NRM Regions Australia: Submission to Agriculture, Land and Emissions Discussion Paper 20 December 2023

NRM Regions Australia welcomes this opportunity to contribute to the discussion on emissions reduction in the agriculture and land sector. As the national representative body for Australia's 54 regional NRM (natural resource management) organisations, our organisations cover all land in Australia, and have a key role to play in supporting the agricultural and land sector transition to a lower emissions future. This submission builds on our earlier contributions to government policy on related issues, including multiple submissions on the reform of the ACCU scheme, the Nature Repair Market, and the Future Drought Fund.

Section A of this submission describes the key areas where regional NRM organisations can support, and add value to, emissions reduction and carbon storage measures in the agricultural and land sectors. The following section then addresses the key questions posed in the Discussion Paper, where relevant to regional NRM organisations.

Section A: Statement on the contribution of regional NRM organisations to emissions reduction and carbon storage in the agriculture and land sector

NRM Regions Australia welcomes the government's scientific assessment of the risk to agriculture and rural communities posed by the changing climate, and their recognition that higher emissions reduction ambition is needed to reduce this risk and take advantage of the opportunities that can come from the transition.

Significant efficiencies in delivering the emissions reduction transition can be achieved by utilising existing organisational infrastructure, relationships, networks, and people that are already based in all agricultural regions of Australia and are skilled at delivering integrated programs that achieve multiple benefits. The regional NRM model was established over 20 years ago because previous ad-hoc or project-based initiatives were preventing whole of system and whole of landscape change. Far from reinventing the wheel, regional NRM organisations are a key part of the wheel - the features and standing capability of regional NRM organisations that can support the transition are described in the section below.

1. Extension support - trusted, skilled, independent advisors in the NRM sector

While many things are needed to support a successful transition towards a carbon neutral agricultural sector, significant investment in extension services to support farmers to develop a low emissions business plan is critical now. Section 5 of the *Australian Government's Agriculture, Land and Emissions Discussion Paper* (the Discussion Paper) describes a number of challenges, and the capabilities that are needed to support the transition, including local evidence to support the rollout and uptake of low emissions technology and practices; the challenge of diverse regions and commodities; and limitations in the scale and breadth of advice in the available workforce across the country. Providing long-term investment for a network of independent extension officers to be deployed through regional NRM organisations (and in partnership with agricultural Industry Bodies and First Nations organisations) would position landholders and communities to make the changes they can now, and set them up to understand the changes they will need to make in the future.

A recent report released by DCCEEW on their pilot Agricultural Stewardship program, which included a carbon farming component and was delivered by regional NRM organisations, found that providing landholders with a consistent contact person to guide them through the process and answer questions was key to enabling their participation. The Independent member for Indi Helen Haines and the National Farmers Federation have also found that landholders are eager for extension support to navigate this complex space. Recent research by Farmers for Climate Action (March 2023) found that regional NRM organisations and Landcare were considered the trusted, independent advisors to support farmers in this area. The Discussion Paper also notes that regional NRM organisations must play a role, stating that "local and regional initiatives will be critical for delivering trusted, place-based information and support to producers and land managers."

Hosting a network of emissions reduction and carbon storage extension officers through regional NRM organisations would also provide multiple additional benefits:

a) Access to an existing network of skilled, capable NRM staff - most NRM staff (over 80%) have degrees in agriculture, NRM, or science, and are skilled in extension provision.
b) Project-ready farmer networks.
c) Opportunities to bring farmers together to talk about emissions reduction and carbon farming and support peer-to-peer learning; this is critical in driving practice change.
d) Trusted, unbiased, technical advice tailored to individual farm businesses.
e) Local connections to other local and related knowledge systems, including First Nations knowledge and science.

f) Specific relevant knowledge - regional NRM organisations are unique in their knowledge and understanding of local landscapes, local and regional climate change impacts, nature-based solutions and carbon farming and environmental market opportunities and constraints. This includes consideration of the benefits and risks arising from the aggregate regional impacts of the transition. For example, alignment of carbon farming projects (for insetting or offsetting) with regional goals, like recovery of regionally threatened ecosystems could provide additional saleable benefits (e.g. biodiversity certificates), while significant expansion of monoculture forestry plantations in a region might pose a risk.

Placing emissions reduction extension positions within regional NRM organisations would also enable the Australian Government to leverage emissions reductions in the agriculture and land sector with other current government initiatives that regional NRM organisations are involved in, including the Future Drought Fund, the Carbon Farming Outreach Program, the Nature Repair Market, and the delivery of the Natural Heritage Trust Climate-Smart Sustainable Agriculture program.

