



Nature. Valued.

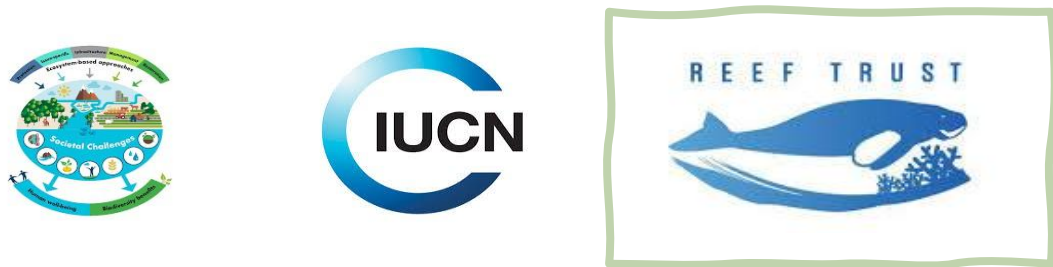
UNPACKING THE GRAZING LAND MANAGEMENT METHODOLOGY
ENVOMARK ASSURED AND APPROVED UNDER ACWIS

Agenda

- Independent market administration and launch of GLM under ACWIS – Amy Basnett, EMA (10mins)
- Unpacking the GLM Methodology under ACWIS – Andrew Yates, Verterra (10mins)
- Meat and Livestock Australia – Julia Waite, MLA (5 mins)
- Demand drivers and market context – Goslik Schepers, EMA (10mins)
- Q&A and close (10 min)



