



Natural capital: a paradigm shift in economic and environmental solutions

The role of primary producers is changing.

Throughout history, farmers have been the backbone of society, providing two essential needs – food and clothing.

But increasingly, they are being required to undertake the heavy lifting on a range of environmental issues, both actual and perceived. These include climate change, reef degradation, reduced biodiversity, soil erosion, and deforestation.

Government effort on these issues has focused on imposing ever-harsher and more complex laws enforced by punitive penalties on primary producers. This is despite significant evidence that external regulation is an expensive and onerous way of achieving minimum compliance, rather than effecting long-term behaviour change.

There must be a better way, one that achieves ecological as well as economic and social objectives.

This article details collaborative research by AgForce, National Australia Bank (NAB), Aboriginal Carbon Foundation (AbCF) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) into the concept of natural capital and how it may offer a solution – if we can change the way we think of farming, agriculture, and natural resource management.

It also details AgForce's collaboration with the AbCF regarding the environmental, social and cultural values of carbon farming agribusinesses.



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Introduction

Since the dawn of civilisation, the value of land has been in what it can produce.

The view that land is only as valuable as what you can grow in it or on it and what you can dig up from beneath it has prevailed until quite recently.

However, as society and science have developed – exponentially so over the past 50 years – so have the technologies and techniques of agriculture and landscape management. We are starting to understand that our landscapes could offer more than food, fibre and raw materials.

At the same time, population pressures and rising social consciousness are increasing demands on primary producers who, in many countries including Australia, own the vast majority of land.

Producers are required to deliver improved consumer outcomes – greater output, cheaper product, better quality – at the same time as better environmental outcomes such as increased sustainability, maintenance of biodiversity, and reduced carbon emissions.

Somewhat unfairly, farmers are expected to deliver the demands of society with their own hands and out of their own pockets.

All this a time when farming is becoming less, not more, profitable and climate challenges are making a life on the land more difficult and risky.

The effects of a climate that is expected to become hotter and increasingly variable, with more regular and severe extreme weather events, is causing ecosystem, financial and social stress, and issues.

The solution may lie in the concept – not yet a science or discipline – known as ‘natural capital’.

In 2017, AgForce embarked on a collaborative program with two iconic institutions: National Australia Bank, the country’s largest rural lender and AgForce corporate partner,

and the CSIRO, the nation’s elite research organisation with a focus on commercialising scientific discoveries.

In 2018, AgForce negotiated a Memorandum of Understanding with the AbCF, a fellow not-for-profit company working with Aboriginal rangers, Traditional Owners and carbon farmers in general to add value to their carbon credits.

Here is the story of our journey into a new agricultural paradigm...

What ‘natural capital’ could deliver – and why it isn’t

Natural capital is a concept that had its beginnings in the emerging environmental consciousness of the 1960s and 70s.

In its broadest definition, ‘natural capital’ describes the entirety of a landscape’s natural assets, the symbiosis of animal, vegetable and mineral that makes life possible. Within the framework of this philosophy, a commercial value can be placed on all parts of our landscape based on the economic, social or environmental outcomes they offer, allowing society to prioritise its desired outcomes.

Many have theorised that natural capital has the potential to:

- incentivise restoration of natural resource condition
- reduce emissions and improve carbon management
- revolutionise ‘agriculture’ as a whole-of-ecosystem producer of multiple services, beyond traditional commodities, and
- significantly broaden the income streams of landholders.

Or so the theory goes.

However, there are a number of difficulties facing those attempting to develop such a

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system, and in fact have frustrated many such efforts over the past 40 years. In particular:

- there is no unified view of what constitutes natural capital
- there is no agreed way of valuing of natural capital, but we know that that value is diminishing
- leveraging natural capital will require a paradigm shift in how society perceives agriculture
- government will need to completely rethink the way they legislate for environmental outcomes.

What is natural capital?

Capital assets take many forms, including manufactured capital (building and machines), human capital (knowledge, skills and health), social capital (relationships and institutions), financial capital (monetary wealth), and natural capital (living and non-living components of ecosystems).

Natural capital is the combined value of our natural ecosystems in which we exist and, directly and indirectly, produce value from. A couple of definitions:

“Natural capital is the world’s stock of natural resources which includes geology, soils, air, water and all living organisms. Many natural capital assets provide people with free goods and services, often called ecosystems services.” (NFF, 2019)

“Ecosystem Services are the goods and services provided by ecosystems that benefit, sustain and support the well-being of people.” (Maynard, 2016)

In essence, natural capital underpins our economy and society. Cattle, sheep and grain producers rely directly on stocks of natural capital to create goods of value to market to Australia and beyond.