2. Regional NRM planning

To support the transition to agriculture's low emissions future, planning that considers the appropriate regional context will be required. Consideration and incorporation of sustainable agricultural and nature repair goals that are explicitly aligned to emissions reduction and carbon storage enable this. Such objectives could be incorporated into regional NRM plans which have been developed by every regional NRM organisation across Australia. These plans are developed collaboratively with communities to inform the priorities for natural resource management in the given region and aim to:

a) Incorporate the best available environmental, social, cultural, and economic data, along with community and First Nations knowledge. The plans are regularly reviewed (every 5-6 years) and refined ensuring that up to date and context specific information and research is available to inform investment.

b) Provide guidance on priorities for each region to guide investment at a landscape scale, including for strategic protection and enhancement of biodiversity, and for sustainable agriculture outcomes, such as soil health. Alignment of projects with these priorities optimises projects to support a range of interconnected benefits, including biodiversity, water quality, productivity, and social capital, thereby also building resilience.

c) Apply participatory based planning processes - so they reflect the issues and priorities of local communities.

d) Align with existing efforts - including national and state-based NRM policy and legislation, including land use planning and statutory approvals.

e) Reduce risk by involving community and industry stakeholders in a plan for NRM in their region.

f) Build climate adaptation into planning processes, initially through the investment in Climate Adaptation sub-strategies (funded by the Australian Government) in 2014/15 but now incorporating current data, where available, and risk mitigations associated with climate change.

The Discussion Paper notes that "*organisations, including regional natural resource management bodies have experience in landscape-scale planning and providing advice to land managers to assist with property-scale planning. There may be scope for further investment in support services, technology, and data to assist with these land management decisions*." Additional investment in data and information within regional NRM organisations as per the following priorities would further support this work:

g) **Update to Climate Smart Planning Data**

The role of regional NRM planning in supporting both climate change mitigation and adaptation work has been acknowledged previously with the Climate Smart planning investment 10 years ago. Regional NRM organisations worked with NCCARF and CSIRO to incorporate climate projections and implications into their plans. Good data is necessary to inform good outcomes, and while this work is still useful today, we believe another investment along these lines would provide another step change to build upon this continent-wide foundation.

h) **Strategic Sequestration Layer**

Investment in a strategic sequestration assessment layer (where it does not already exist) to increase the capability of regional NRM organisations to align (where appropriate) nature repair efforts with areas of high carbon sequestration offers the opportunity for alignment of multiple government and NRM objectives in the carbon sequestration and nature repair space. This would leverage the existing capacity within regions to undertake planning through updating regional plans/strategies to identify carbon sequestration opportunities, highlight opportunities for co-benefits, and minimise perverse outcomes arising from carbon farming, such as monocultures and/or inappropriate land use.

i) Natural Capital Accounts

A number of regional NRM organisations have invested in, or are exploring opportunities to invest in, regional natural capital accounts. Regional natural capital accounts provide a baseline assessment of the extent and quality of natural capital

assets in a region, which then provides an opportunity to attract investment to improve and protect the health of those assets. Investing in regional natural capital accounts across Australia would help inform and attract private investment to regional areas to help to sequester carbon and protect environmental assets, in line with the government's nature positive objectives. The potential to invest in natural capital accounts has also been flagged through the Australian Government's draft Nature Positive legislation and policies.

3. Collaborative capacity enabled through connected regional NRMs

Collectively, the regional NRM organisations have over 2,400 staff embedded in their communities and working out of more than 100 rural and regional locations covering every part of Australia. NRM staff work with a wide range of stakeholders, including landholders, agricultural industry representatives, state government agencies, local government, First Nations people, Landcare groups and other aligned conservation and land management groups. Our wide reach in regional communities across Australia means regional NRM organisations are perfectly placed to support the transition in a way that considers diverse interests and is aligned with the identified goals of communities, as described through their regional NRM plans.

At a national level, NRM Regions Australia staff work with the Australian Government, agricultural and carbon industry representatives, peak bodies, and the research sector, among others, to connect the dots between numerous programs, policies, and objectives. NRM Regions Australia has significant internal capacity and relationships with those working on carbon farming, natural capital accounting and finance, environmental markets, climate resilience, nature-based solutions, industry sustainability planning, and environmental data and information. A key body of work over the last few years has included working with industry groups including the cotton, red meat, and wine industries to identify and support alignment of key elements of industry sustainability plans with regional NRM plans. This critical coordination and collaboration capacity can be used to support, leverage, and promote emissions reduction and carbon storage opportunities that enable multiple benefits to be delivered to regional communities across Australia.