Natural Capital Credits



Credits issued for measurable nature improvements that have been achieved



Credits can be sold to companies under ESG and offset schemes



ENVOMARK represents scientific rigour, data transparency and integrity



Credits accumulate over defined periods and can be sold separately or aggregated

Natural Capital Credits



Credits issued for measurable nature improvements that have been achieved



Credits can be sold to companies under ESG and offset schemes

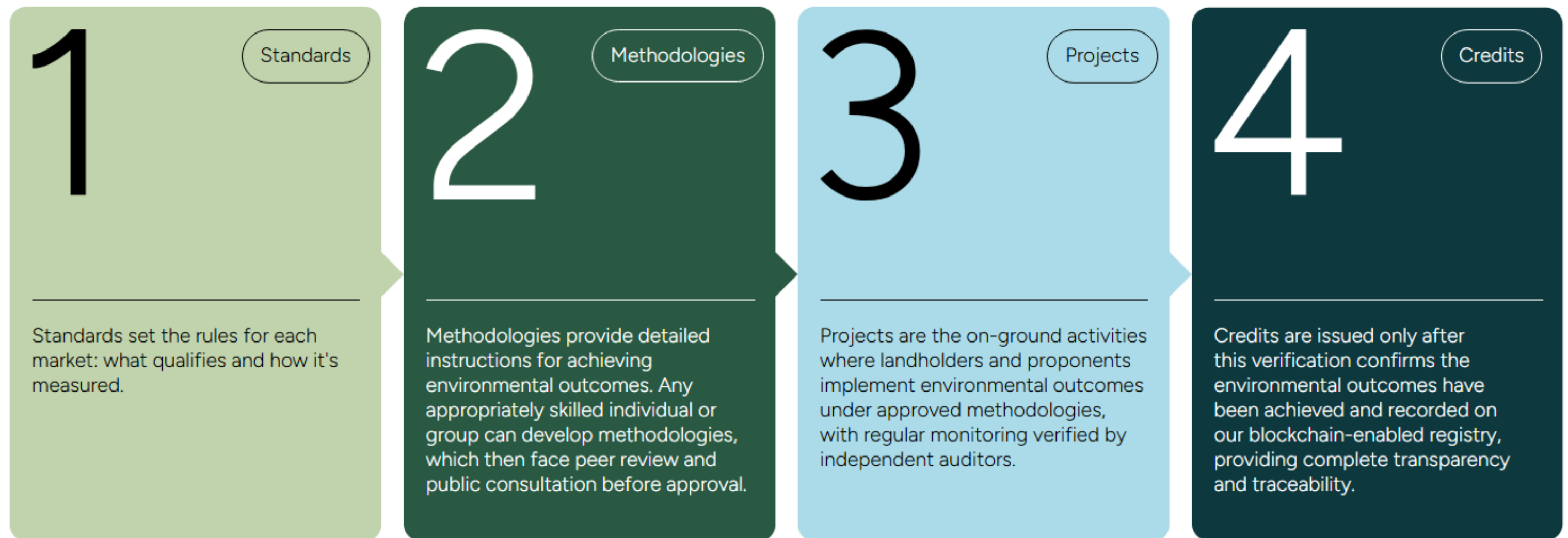


ENVOMARK represents scientific rigour, data transparency and integrity

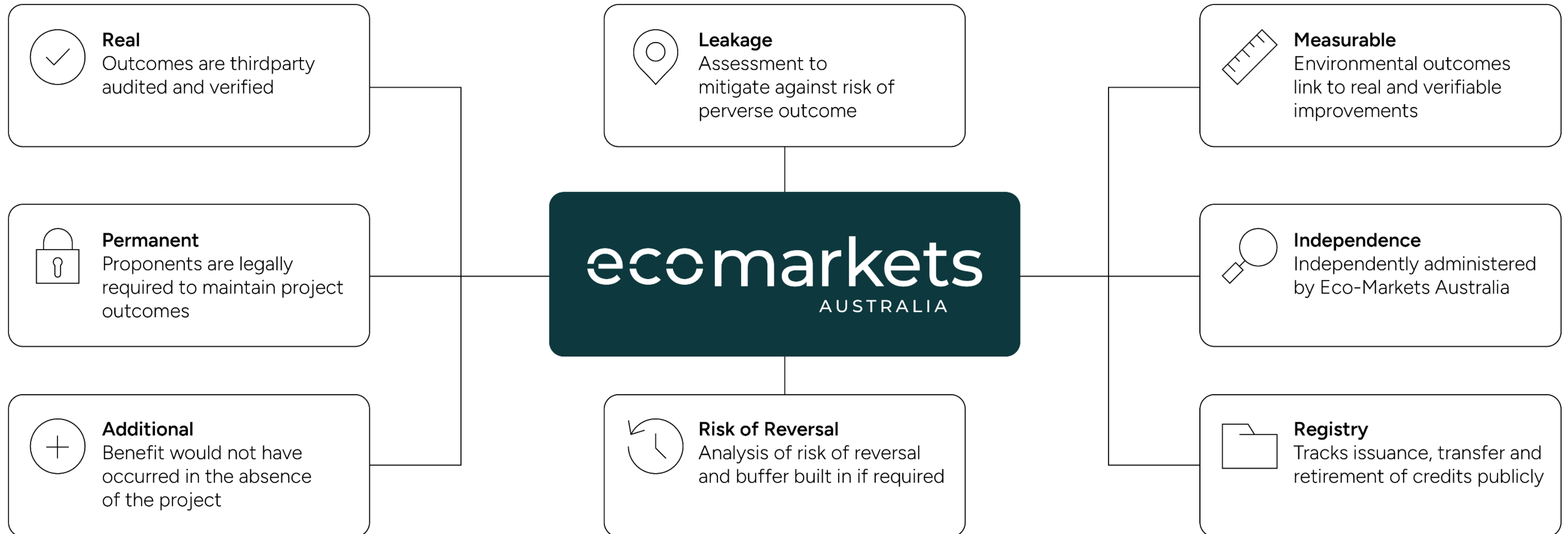


Credits accumulate over defined periods and can be sold separately or aggregated

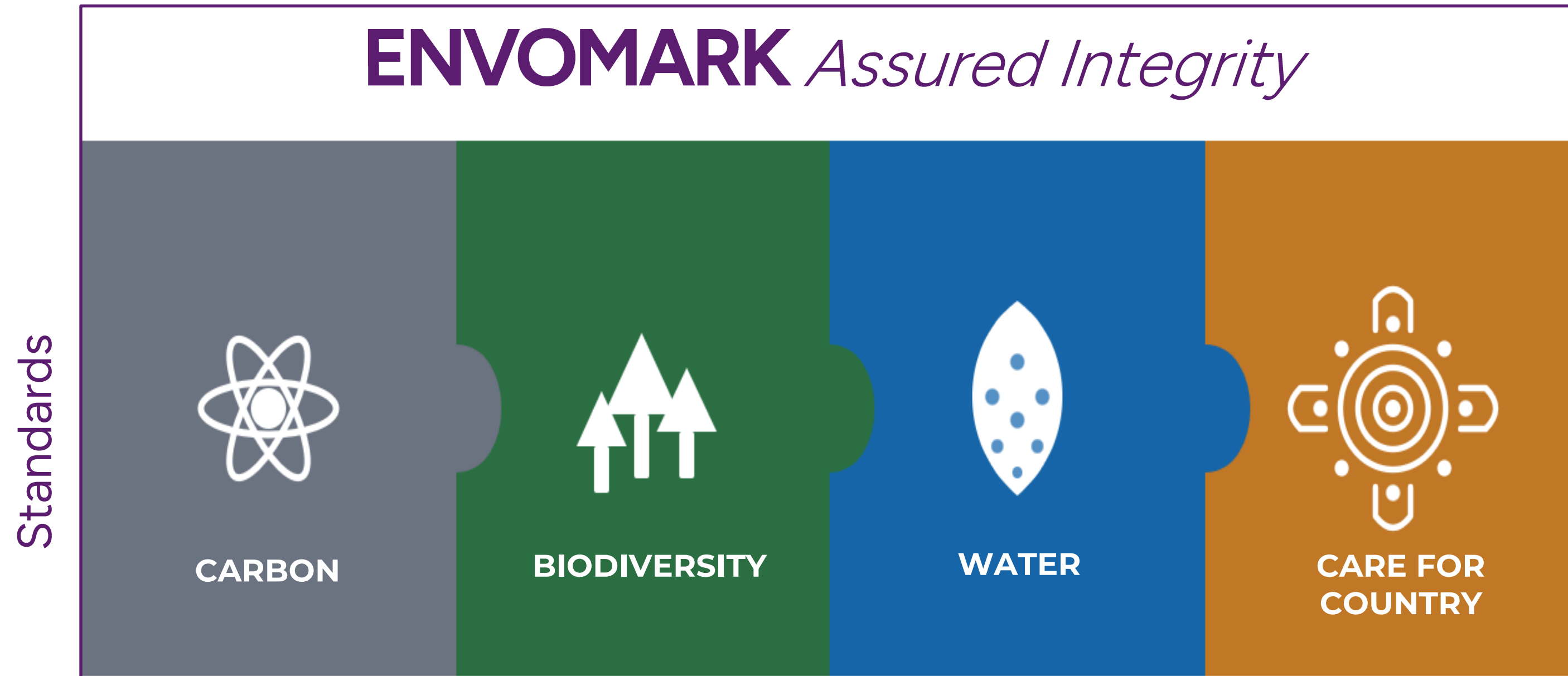
The Process – Value Nature Framework



Eco-Markets Australia's Integrity Guardrails

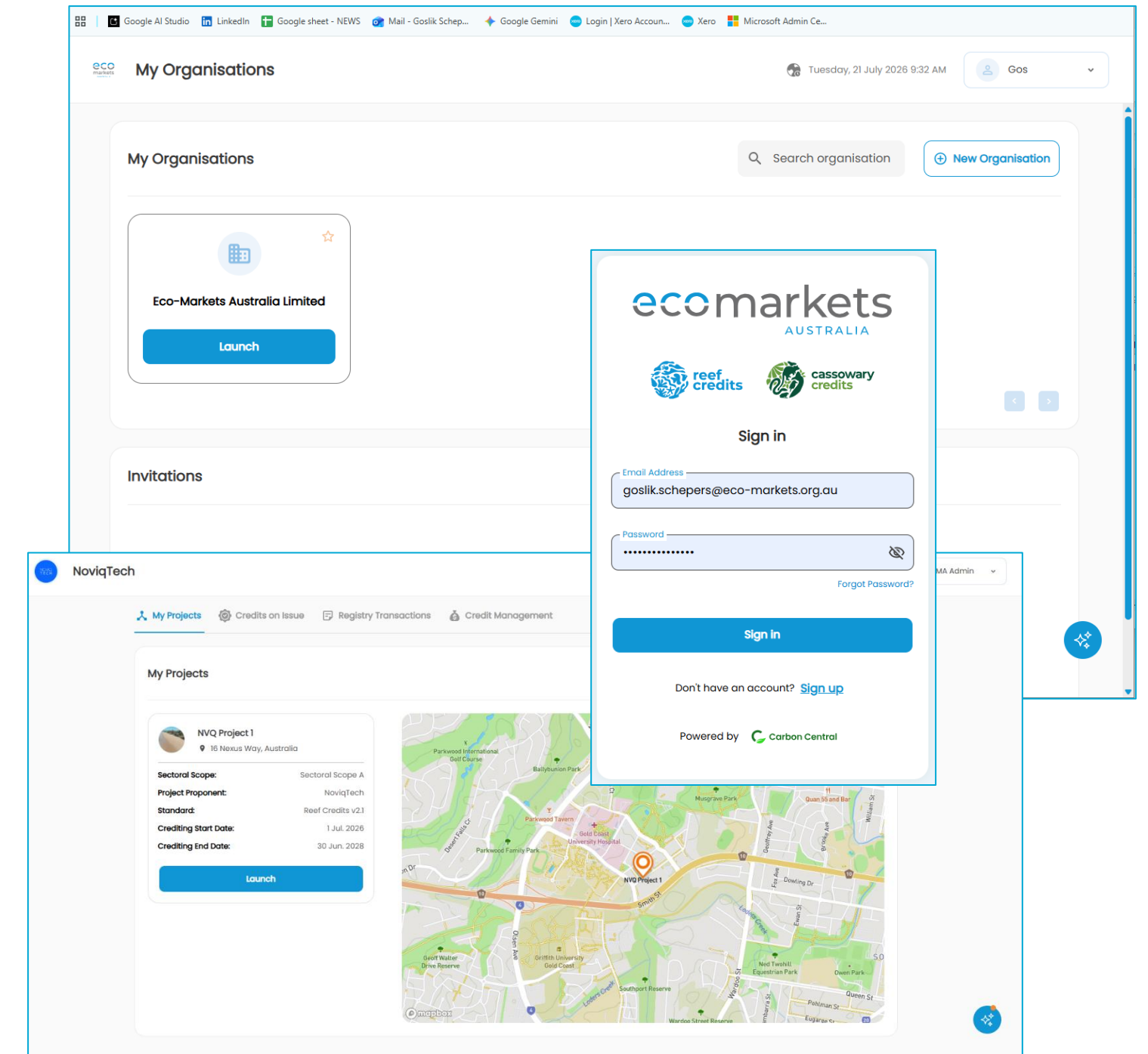


Integrated Suite of ENVOMARK Standards



Eco-Markets new Registry

- Fully Block-Chain enabled
- Electronic methodology policies on Hedera Guardian platform
- Internationally aligned frameworks
- Minimum Viable Product is being tested
- Transition from S&P to Noviqtech in August
- Proponents active in new registry from end August
- Official launch at the 22nd September ABIS event
- New fee structure:
 - No significant shift
 - Formal details to be shared



Reef Credit Methodologies

NITROGEN USE EFFICIENCY



Soil and Fertiliser management

Crediting Period – 10 years

Est 700-1000 Reef Credits/yr
/project

Est 700-1000kg **DIN**/yr/project

14 Registered Projects, 2
Pipeline Projects, 9 in
development

GULLY REHABILITATION



Stabilise landforms, improve soil
health, and restore native
vegetation cover

Crediting Period - 25years

**Est 1,394 Credits & 750
tonnes/yr of fine sediment**
during rainfall events.

FEDERAL GOVERNMENT
ENDORSED OFFSET

WASTEWATER



Macro-algal bioremediation

Pacific Bio & Burdekin Shire
Council partnership

Crediting Period - 15 years

Est 5,000-10,000 Reef
Credits/year at full capacity.

Est 5-10t/yr of **DIN**

GRAZING LAND MANAGEMENT



Increased ground cover reduces
hillslope **fine sediment** runoff in
high-intensity rainfall events.

Remote sensing, site soil &
rainfall data, RUSLE equation,
DRCM – climate impacts

Crediting Period – 25years

Stack with ACCU's

Australasian Catchment Water Improvement Standard

- Built on the success of the Reef Credits Scheme
- Framework for ENVOMARK water improvement Scheme applicable to defined catchment settings across Australasia
- Sets rules and requirements that must be satisfied to develop water improvement Projects and Methodologies
- Encourages the inclusion of First Nations peoples in the design and implementation of water improvement Methodologies and Projects, incorporating perspectives, practices and knowledge systems.
- Encourages alignment to Sustainable Development Goals to support reporting
- The Scheme can be used to develop, buy, and sell water improvement Credits for voluntary (ESG/TNFD) and compliance purposes



Grazing Land Management Methodology has been ENVOMARK assured and approved under ACWIS



Peer Review

Independent market administration = transparency and governance, upholds scheme integrity and ensures eligibility and alignment with the ACWIS through:



Public Consultation



Methodology Revision



TAC Recommendation



Board Approval



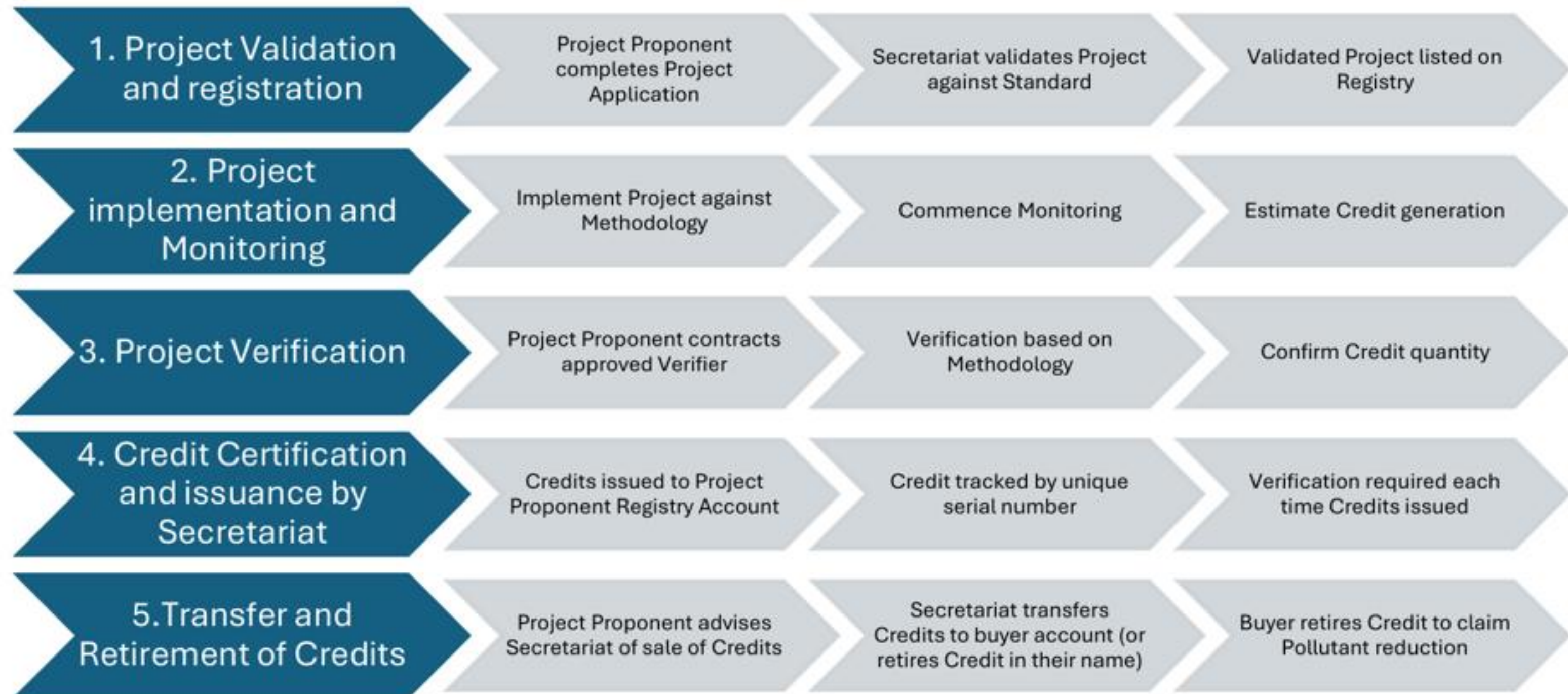
Stackable with Soil Carbon

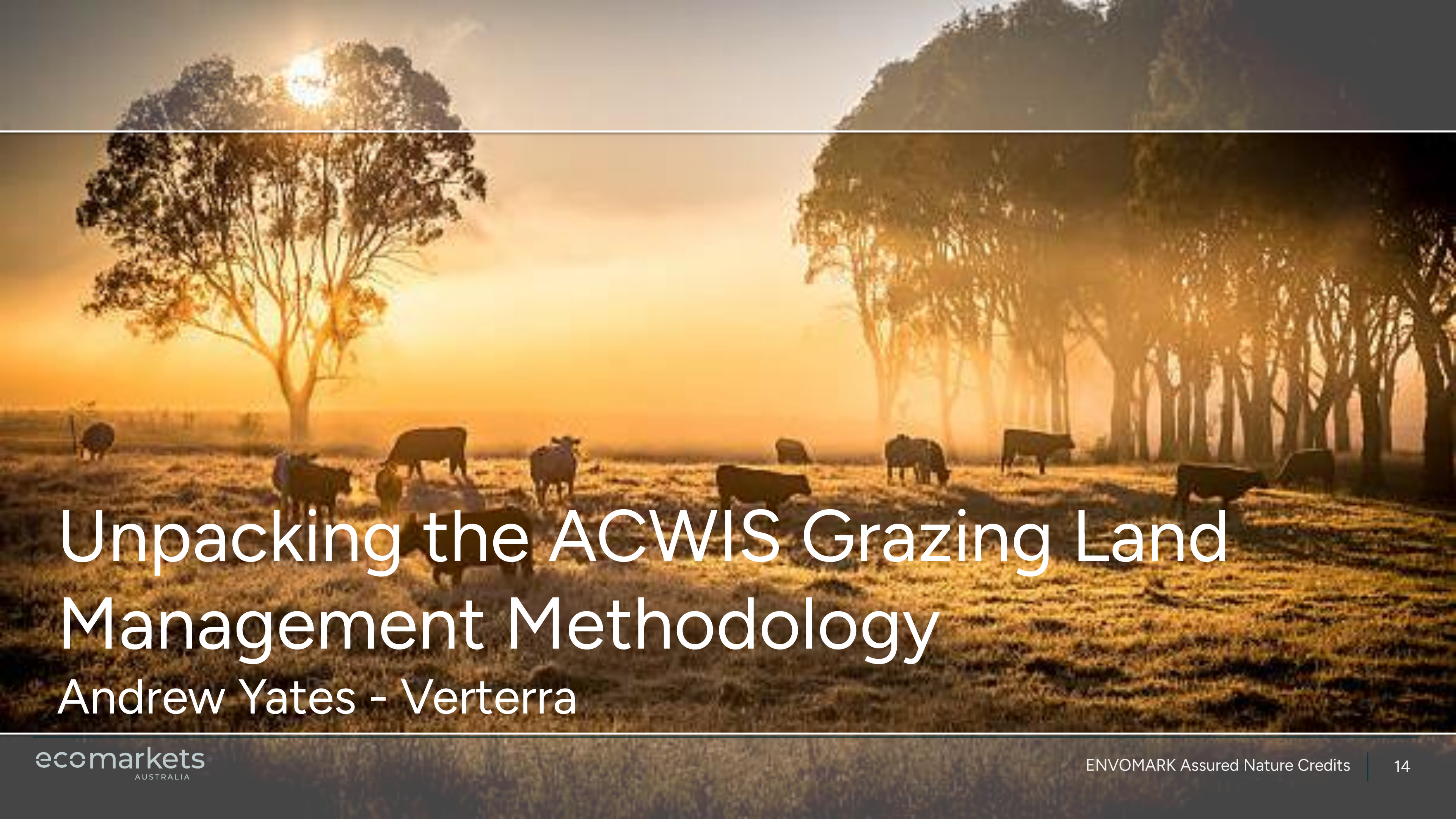
- Project Application and Review Procedure
- Project Validation and Registration
- Validation of independent third-party Verification and Monitoring Period Reports
- Credit Certification and Issuance onto ENVOMARK blockchain registry
- Credit Tracking on the ENVOMARK Registry from Issuance, Transfer & Retirement
- Clean Energy Regulator endorsement and approval to stack with Soil Carbon

Voluntary Market Participation

- Statutory Declarations of project intent provided as part of Project Application
- NO notes on Title, NO locking up land indefinitely
- ENVOMARK Credits ONLY issued for outcomes achieved (not projected)
- Non-compliance
 - Disturbances such as fire or cyclones can affect ground cover (& carbon crediting). If project is impacted, Proponents can either:
 - defer reporting on impacted areas until they have recovered or
 - Temporarily exclude those areas from project calculations for up to 12 months.
 - If serious, Secretariat can suspend the project while under investigation
 - If not remediated or able to remedied within a reasonable period, the Project may be cancelled (no Credits to be paid back)

ENVOMARK Project Application and Review Procedure





Unpacking the ACWIS Grazing Land Management Methodology

Andrew Yates - Verterra

Grazing Land Management (GLM) Method

- Scientifically robust market method designed to deliver water quality outcomes through improved grazing land management.
- GLM was developed by Verterra for the Reef Credit Scheme, now adapted for ACWIS.
 - Recognises the opportunity to be rewarded for positive improvements to water quality within Australia
 - Opportunity to extend across to New Zealand subject to interest
- Links groundcover improvement to a reduction in erosion and quantifies prevention of fine sediment flowing into waterways.



GLM Method Summary

- Modelled approach that utilises remote sensing data to quantifying sediment reductions:
 - Revised Universal Soil Loss Equation (RUSLE)
 - Dynamic Reference Cover Modelling (DRCM)
- Developed for grazing enterprises (10+ years).
 - A GLM Plan is mandatory, detailing grazing improvements aimed to increase ground cover
 - Some soil sampling required to determine fine sediment proportion and soil erodibility
 - Method requires installation of a compliant rain gauge

Activities not eligible for Credits under this Method:

- Irrigation, including pasture irrigation
- Broadscale clearing of woody vegetation
- Activities identified as excluded activities under the relevant Standards.

GLM Method Measures Real Outcomes

- Each time the model runs, it quantifies sediment savings that have been achieved.
- There is no reversal scenario and no claw-back of credits projected and not achieved.

Additional Benefits:

- By isolating the impact of land management (through DRCM), monitoring insights can be used to improve grazing productivity.
- The GLM Method aligns with soil carbon improvements, enabling landholders to stack outcomes across the landscape.

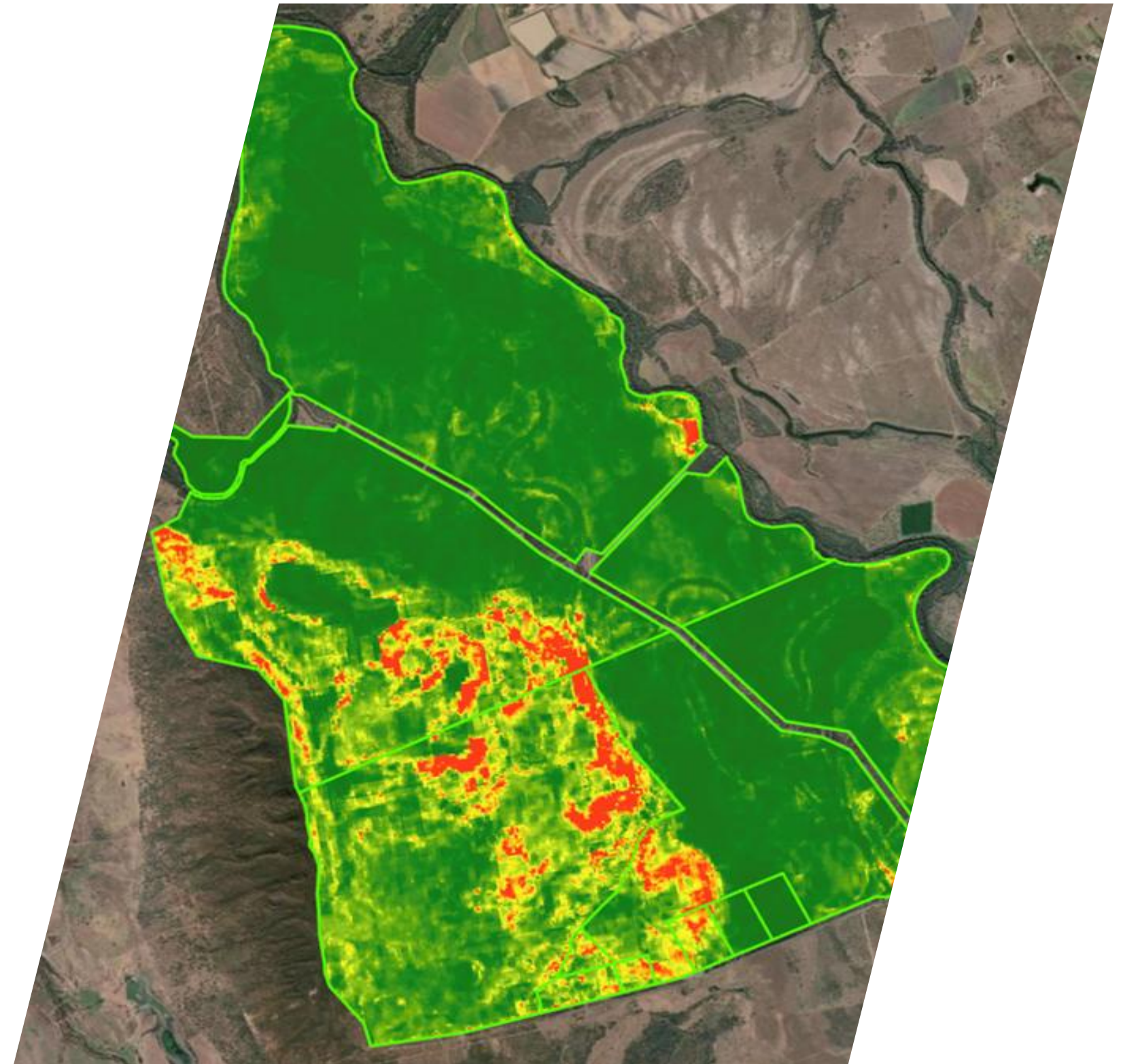
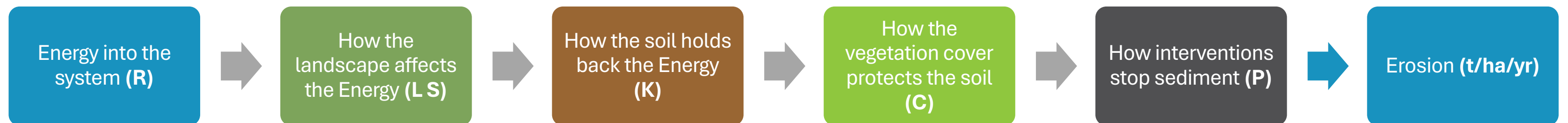
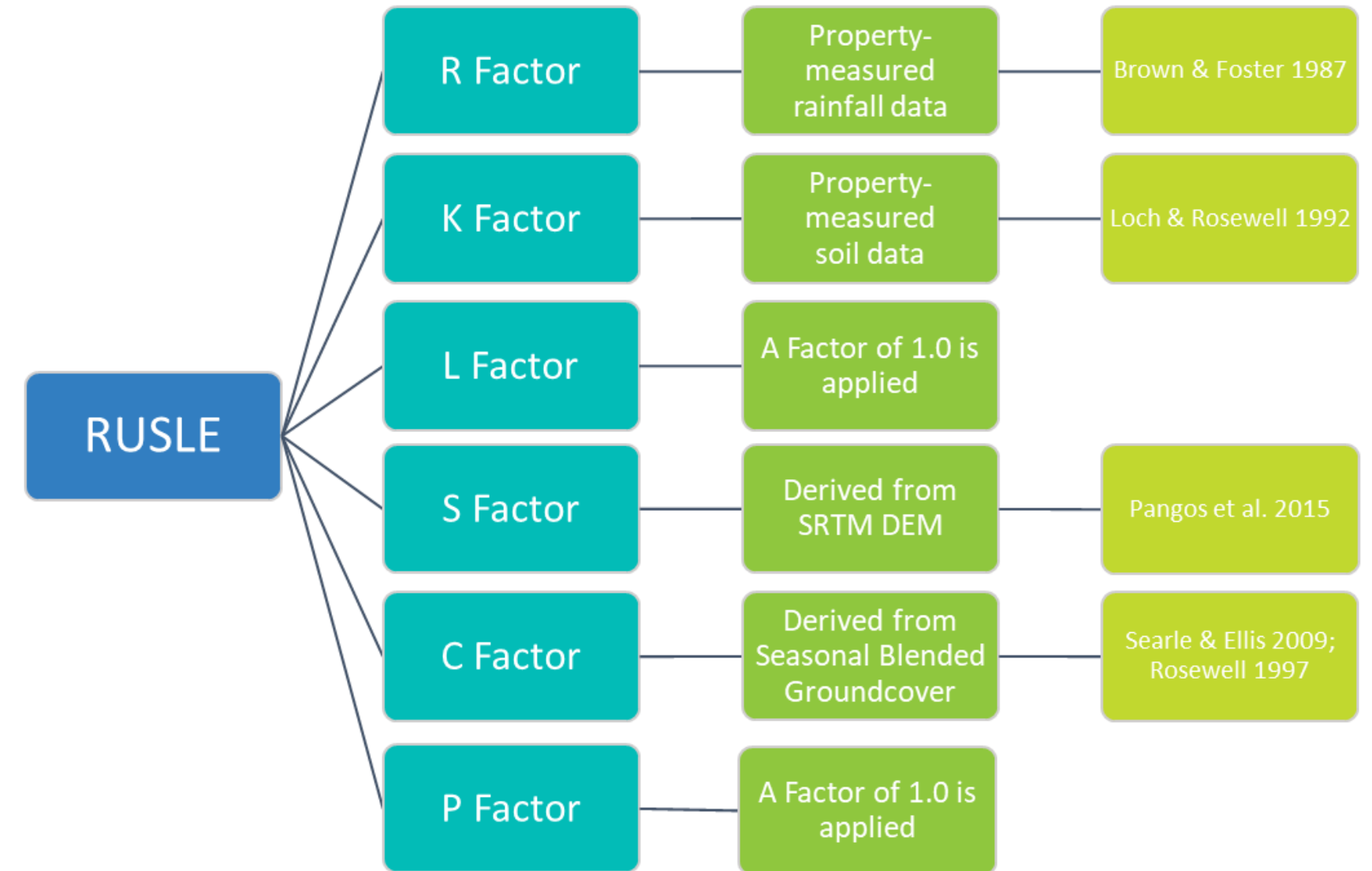


Image output generated using the GLM method, showing high risk erosion areas for targeted intervention.

Revised Universal Soil Loss Equation (RUSLE)

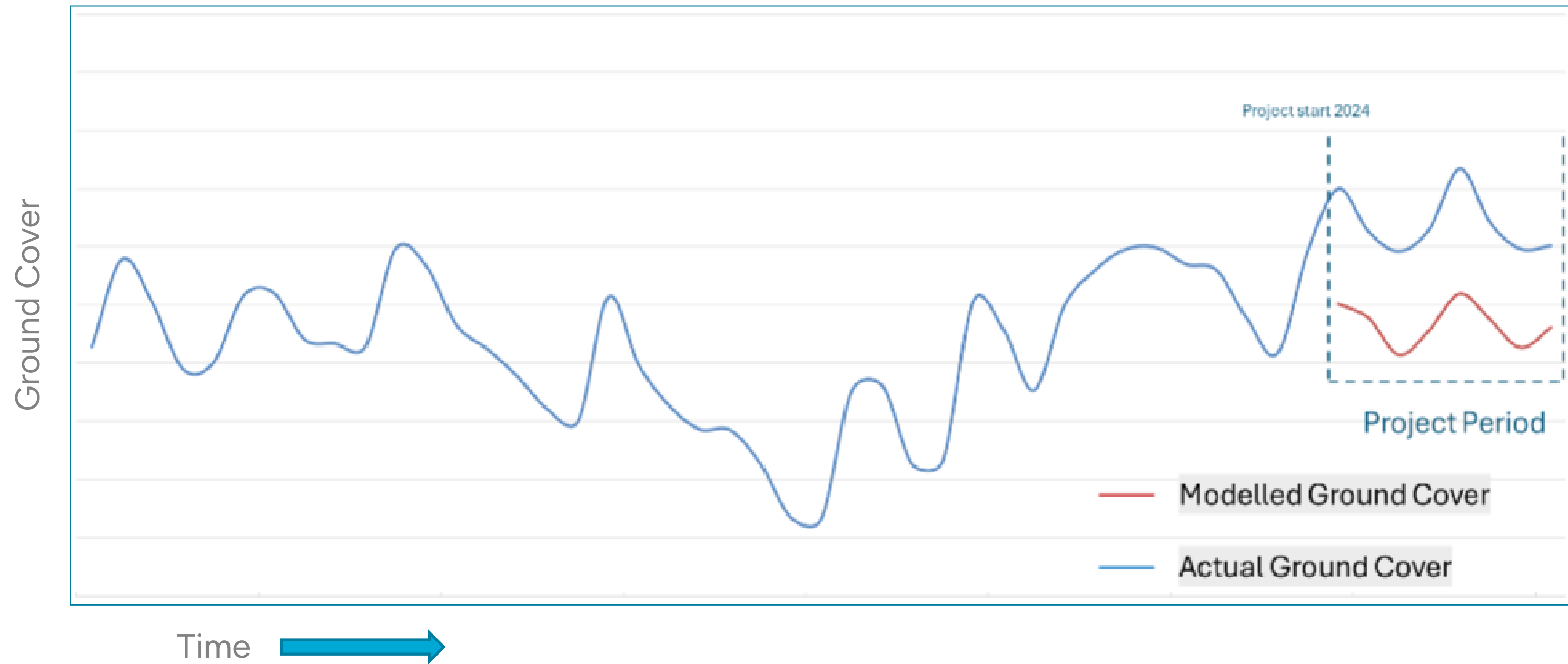
- Sediment calculations under GLM are based on a hillslope soil loss model known as the Revised Universal Soil Loss Equation (RUSLE).
- Long researched and widely used erosion model including Great Barrier Reef space.



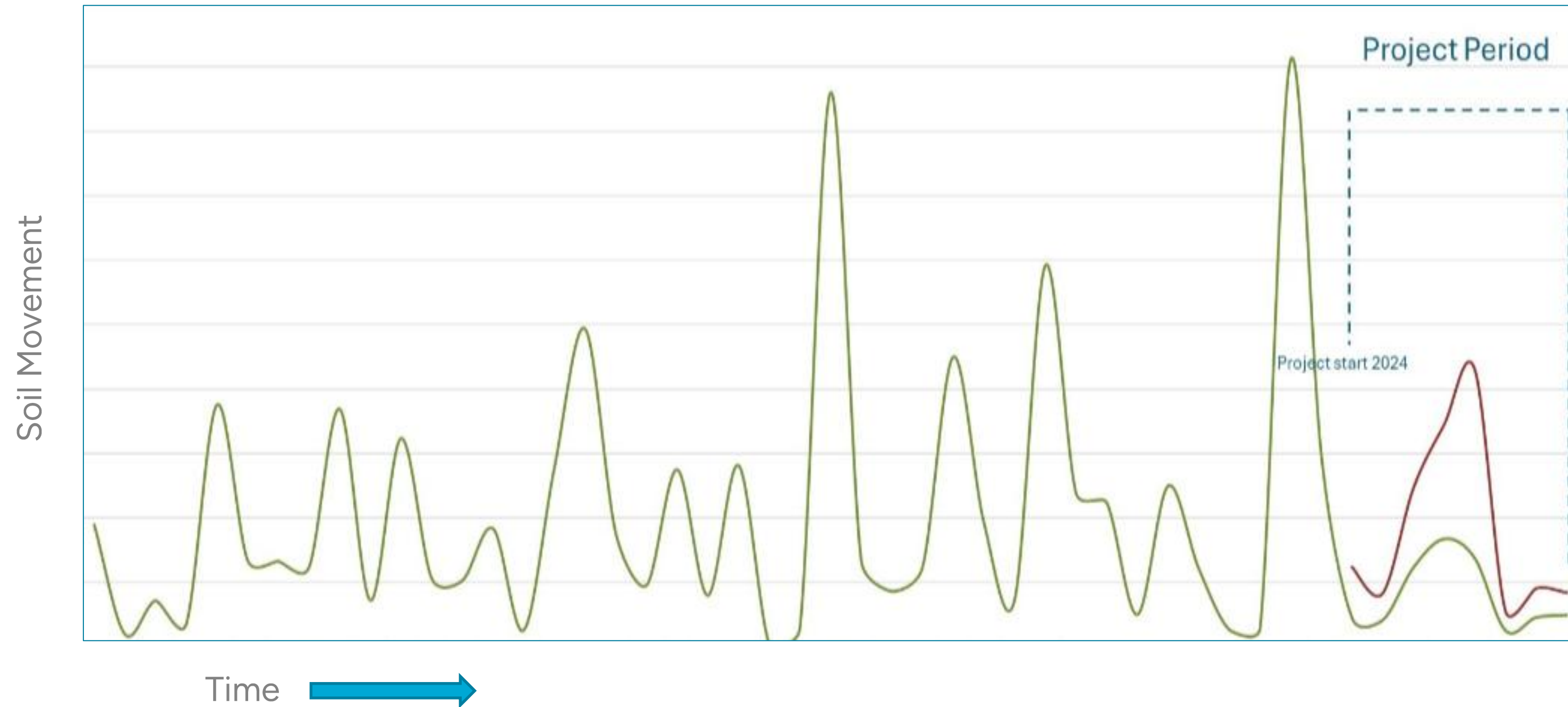
Dynamic Reference Cover Modelling (DRCM)

- Method accounts for seasonal influences (groundcover response to rainfall), and only credits for grazing management activities. This is achieved through DRCM.
 - Verterra's DROVER Monitor was developed to isolate the impact of land management on groundcover.
- Method requires selection of minimally disturbed reference pixels within ~10km of the project area. This establishes a benchmark of what's possible within the landscape to isolate impact of land management on groundcover and erosion.
 - Calculates average ground cover across the property to establish a project baseline.
 - By comparing current groundcover to the baseline and dynamic reference pixels, changes can be attributed to land management, not climatic conditions.
- Groundcover is then fed into RUSLE with additional data such as rainfall to calculate sediment reduction.
 - Output forms the basis for award of water quality credits.

Output - Groundcover



Output – Sediment Savings

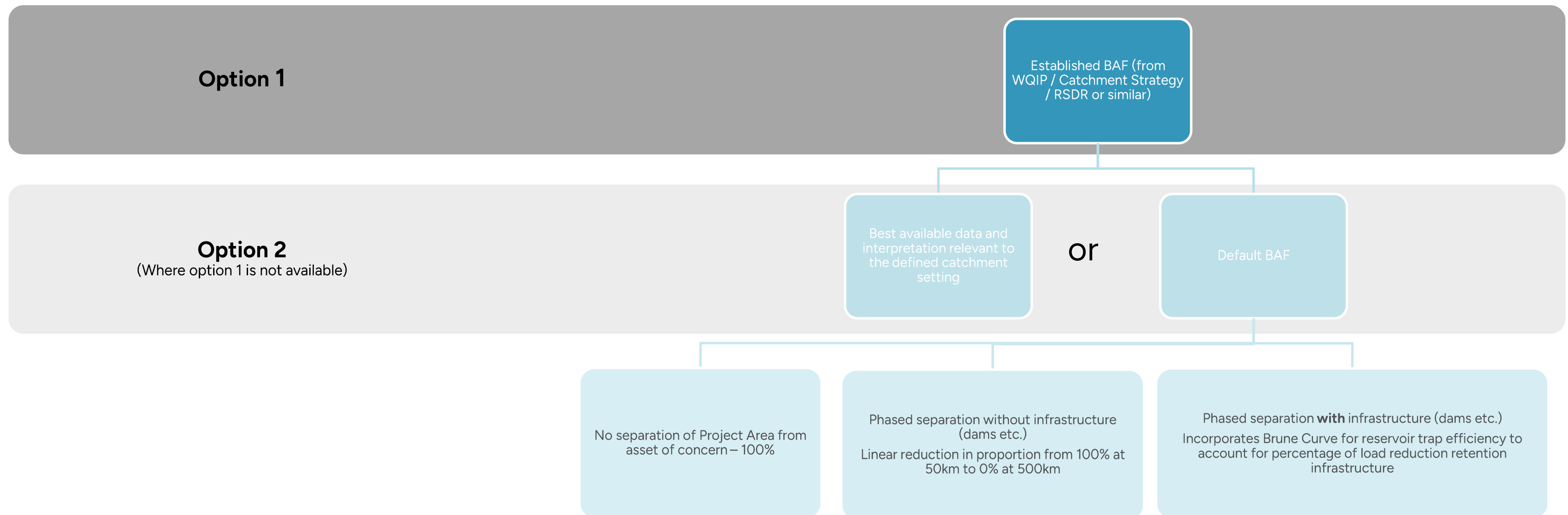


Integrating ACWIS with Reef Credit GLM

- Key changes to GLM Reef Credit Methodology
 - Fine Sediment (FS) definition revised to Soil particles comprising the clay and fine silt fractions, defined by a default particle size threshold of $< 63 \mu\text{m}$, unless alternative specified in an applicable Water Quality Improvement Plan.
 - Remotely observed groundcover input updated from to align with RUSLE modelling conventions and Queensland Government practice.
 - Temporal scale adjusted from monthly to seasonal (three-month reporting periods) to reduce data gaps associated with cloud cover and extend baseline ability.
 - Inclusion of a hillslope delivery ratio (10%).
 - Data source updates to enable national applicability.
 - K-factor to be determined through soil sampling, with a sampling plan required consistent with Method specifications and updated equations.
 - Baseline period extended to 10 years.
 - Inclusion of alternative options for benefit attenuation factors where factor not already established.

ACWIS - Benefit Attenuation Factor(BAF)

What proportion of sediment export is expected to reach the at-risk asset of concern?



Two Pilot Program Opportunities



- Fully-funded Verterra and MLA pilot program.
- Aims to establish evidence of productivity gains associated with participation in water quality and soil carbon markets.

- Partially-funded Verterra and AgriProve pilot program.
- Aims to establish market precedent for project stacking: Generating productivity gains, Water Quality and Soil Carbon Credits from grazing practice change, a whole-of-property approach.



- Reef Credits
- Reef Credits + Soil Carbon ACCUs

- Murray-Darling Basin Credits
- Basin Credits + Soil Carbon ACCUs

Pilot Program Benefits



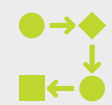
Verified property baseline and ongoing monitoring

Access to DROVER Monitor outputs, including property maps, baseline analysis, and repeat monitoring of ground cover, erosion risk and pasture performance to objectively track change over time.



Structured planning support linked to market methods

Grazing Land Management (GLM) planning aligned to water quality credit schemes (Reef Credits / ACWIS), with optional integration of soil carbon project planning where relevant.



Direct technical support throughout the project

Ongoing advice from Verterra and AgriProve to interpret data, assess options, trial practice changes, and understand implications for productivity and environmental outcomes.



Reduced or no-cost access to pilot program components

Where applicable, no-cost participation in water quality crediting projects during the pilot period (first three years), reducing financial risk while learning how schemes work in practice.



Learning, extension and industry exposure opportunities

Involvement in case studies, field days and workshops (with landholder approval), contributing to industry evidence while gaining early insight into emerging environmental market pathways.

DROVER - Case Study

PROPERTY	Calliweera
LOCATION	40km northwest of Rockhampton, QLD
SIZE AND USAGE	3,600ha family-owned grazing operation



PROVE

- Declining ground cover and pasture degradation
- Erosion delivering high sediment loads to the Great Barrier Reef



*The land responds quicker to rain. There's more infiltration of water into the soil and less runoff. To have this newfound resilience to hard times means less stress and anxiety about the future. We'd absolutely recommend this to anyone looking to make better use of their land. **Nathan Warnock***



IMPROVE

- Forage Budgeting:** matching stocking rates to long term carrying capacity
- New Infrastructure:** Reconfigured paddocks and water points to allow for periods of rest
- Erosion Control:** targeting high risk areas for improved ground cover
- Soil Carbon Farming:** project registration to quantify benefits



VALUE

- Improved grazing productivity
- Reduced erosion risk and visible declines in bare highly erosive soils
- 4.2% increase** in ground cover and drought resilience
- 15% reduction** in soil movement
- 95 tons** of fine sediment avoided from reaching the Great Barrier Reef
- Issuance of over **6,000** Australian Carbon Credit Units

What is DROVER?

- **Dynamic Reference for Optimising Value and Erosion Reduction**
- Scientifically robust decision support service designed to support the GLM Method
- Expanded to a whole-of-property service grounded in Verterra's ecological engineering expertise
- Enables landholders to PROVE land health and identify areas for improvement, IMPROVE land management, and VALUE the outcomes.

Visit:

<https://droverlandmanagement.com>

PRODUCTS & SERVICES



Benchmark and track land health against locally matched control points

LAND MANAGEMENT SERVICES



Targeted technical assessments



Expert advisory, planning and management services



Site-specific revegetation & native seed supply services

MARKET ACCESS



End-to-end support to access environmental markets



Meat and Livestock Australia

Julia Waite

Industry at a glance



2.24M
tonnes of Australian red meat
products exported to
104 countries
in 2024 (DAFF)



1.34M
tonnes of beef
exported (DAFF)



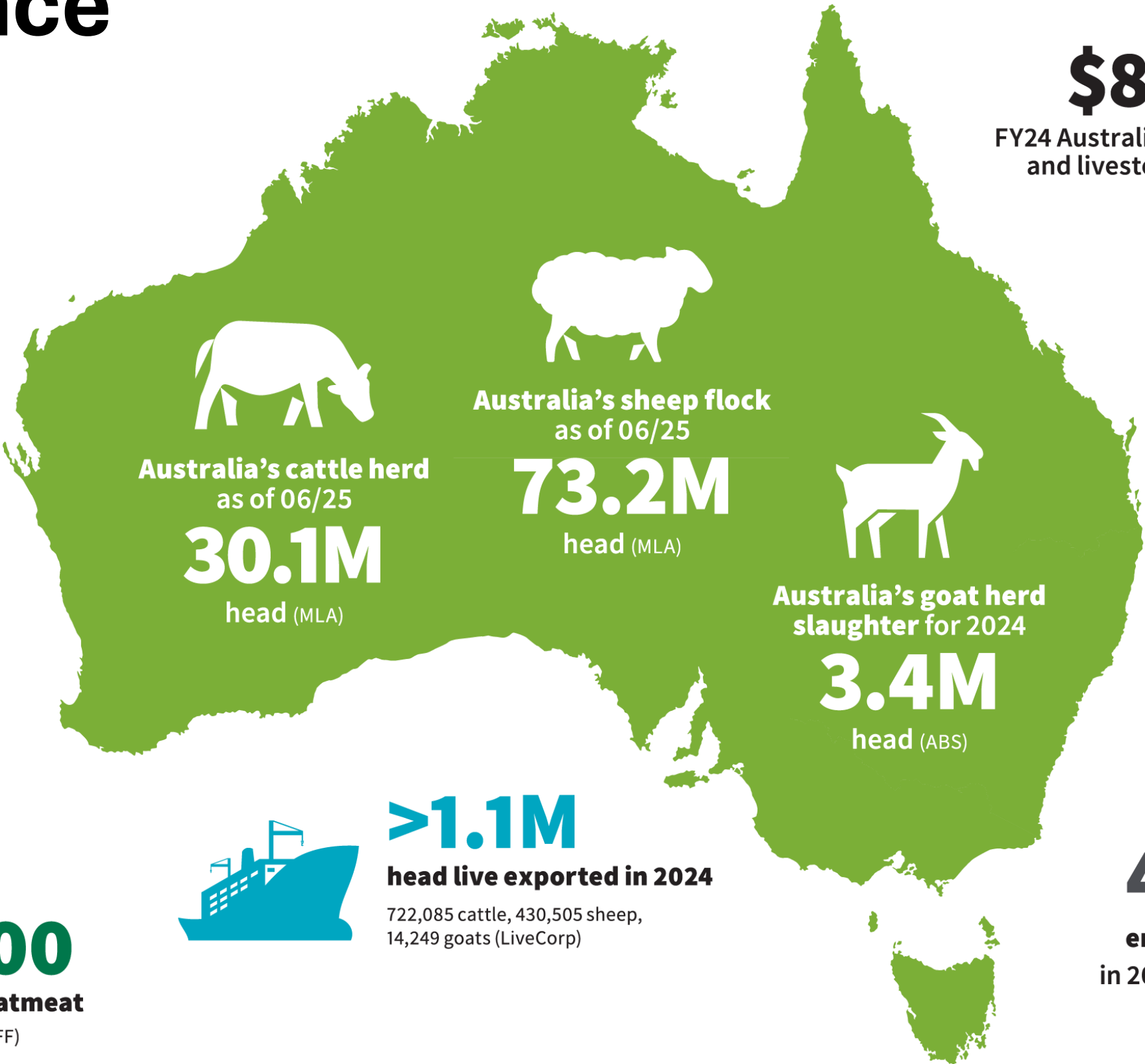
614,000
tonnes of lamb and
mutton exported (DAFF)



51,000
tonnes of goatmeat
exported (DAFF)



>1.1M
head live exported in 2024
722,085 cattle, 430,505 sheep,
14,249 goats (LiveCorp)



\$81.7B

FY24 Australian red meat
and livestock industry
turnover

\$22.9B

gross value of
production

92%

Australian households
purchased beef and

72%

purchased lamb in the
past year

03/24 (NielsenIQ)



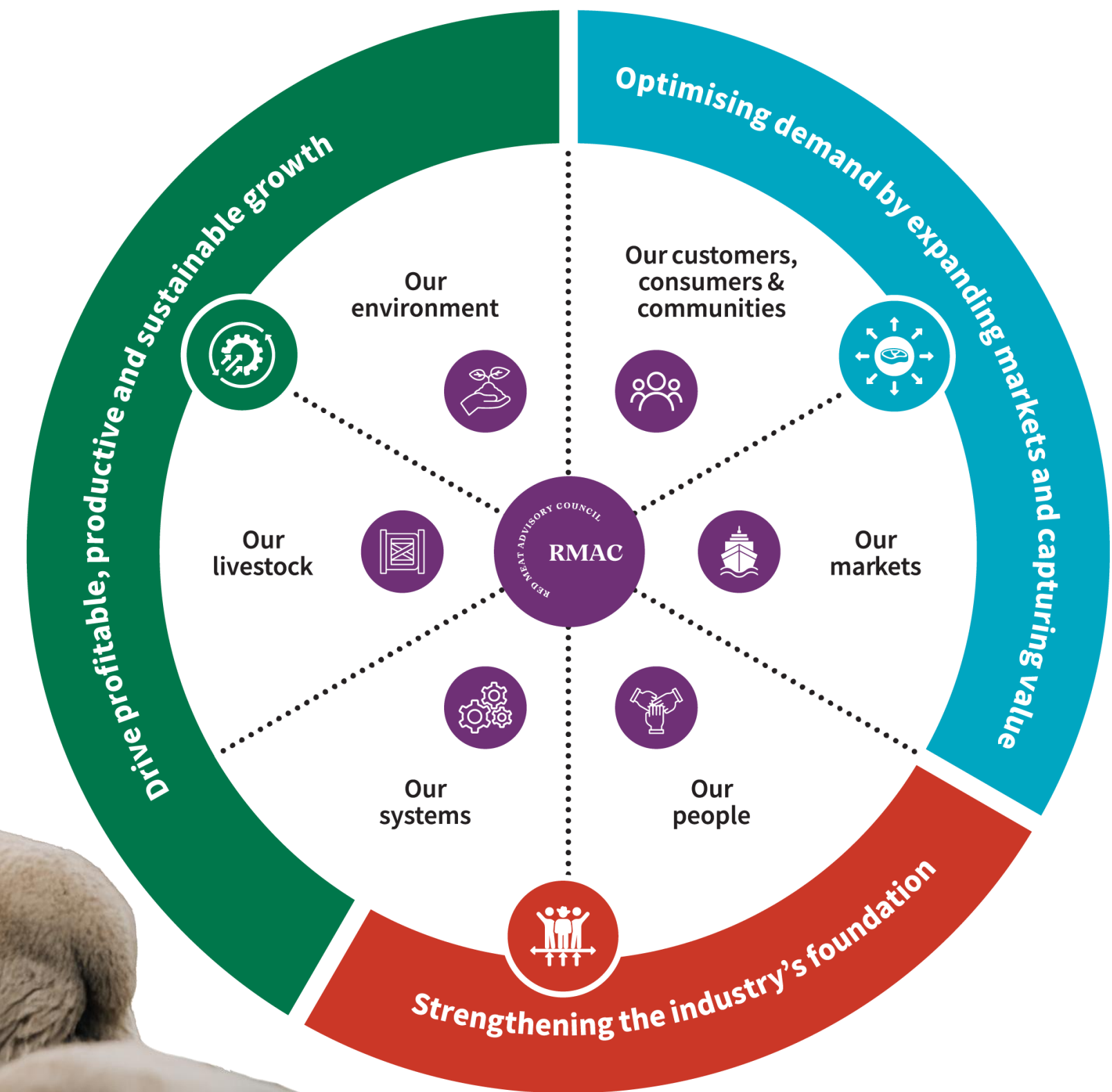
419,000

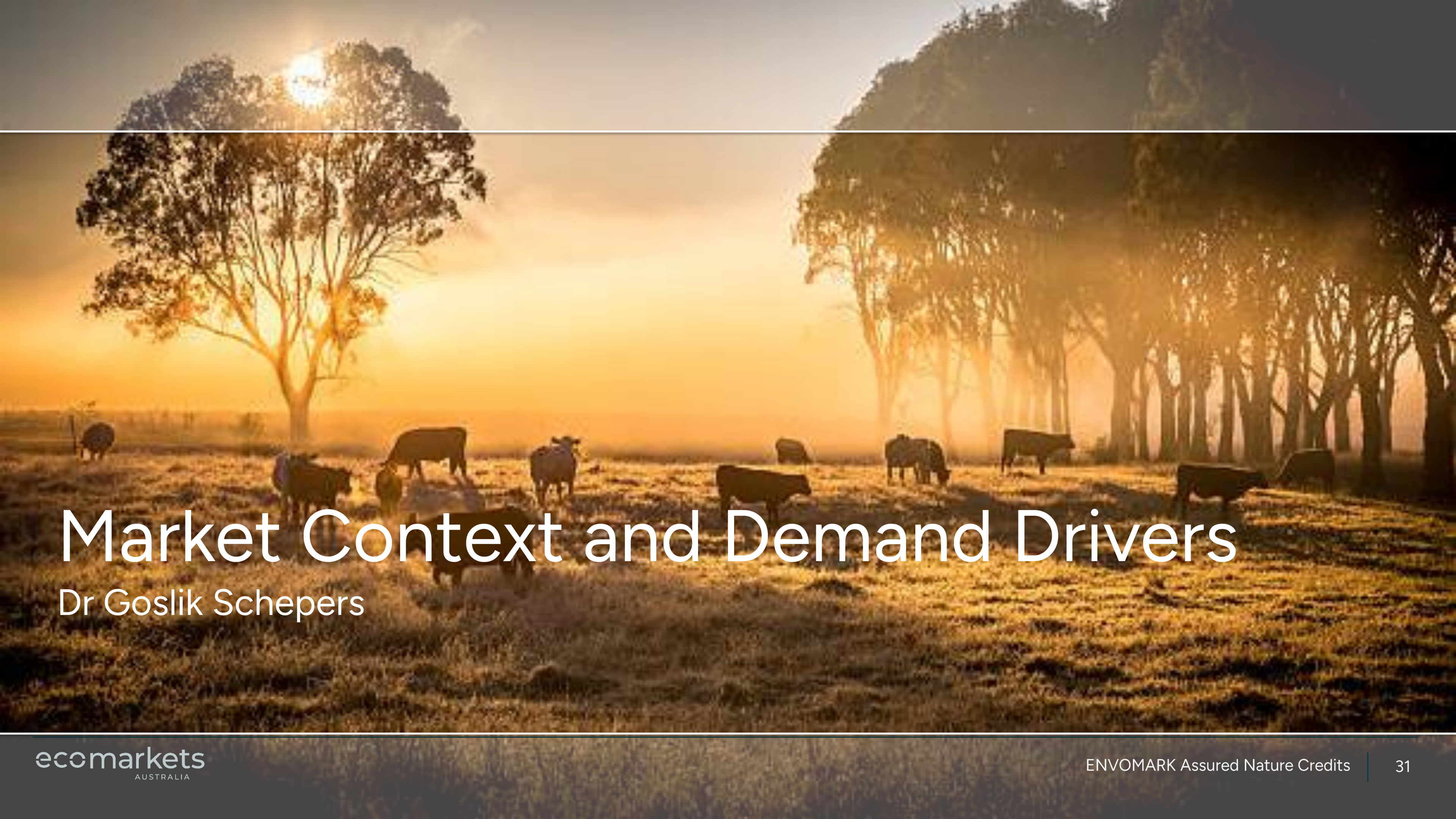
employed by industry
in 2022-23 (EY, IBISWorld, ABS)



Meat and Livestock Australia

- Research & Development
- Adoption
- Marketing





Market Context and Demand Drivers

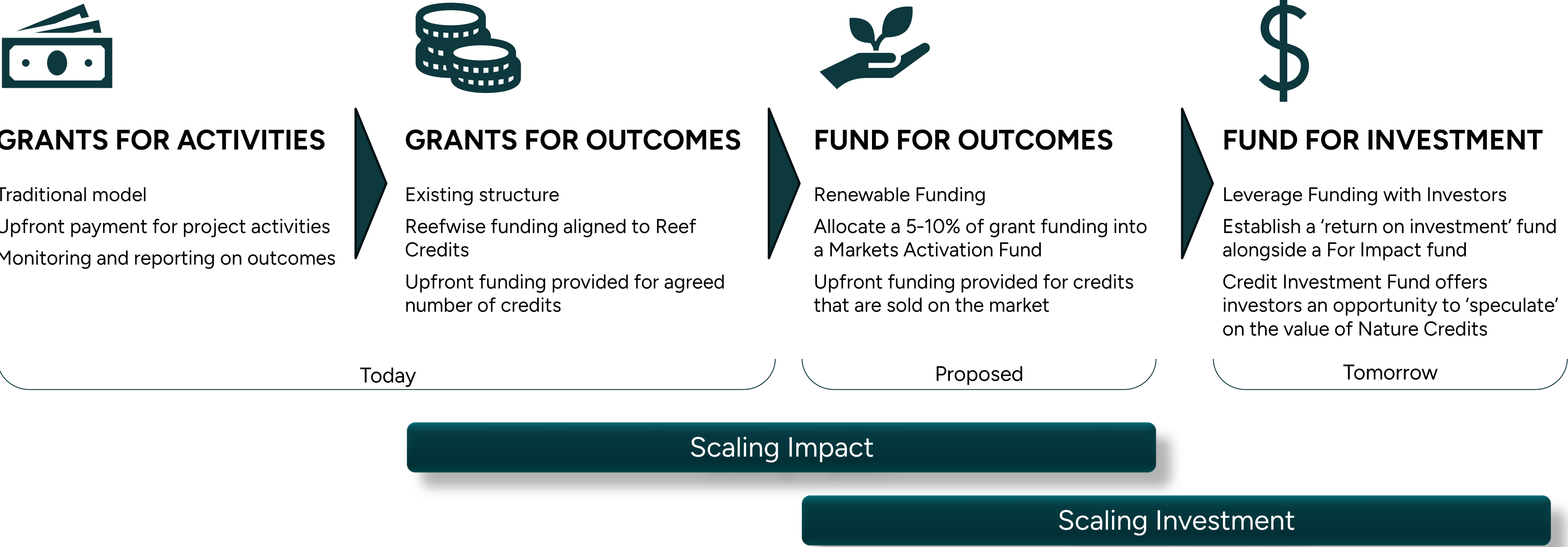
Dr Goslik Schepers

Nature Credits & Risk

- Corporate capital understands, manages and invests in risk
 - Emerging markets are inherently high risk
 - High integrity credits reduce risk
- ENVOMARK Credits = Measured, verified outcomes already achieved, not promised
- Risk reduced environmental outcome
 - Delivery risk removed – issued after outcome
 - Reputational risk reduced – assured governance
 - Confidence in environmental claim
 - Premium product – cost plus value



The Evolution of Nature Credits



Who will Buy the Credits and Why?

- Telling a story about your contribution to Nature is no longer acceptable
- Legislated accounting for impact is tightening
- Awareness of environmental risk is increasing
- Credits are the new Currency for nature

Nature Credit Demand Drivers



FEDERAL GOVERNMENT
Fine Sediment methodology against port dredging

QUEENSLAND GOVERNMENT
NUE methodology against aquaculture



- Still case-by-case
- Potential for coding into offset hierarchy

Nitrogen Use Efficiency (NUE) methodology
used in ESG reporting



Government Advocacy to Secure Enduring Demand

Scaling Markets alongside Nature Repair Market

- Seeking Government recognition of third-party voluntary markets
- Government sets standard, independent administrators manage markets
- Monetization of credits alongside certificates

Use of Nature Credits within Risk-Adjusted Offset Hierarchy

- Preference for credits over unregulated remediation or restoration contributions
- Recognize advanced offsets as the best environmental accounting
- Leave like-for-like or agreed offset to National EPA

Commercial imperative to buy credits

- Aligning risk-adjusted offset hierarchy to an accelerated approval path
- Reward companies that take impact seriously with a commercial advantage



Proposed – Risk-adjusted Offset Hierarchy

Corporate-led Impact Assessment	Credit Assessment
Self-reported environmental impact quantified in terms of credit metrics (e.g. 1ha biodiversity loss)	1 credit impact

Priority	Pathway	Credit Calculation
1	Purchase existing credits from a recognised assurance framework	1.2x impact
2	Propose plan for credit generation under a recognised assurance framework	1.5x impact
3	Negotiate bespoke offset activity outside a recognised framework	2.5x impact
4	Financial settlement to the Offset Account (as last resort)	10-20x impact



Current Options

Proposed – Risk-adjusted Offset Hierarchy

Corporate-led Impact Assessment	Credit Assessment
Self-reported environmental impact quantified in terms of credit metrics (e.g. 1ha biodiversity loss)	1 credit impact

Priority	Pathway	Credit Calculation
1	Purchase existing credits from a recognised assurance framework	1.2x impact
2	Propose plan for credit generation under a recognised assurance framework	1.5x impact
3*	Negotiate bespoke offset activity outside a recognised framework	2.5x impact
4*	Financial settlement to the Offset Account (as last resort)	10-20x impact





QUESTIONS



Thankyou

Level 1, 261 Queen Street,

Brisbane QLD 4000, Australia

Email: info@eco-markets.org.au

Phone: +61 437 264 608

eco-markets.org.au