However, the issue is that natural capital is more conceptual than concrete, and society lacks a definitive view. This exacerbates the second issue – if we can’t absolutely define what it is, how do we place a marketable value on it?

Society has largely externalised the costs of land degradation, by not paying for the real cost of food and fibre. Consumers have neglected to pay for the upkeep of the natural resource base that produces the food and fibre we all need.

How do you value it?

Anyone who has followed an unlisted company’s float will understand that it is virtually impossible to accurately estimate the value investors will place on a previously untested stock. Valuing natural capital is even more fraught, because there are no comparable companies or stocks and no precedents.

Because most ‘types’ of natural capital have never had a commercial value – indeed, many are still notional – the prospect of calculating their worth in a self-regulating market is currently not possible.

This is exacerbated because the overall value of natural capital is continually being eroded because its value is not being factored in as a cost of production. The natural capital element of our asset systems has been excluded from our decision-making process and the connection between environmental and economic interests has been largely ignored.

Consumers are able to benefit from a greater supply of goods and services at lower prices, because of the underlying discounting of natural assets. Society has largely externalised the costs of land degradation, by not paying for the real cost of food and fibre. Consumers have neglected to pay for the upkeep of the natural resource base that produces the food and fibre we all need.

For almost two centuries, the extraction of nutrients from the land to produce primary commodities has provided producers with inadequate financial surplus to replenish those nutrients. The decline in agricultural land condition has been strongly influenced by the cost-price squeeze.

It is little wonder that from 1984, rural Queensland has been in decline, as debt has underwritten production. ABARES data shows that in 1989, \$1 of debt produced \$2.14 in output. By 2003–04, \$1 of debt produced just \$1 of output. By 2010, it had been slashed to 64 cents – a 70% reduction in less than 40 years (Rees, 2019; RBA 2019).

With financial capital, drawing down too much debt risks bankruptcy. With natural capital, drawing down stock from our natural environment, without allowing and encouraging recovery, will create a social, economic and ecological liability.

In these challenging times of rising input costs, consumer concerns around health, environment and sustainability, resource competition and ecosystem issues, we need to understand the underlying economic value of our natural capital and how to preserve it alongside our other capital assets.

What is ‘agriculture’?

As noted, society continues to cling to a narrow, historical view of what agriculture is – growing things. Society, government and, indeed, our own industry, will need to ‘think outside the box’ when it comes to the way agriculture is ‘defined’ if the natural capital model is to work.

Reducing emissions from agricultural industry and increasing the management and storage of carbon in agricultural lands requires a paradigm shift in societal attitude; from farms being regarded solely as producers of commodities, to being providers of numerous interdependent ecosystem services. Food and fibre production is only one of these ecosystem services.

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Also at play are drivers challenging the sustainability of agricultural production. This paradigm shift hinge are deep-seated structural issues rooted in supply side economics and administration of law under the Australian Constitution.

Where does government regulation fit in?

For natural capital to offer an effective solution, rather than a token, ‘feel-good’ activity, government needs to completely rethink its role in managing climate change.

Governments must move away from a punitive, regulatory approach to vegetation and landscape management – one that focusses on financially penalising bad practice which just serves to increase rural debt – towards a market-based approach that rewards landholders for good practice.

The legal shackles placed on landholders over the last two decades have restricted their ability to develop new cropping areas or improve pasture lands in order to increase productivity and income. Restrictions on vegetation management particularly, have thereby hampered landholders’ ability to improve production and maintain healthy levels of enterprise growth and viability.

Experience here and overseas has proven over time that regulation and punishment is an expensive, onerous, and demotivating way of trying to ensure minimum compliance that completely stifles innovation and best practice. True and effective behaviour change can only occur when stakeholders are appropriately motivated and rewarded, whether financially or in some other way, to continually improving performance. Environmental outcomes are no different.

Furthermore, under the Australian Constitution, the imposition of regulatory controls on land management has been orchestrated by state government, without a requirement to compensate for diminution of property rights or expropriation of property value.

How do we create a viable natural capital solution?

No matter how desirable and effective a natural capital approach may be, it will only become a reality if it is socially, politically and, ultimately, commercially viable.