Regional NRM organisations are also connected to each other through NRM Regions Australia and complementary jurisdictional processes. As the peak body we convene a national bi-annual Knowledge Conference, an annual national CEOs Forum, an annual national Chairs Conference, and multiple communities of practice that meet regularly on topics that include natural capital; carbon farming and environmental markets; bushfires and climate resilience; regional planning and biosecurity. The communities of practice contribute to showcasing success, developing

informative webinars and knowledge-sharing events, and in creating tailored tools and products for adoption by stakeholders.

At a jurisdictional level, NRM Regions Australia also supports regional NRM organisations to connect to each other, including through a fortnightly jurisdictional CEOs working group. Regional NRM organisations are supported through local, jurisdictional, and national connections and collaborative capacity to support the land and agricultural sector to transition to a lower emissions future.

Section B: Response to questions from the Discussion Paper

1) What are the opportunities to reduce emissions and build carbon stores in agriculture and the land? What are the main barriers to action?

Repairing, protecting, and restoring nature, as well as investing in more sustainable agricultural practices that store carbon through soil and vegetation, provide on-farm opportunities to store more carbon right now. These activities have clear public and farm-level benefits. However, regional NRM organisations and others have reported that landholders are extremely confused about the value proposition and the complexity of the processes for undertaking carbon storage and emissions reduction actions now, and what implications there might be for the future for so called 'early adopters' if they exhaust their carbon storage capacity in the absence of a market or regulatory incentive to do so. Many landholders report not knowing what their emissions are (their so-called number) and what they could do to reduce emissions. Landholders are also very confused about whether they should sell their carbon storage capacity through ACCUs or other mechanisms or if they should be trying to 'hold onto' their carbon for insetting if produce markets (or industry targets) start to demand carbon neutrality or other sustainability goals. Demystifying emissions accounting, promoting understanding of options to decarbonise and store carbon and a clear value proposition for why to do so, along with advice on domestic and international drivers for emissions reduction now and in the future, need to be considered and communicated clearly to landholders. In the absence of such clear communication from Government or other reliable/trustworthy sources, the information vacuum may be filled by poor advice, and the necessary transition is unlikely to occur.

Establishment of an Australian Government Ag and Land Sector Emissions Reduction 'hub' that provides current, up to date information and responses to FAQs, while also linking to other reputable sources of information (for example the NRM Regions Queensland/QFF carbon farming handbook) and jurisdictional policies, programs and opportunities to reduce emissions, would be a good first step to enabling action now. Investing in regional NRM organisations to

deliver extension services to support the translation and application of information from the hub, once established, is key to getting action happening on the ground.

2) How can we progress emission reduction efforts whilst also building resilience and adapting to climate change?

We agree with the government's assertion in section 1.3 that biodiversity restoration and nature repair are part of the solution to emissions reduction –in fact, the urgent need to respond to both the climate and biodiversity crises requires a coordinated response. Regional NRM organisations across Australia work collaboratively with partners to restore on-farm biodiversity and manage land sustainably, and we know that landholders participate in these activities to derive a range of benefits. Benefits from nature repair activities include boosted productivity through activities such as tree planting through provision of shade and shelter for livestock, increased populations of beneficial insects, reduced evaporation and increased water use efficiency, improvement in water quality and persistence for livestock, and retention of soil from erosive processes. Natural resource management (NRM) activities and participation in NRM is documented to also improve well-being and social capital (see for example Brown and Schirmer, 2018 https://nrmregionsaustralia.com.au/building-drought-resilience/)

With additional investment, regional NRM organisations are well-placed to support efforts to ensure emissions reduction activities are considered at both a farm-scale to build on-farm resilience and adaptation; and at a regional scale to ensure actions and investment deliver multiple benefits across Australian landscapes and contribute to the public good. This investment to support landscape health can also support the Australian Government to meet their commitments under both the Paris Agreement and Kunming-Montréal Global Biodiversity Framework.

3) Are there initiatives or innovative programs underway that could be applied or expanded on at a national scale?

As previously mentioned, the 54 regional NRM organisations cover the whole of the Australian continent, providing national coverage for the upscaling/extension of government programs in the emissions reduction, nature repair and climate resilience space. