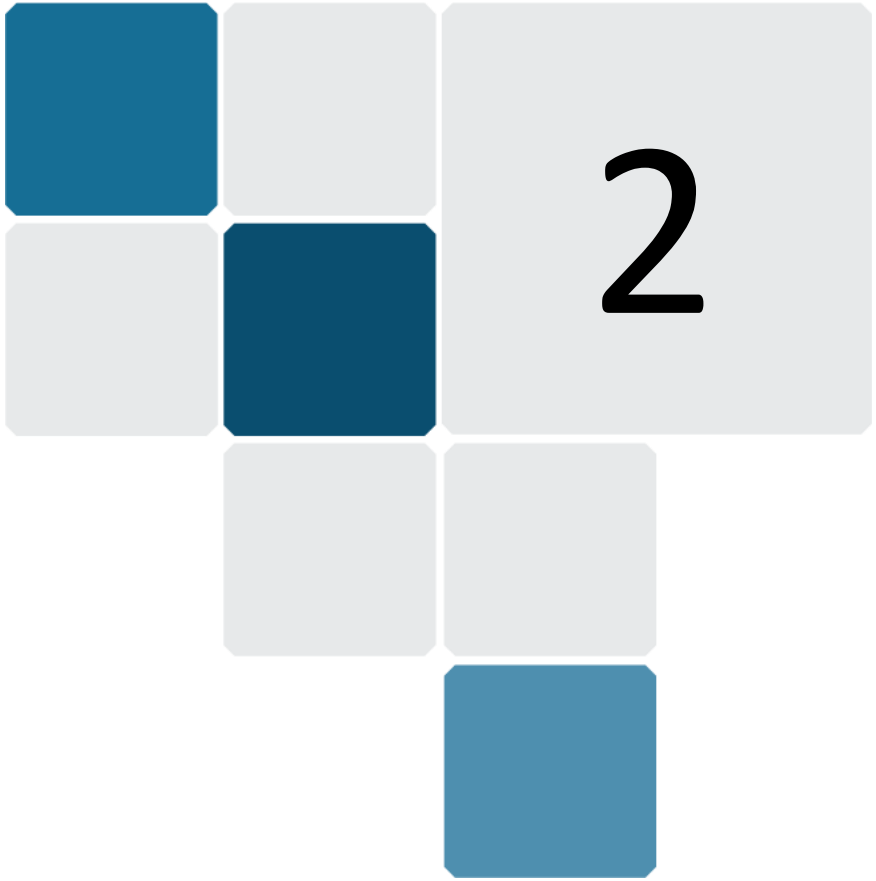
Activities being done

469 Applying nutrients to the land in the form of a synthetic or non-synthetic fertiliser

469 Altering the stocking rate

261 Re-establishing or rejuvenating a pasture by seeding or pasture cropping

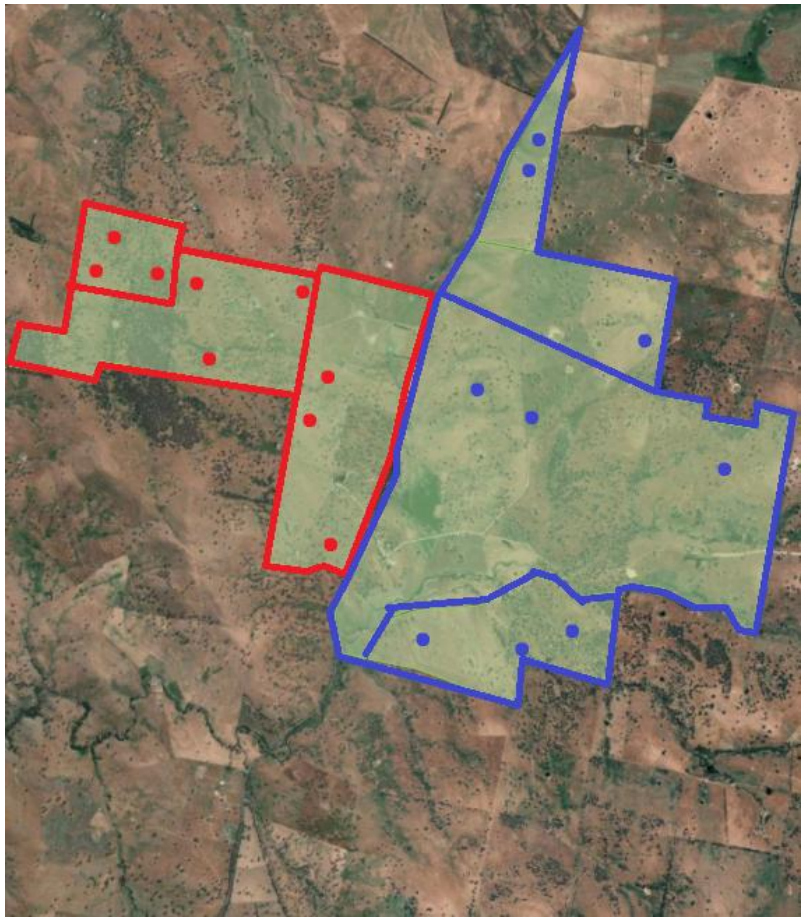
- 111 Converting from intensive tillage practices to reduced or no tillage practices
- 110 Retaining stubble after a crop is harvested
- 76 Establishing, and permanently maintaining, a pasture
- 71 Using legume species in cropping or pasture systems
- 35 Applying lime or other ameliorants to remediate acid soils
- 30 Using a cover crop to promote soil vegetation cover or improve soil health
- 25 Applying gypsum to manage sodic or magnesic soils
- 7 Modifying landscape or landform features to remediate land
- 5 Undertaking new irrigation
- 5 Using mechanical means to add or redistribute soil through the soil profile



Sampling plans and sampling

A critical control point

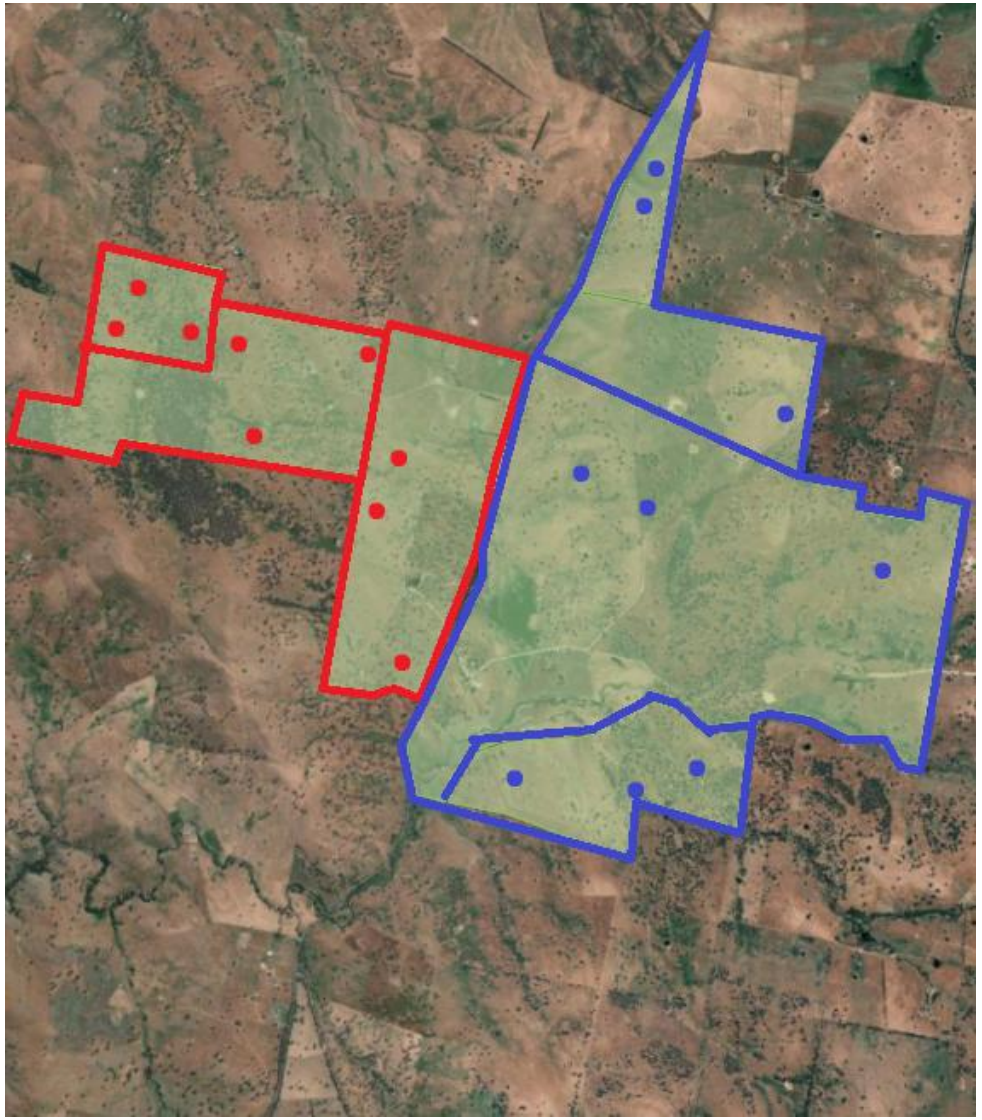
Sampling process and plans



- Geospatial map
  - carbon estimation areas (CEAs)
  - exclusion areas (EAs)
  - emissions accounting areas (EAAs)
  - strata
- Process and plan for randomly assigning sampling locations
- Process for reserve points

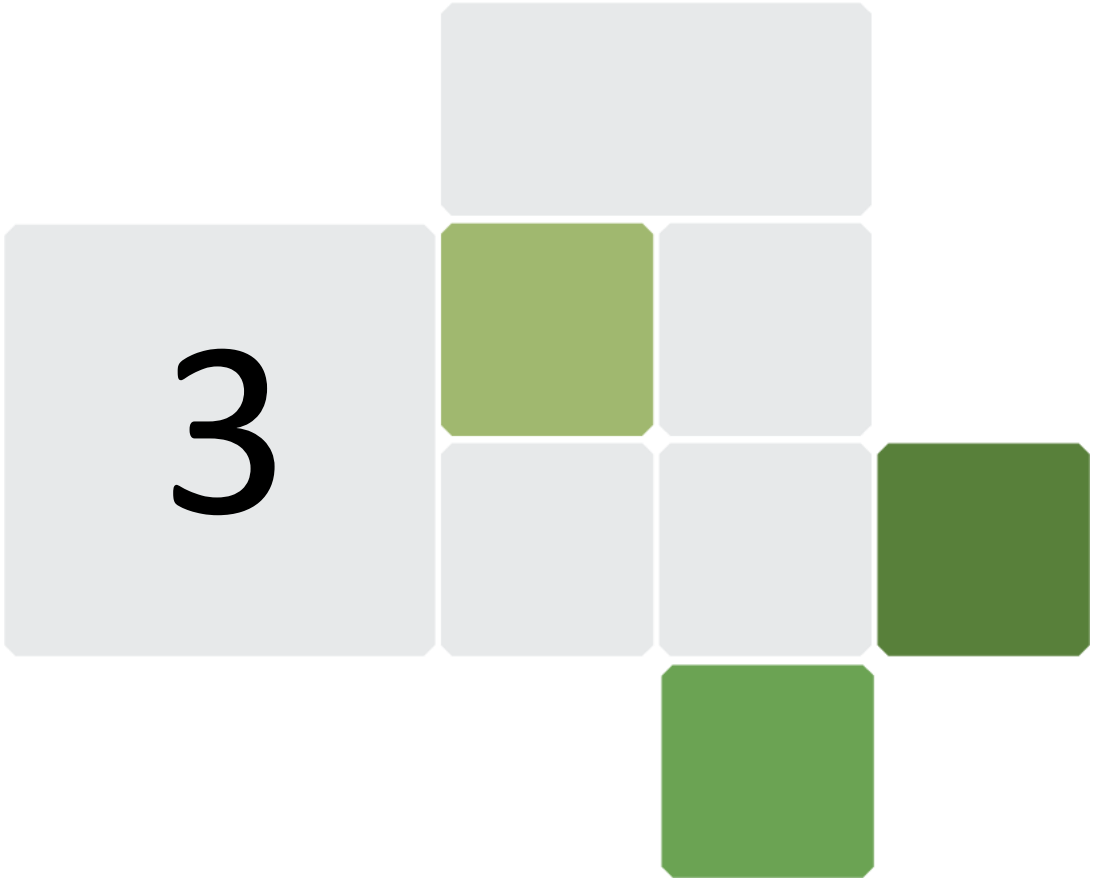
Random sampling prevents bias and maintains integrity

- Proponents must submit a sampling plan before each sampling event.
- Requires a pseudo-random seed number.
- Notify of sampling locations.
- Use GNSS device.



Recent analysis

- Compared target locations with actual sampling locations.
- Some minor data errors identified.
- Once rectified/explained, 100% of samples reviewed were collected from <4m of target.



Sample processing and analysis

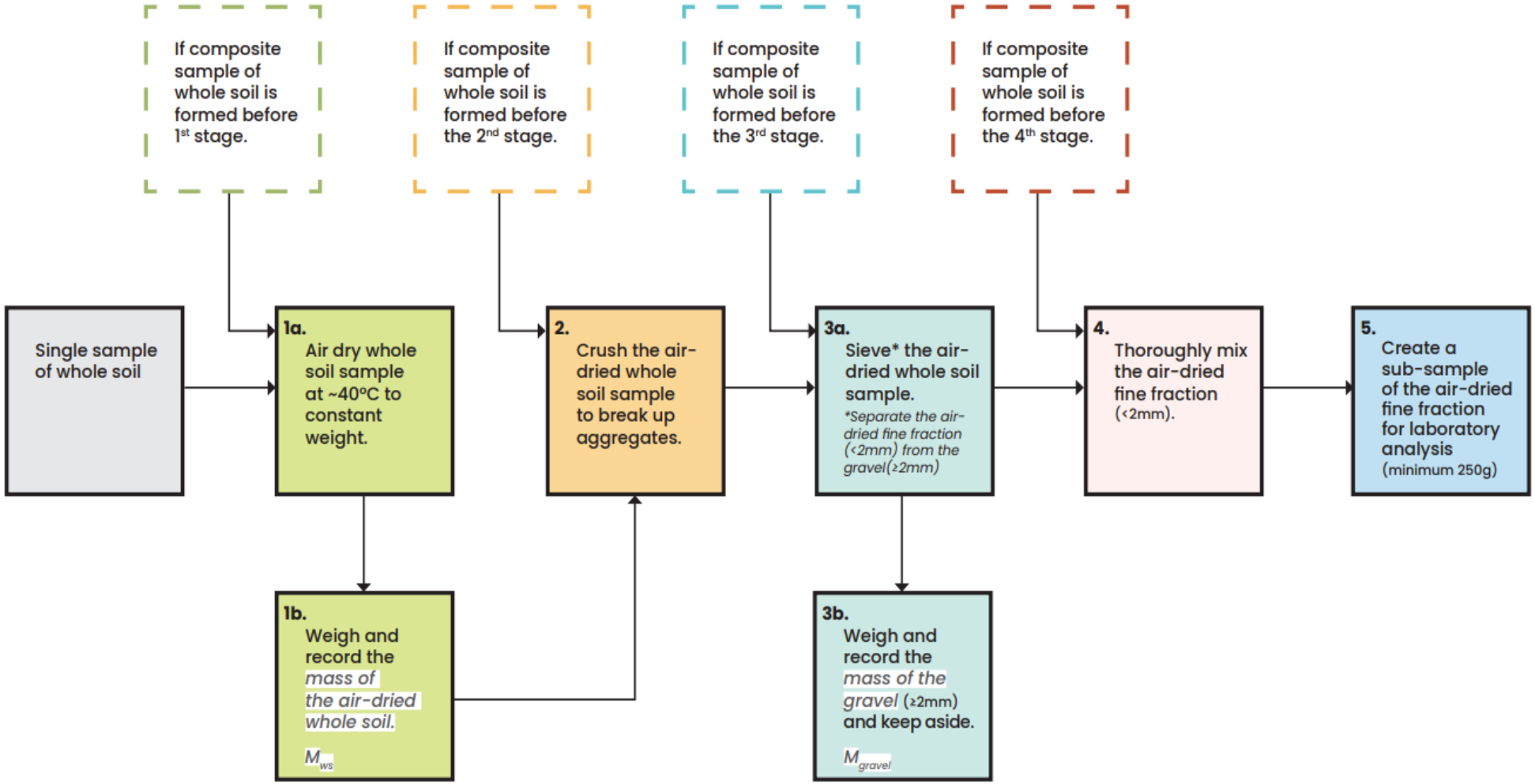
Another critical control point

NATA accredited and ASPAC certified Labs

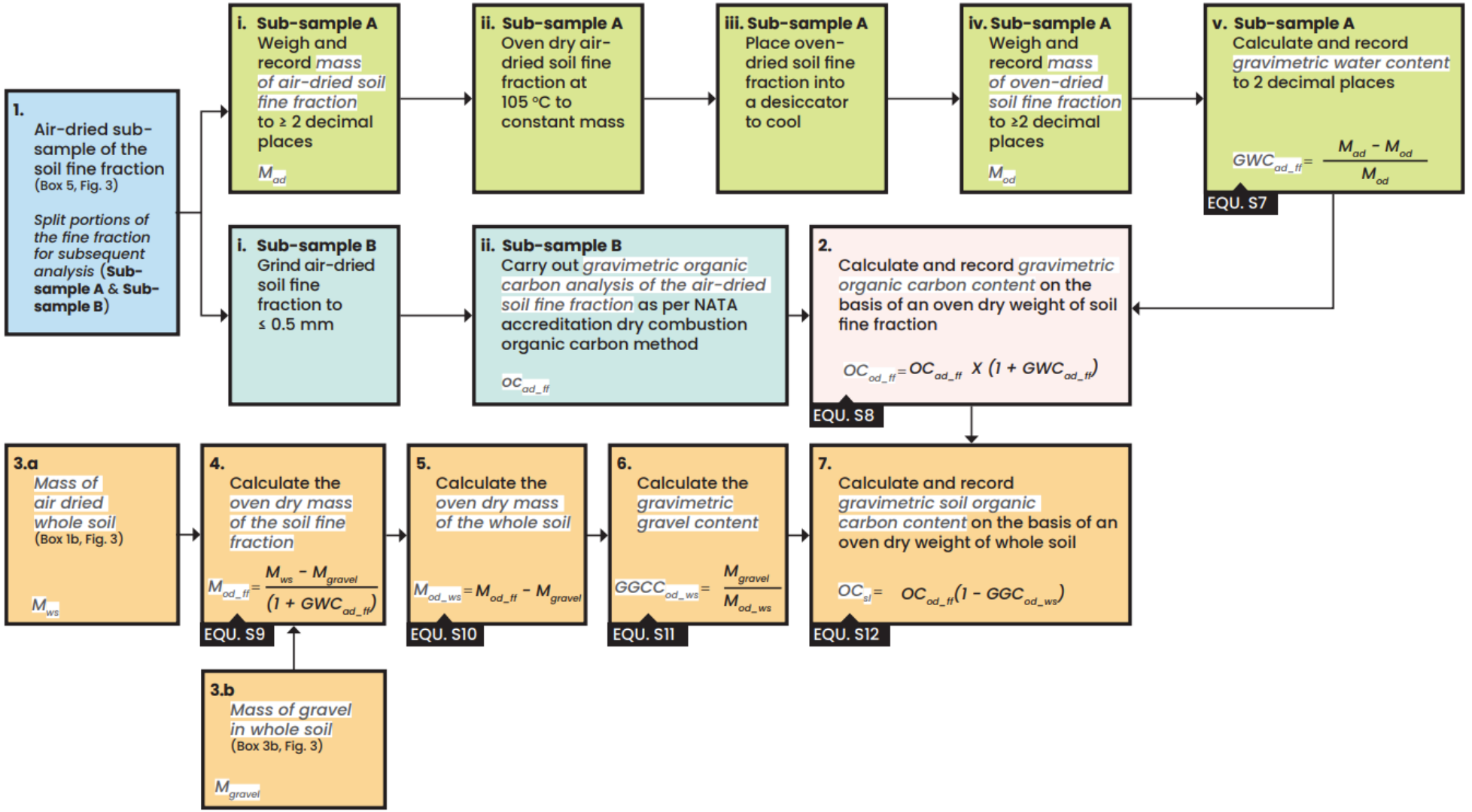
- NATA accreditation for ISO17025

- ASPAC certification for
  - 6B2b (no pre-treatment)
  - 6B3 (acid treatment)

Sample preparation 1



Sample preparation 2



Uniform preparation

- Uniform process between labs completing the dry combustion analysis for soil samples.
- This is still required even if proponents use spectroscopic modelling.
- Spectroscopy has additional requirements.

Image source: https://www.labcompare.com/176-Nitrogen-Analyzer-Total-Nitrogen-Analyzer-TN-Analyzer/12627729-FP928-Carbon-Nitrogen-Analysis-by-Combustion/

Spectroscopy

- Additional requirements in the supplement for spectroscopic analysis.
- Spectroscopic analysis requires sub samples to be validated through dry combustion.

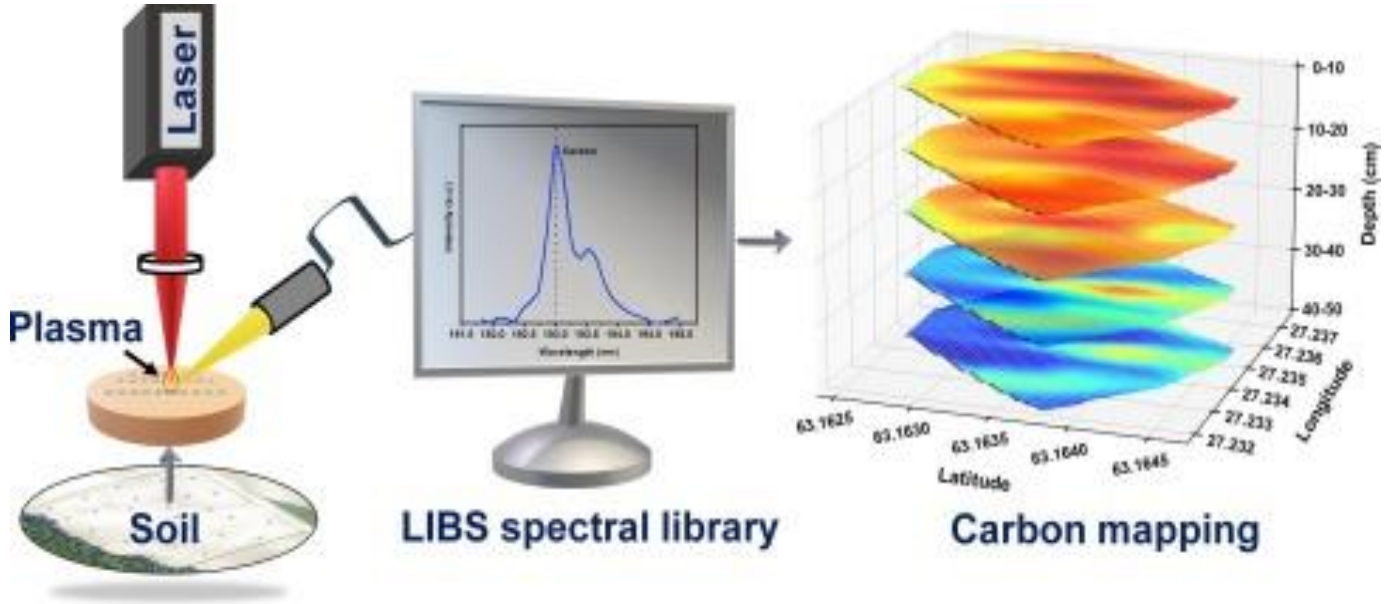


Image source: https://www.sciencedirect.com/science/article/pii/S0016706123002276

Statements – updated forms are coming…

S32(1)(k) a written statement, from the person(s) responsible for carrying out the sampling round that:

- they have no financial interest
- collection and preparation were undertaken in accordance with this determination and the supplement
- the sampling was not conducted in a manner to overestimate any increase in SOC.

Sampler and sample preparer requirements

Sample collection technician

- (i) has experience in the collection of soil samples; and
- (ii) has a good understanding of the sampling requirements of this determination and the Supplement; and
- (iii) has no financial interest in the soil carbon project; and
- (iv) did not prepare or review the land management strategy for the project; and
- (v) meets any requirements included in the Supplement

Sample preparer

- (2) The preparation of a soil sample must be undertaken by an independent person who meets the requirements set out in subparagraphs 7(2)(c)(ii) to (iv) of this Schedule.

Future compliance

- The CER will randomly select projects that are being sampled.
- These sampling rounds to be attended by CER staff and/or auditors.
- Intending to gain understanding of sampling process.
- Possibly extend into demonstrations at NATA/ASPAC laboratories.

Key takeaways

The sampling process and plan needs to outline:

- project area map – CEAs, strata, EAs, and EAAs
- how sample points are randomly allocated
- what the ‘seed’ is
- processes for collecting samples including reserve points.

Key takeaways

Sample analysis needs to conform to the Supplement requirements of:

- NATA accredited and ASPAC certified lab for dry combustion
- special requirements for spectroscopic modelling
- signed statements for sample collection and preparation.

Thank you

Contact

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