AgForce believes that an effective natural capital approach would see landholders paid for the ecosystem services (such as carbon abatement and/or sequestration) their properties provide by beneficiaries of these services (such as governments, biodiversity funds, offsets) which will in turn incentivise and accelerate ecological benefits such as reduced greenhouse gas emissions.

At a national level, we must:

- ensure that governments at all levels understand that regulatory control isn't the best pathway to environmental, social or other agreed outcomes
- ensure the community recognises that producers need to be paid fair and equitable returns for the products and services their property provides
- develop a robust process for valuing natural capital assets, ecosystem services, and land management practices
- develop a marketplace that maintains a fair exchange value for natural capital and facilitates transactions between producers and purchasers/beneficiaries through banking and commercial sectors
- establish a vehicle to link industry policy to on-the-ground programs and projects via robust data and evidence-gathering
- establish a Natural Capital Commission, under National Farmers' Federation stewardship, to elevate the challenge of developing market and dimensions, and
- attract support and investment from external sources to delivery on industry and committee needs.

Within Queensland, achieving this requires:

- reform of the tenure, water, vegetation, and management systems

- an infrastructure strategy to guide and hasten the delivery of infrastructure, in particular water and transport, that supports agricultural production, and
- the state's attractiveness for investment in agriculture-based projects needs to increase.

Defining the value of natural capital

AgForce advocates a natural capital approach based on payments to producers for measurable ecosystem services. Once we define what natural capital is and we understand the full breadth of its possible products and services, we can begin to determine what each is worth to our markets and society.

A fundamental challenge for an effective marketplace of ecosystem services is the development of agreed methodologies for defining the service and practical procedures for measuring and clearly demonstrating change. AgForce has already had detailed interactions with the Queensland Government's Land Restoration Fund (LRF) and proposed three priority projects necessary for broadacre agriculture to progress the issue.

The first project seeks to test metrics for valuing natural capital, measuring changes to ecosystem condition and identifying rates of service production within different bioregions. The second seeks to identify the baseline attributes of healthy ecosystems that all stakeholders agree upon, with emphasis on identifying the extent, density and configuration of vegetation across the landscape. The third targets the gathering of scientific and policy positions to negotiate agreement on the best options for Queensland landscapes and rangelands. The first two projects are yet to be supported by Queensland Government.

Developing an effective natural capital market

A commercially sustainable, and self-sustaining, marketplace for natural capital assets and services for every given landscape is possible if we take a natural capital approach.

This is an extremely complex and completely untried system. We don't yet know what the exact steps are to create this market – or when they will be realised – but the process must:

- identify the Ecosystems Reporting Categories that exist – natural or human modified systems representing all ecosystems in the given area
- identify the types of Ecosystem Functions – the biological, geochemical and physical processes and components that take place or occur within an ecosystem
- verify the environmental, social and/or cultural values of a project using the Core Benefits Verification Framework developed in Australia
- identify and measure the Ecosystems Services – the goods and services provided by ecosystems that benefit, sustain and support the well-being of people
- value the Ecosystems Services using monetary or other metrics
- attribute value to the net-worth of natural capital assets (such as vegetation, soils, water resources and geology).

An alternative methodology being trialled by Queensland Government through the Land Restoration Fund is the Accounting for Nature framework.

Redefining the role of government

Traditionally, governments – themselves significant landowners on a global scale – have viewed their role in relation to environmental protections as law-maker and regulator. This has been true of governments of all political persuasions, but in general terms, the further towards the left they lean, the greater their reliance on external regulation.

This has generally resulted in complex, cumbersome, often contradictory legislation that enforces a one-size-fits-all approach to land management. The nett result is poorer environmental outcomes. A classic example is the Queensland Government's draconian Vegetation Management Act which, by making it virtually impossible for landowners to adequately manage vegetation on their

properties, actually decreases the value of natural capital. For example, uncontrolled regrowth leads to less and poorer pasture, increasing erosion and runoff and reducing carbon sequestration.

The failure to recognise – and harness – landowners' attachment to their land, genuine desire to facilitate improved environmental outcomes and vast knowledge of land management built over centuries is not only patronising and demotivating, it is a wasted opportunity. For natural capital to work, government at all levels will have to completely reassess and redefine their role.

In addition to adopting an education- and incentive- rather than a regulatory-based approach to environmental issue, government must:

- increase RD&E investment in conjunction with land managers in developing sustainable farming practices and providing information to industry
- streamline environmental regulations – and ensure legislation between and across levels is complementary and not contradictory
- in-build into legislation mechanisms to gauge its effectiveness and correct or eliminate regulations not found to be meeting environmental objectives and targets
- balance land use competition with mining, energy, urban encroachment, and public conservation in planning processes
- prevent the removal of scientifically demonstrated good quality cropping land (80% of Queensland is now under some form of resource exploration permit)
- ensure that water sector reform aimed at environmental sustainability, such as the Murray-Darling Basin Plan, effectively balances the associated socioeconomic costs.

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- ensure certainty around future availability of water so producers can make sound business decisions
- increase environmentally sustainable water use planning which is vital to production of food and fibre, and
- provide security of land and water rights, for example, the tenure conversion issue highlighted in the Land Tenure Review recommendations.

Not only is the value of remaining natural capital declining, as pointed out previously, so therefore is the agriculture industry's capacity to influence such fundamental societal reform.

In formulating its natural capital project, AgForce is establishing not only a vision but a feasible framework for success that no other organisation,

government or otherwise, can or has provided. We appreciate that, in forging this new path, we will not have it 100% right and that many will have differing, even diverging, views. And the fact that no-one has gone before us means we are not blinkered by convention, and have been able to have a completely fresh way of doing things.

Addressing these items that will provide secure investment certainty for agricultural production and underpin progression of natural capital.

But first, a little background is required on how we got to where we are.

AgForce's unique approach – and why it might work

Building on 'runs already on the board'

Behavioural and attitudinal change programs are amongst the most difficult and slow-moving, especially at the societal level. Yet this, in addition to revolutionising government's view on how to manage climate change and engaging the market to develop a commercially sustainable 'ecological economy', is critical to implementing a successful natural capital program. That is why 'natural capital' is still theoretical, a revolutionary notion, rather than a self-sustaining system backed by appropriate legislation and effective market mechanisms.

AgForce's mission statement – Advancing Sustainable Agribusiness – underlines why we have been at the forefront of voluntary, incentive-based best practice farm management research and extension in Australia for more than a decade. We were integrally involved, along with other agriculture peak bodies and various natural resource management groups, in developing the Queensland Government-sponsored best management practice (BMP) farming programs.

However, the ongoing decline in rural communities due to unrelenting economic pressures, a legacy of unsupportive planning and legislation, and a lack of bold, forward-looking policy choices has seen an increase in rural debt and a decrease in property viability. Not only is the value of remaining natural capital declining, as pointed out previously, so therefore is the agriculture industry's capacity to influence such fundamental societal reform. However, it is critical for the environment and the community – which includes Australia's farmers and the essential food and fibre products that they produce – to begin the conversation.

The uptake of these programs, among member and non-member producers, was extraordinary and real in-roads were being made. It is unfortunate that, after 10 years of effort and progress, the government's attitude to the program fundamentally changed. The BMP programs changed from being ones of willing and voluntary participation and collaboration to ones of regulation and compliance and were discontinued – clearly a retrograde step by a government with a 'regulate first' mindset.

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only an abuse of trust but a clear danger to our members, and AgForce made the heart-wrenching decision to delete the data to safeguard producers from unfair prosecution.

However, although the BMP schemes did not reach full potential, they adequately demonstrated ‘proof of concept’ for voluntary schemes and the willingness of producers to participate in them. For example, the Grazing BMP program was used as a case study for the RMAC Beef Sustainability Framework and delivered aggregated practice data into the Queensland Government’s Paddock to Reef reporting.

And, although the data was lost, the learnings were not (including the need for government to participate as an equal, a collaborator rather than enforcer), placing AgForce in the best position to champion a more contemporary and effective program.

Strange bedfellows often make the best partners

Also at the fore was AgForce’s proven ability to work effectively – if not always ‘comfortably’ – with a range of groups whose often-divergent viewpoints made the collaborations somewhat ‘unlikely alliances’. This capability offered further potential for a new way of doing things. It allowed us to identify and attract strategic partners who could offer the most relevant and constructive contributions rather than merely a shared viewpoint.

In developing its natural capital program, AgForce has partnered with:

- **NAB**, one of Australia’s Big 4 financial institutions and largest listed companies
- the **CSIRO**, the national science research agency

- The **AbCF**, a not-for-profit dedicated to community prosperity through carbon farming
- along industry contributions, for example from NRMs and AgTech providers.

Why is NAB interested?

As Australia’s largest rural lender, NAB has a lot of ‘skin in the game’ when it comes to agriculture and rural communities. Over the past four years, NAB surveyed 10,000 of its agribusiness customers about natural capital risks:

- 91% said soil health was a key business risk
- 85% were concerned about water scarcity and energy costs
- 75% had made recent investments to mitigate a sustainability risk.

So, alongside the obvious environmental and social responsibility benefits, improving NAB’s understanding of the value of natural capital the project will create opportunities for them to improve customer relationships and better support lending opportunities that improve customer productivity and resilience.

NAB commissioned fellow collaborator CSIRO to conduct research into pasture management. The work showed that well managed, diverse perennial and palatable pastures are more resilient to drought and more profitable in the long term. The same research demonstrated that, in the short term, a farmer maintaining good quality pasture is financially indistinguishable from one who is degrading their pasture through over grazing. But in the medium and longer terms, the risks and costs of overgrazing are stark and the cost to rehabilitate is significant. For NAB, ensuring they were able to play a role in supporting customers to protect and enhance pasture quality is a key way of mitigating longer term financial risks and demonstrating their commitment to sustainable land management.

It is also a way to connect with their customers in another way. The launch of the NAB-CEFC Energy Efficiency Bonus demonstrated demand from customers to invest in assets

that address energy risk. Additionally, having a product that supports this demand offers NAB reputational benefits with customers and the broader community.

NAB's involvement in the natural capital project offers them an opportunity to address risks more complex than energy. They are actively looking for partnerships with groups such as AgForce to better understand their financial materiality and provide tools to make it easier for customers to demonstrate good management. The AbCF is a sustainability partner of NAB and regular supplier of Australian Carbon Credit Units with environmental, social and cultural values.

What do Traditional Owners and farmers have in common?

The short answer is a love of the land. There is also a strong desire to see the land and waters being well managed for the next generation to prosper as well. Carbon farming is a new agribusiness with many pastoralists and farmers now earning an income from carbon credits and cattle. Other methods used by farmers such as 'Human Induced Regeneration' are also providing an income for farmers to stay on the land.

Adding genuine value to carbon credits or identified rural commodities with verified environmental, social and cultural outcomes is good for farmers as it acknowledges their pride in achieving outcomes through hard work, and then rewards them in the marketplace with increasingly 'choosy' customers willing to pay a premium. The peer-to-peer, strengths-based approach respects data sovereignty and provides jobs for locals as verifiers (with nationally accredited training and professional support).

A Memorandum of Understanding signed between AgForce and the AbCF in 2018 agreed to:

- establish a code of conduct between AbCF and AQF that supports constructive discussion and collaboration concerning best practice rural land use for the verification of environmental, social and cultural values using the Standard

- increase the financial profitability of rural commodities in the market domestically, and internationally providing linkage to the UN Sustainable Development Goals, through the verification of environmental, social and cultural values
- develop a farmer-to-farmer (peer-to-peer) approach for the verification standard with customised tools that promote rural employment opportunities, recognise local expertise and invest in regional communities
- provide visible support from all collaborators for programs and initiatives (linked to natural capital) that are current or created under the MoU
- to advocate for and promote our mutual aspirations as they relate to the sustainable use of, natural capital and reduction of impact on natural capital
- develop a farmer-to-farmer training program, linking learnings and approach from the now-lapsed Grazing BMP to the current nationally accredited carbon training program that is based on a ranger-to-ranger approach, and
- promote the benefits of carbon farming projects with environmental, social and cultural values for member benefits in the voluntary market.

Work in progress and next steps

There are two streams of work already underway.

The first is a long-term initiative to bring together partners across the agricultural supply chain to facilitate collaboration and drive awareness about the importance of natural capital.

This is being supported, in the short term, by a number of discrete projects being undertaken separately by the four partners – the CSIRO, NAB, AbCF and AgForce – to bring together financial and environmental data in order to better understand the linkages between good natural capital management in agriculture and long-term financial performance.

Specific streams include:

- an ‘audit’ of available (and valid) industry statistics, research, economic, agricultural and environmental datasets, and tools
- the collection of property-level data such as mapped quantifications on ecosystems, assets, land use, production systems, income sources, land condition, soils data, topography, and metrics on growth and senescence
- collection or collation of similar data aggregated to a catchment and state level, including by extrapolation from the property level data.

The outcomes from this data are:

- building the evidence required for accurately valuing natural capital assets
- quantifying the services provided by these assets and social benefits obtained from them
- establishing a marketplace that enables natural capital to be priced appropriately and incentivise landholders to continue to improve the value of these assets
- measures / tools to accurately and usefully track land condition, soil quality, etc.

As technology and connectivity grows, it is anticipated that the quantity and quality of data available will assist ever more accurate and useful systems.

Work will also need to be done to encourage government and industry to develop a coherent natural capital policy that can drive industry valuation and its incorporation into the natural environmental economic accounts. We view the establishment of a Federal Government-aided Natural Capital Commission as a critical part of the solution.

Most importantly and woven through the project, will be projects to promote awareness and acceptance of the validity and effectiveness of natural capital as a self-sustaining economic and ecological tool. Inextricably tied to this will be efforts to assure the community that primary producers actually do care for

their land and want to not just maintain but improve it, that the sustainable management of natural resources is in their interests and is very much a lived experience tied to long-term decisions across the generations.

Conclusion

It is clear that the ‘traditional’ method of environmental protection – government regulation enforced by punitive penalties – is not working and is, in many circumstances, counterproductive.

Given that primary producers recognise the importance of the environment and the unique service it provides for agriculture and for the broader public, there is only one possible reason for this failure. Legislation is poorly conceived, is based on ideology and theory rather than science and experience, and creates a narrow focus on achieving minimum compliance that stifles genuine engagement and innovation.

Australia needs a completely new paradigm when it comes to environmental management, a collaborative framework that harnesses the genuine desire of landowners and other stakeholders to preserve and improve our natural environment and reward them financially for doing so on the nation’s behalf.

Market mechanisms have been proven over a long period to offer effective solutions to a range of commercial, social and, more recently, environmental issues (recycling is a good example). We believe that establishing a system endorsed by the community that allows market forces to achieve this in relation to a range of environmental outcomes is a no-brainer.

Most importantly and woven through the project, will be projects to promote awareness and acceptance of the validity and effectiveness of natural capital as a self-sustaining economic and ecological tool.

This will require several commodities in spades:

- inspiring and driven leaders who can build a compelling case for natural capital and ‘sell’ it to beneficiaries, investors and the wider community

- innovation to develop new ways of thinking and of doing, including societal attitudes to agriculture and market-driven mechanisms to value and trade natural capital assets
- collaboration across sectors, including finance, agriculture, community services, and government and a willingness to work together in compromise to achieve a shared vision
- perseverance and a commitment to reaching our destination regardless of the timeframe, which will be long, nor then many challenges and teething issues we will face along the journey, and
- governments willing to honestly re-evaluate their role and become collaborative equals rather than regulators.

Of all those difficult but ultimately doable asks, it sadly may be the latter where the greatest challenges lie.

About the authors

Michael Guerin is a senior executive with experience working with major corporations, running large farming operations, advancing agricultural research and increasing international trade.

Growing up on a family farm in New Zealand, Mike has held numerous senior executive roles in large corporations throughout this career, including Regional and Rural Banking Managing Director at ANZ, and Managing Director and Chief Operating Officer at Elders.

Michael has been Chief Executive Officer of AgForce since October 2017.

With a mandate to 'Advance Sustainable Agriculture', AgForce represents the Queensland grazing and grains industries. It is a not-for-profit organisation that relies on voluntary membership fees, bequests and other donations to be able to continue its work. With around 4,500 voluntary members, it is Australia's largest state farming organisation.

Rowan Foley comes from the Wondunna clan of the Badtjala people Traditional Owners of K'gari (Fraser Island) Queensland. Rowan is the founding CEO of the Aboriginal Carbon Foundation (AbCF) a not for profit company and Managing Director of the Reducing Carbon Building Communities Fund Pty Ltd.

Rowan arrived in the Northern Territory in 1989 working as a ranger at Uluru – Kata Tjuta National Park and returned in 2005 as the Park Manager living in Mutitjulu community for a total of six years.

The Kimberley Land Council employed Rowan as their first Land Management Officer 1995. He established their Land and Sea Management Unit and negotiated the first Indigenous Protected Area in Western Australia.

Rowan was invited to give a TEDx Talk in Brisbane in 2018, speak at the UNFCCC in Bonn, Germany on carbon farming and attended the Paris Climate Agreement in 2015. The Maori Carbon Foundation established in 2018 in New Zealand has drawn its inspiration and guidance from the AbCF in Australia.

Rowan lives with his family, dog and horses in Alice Springs NT.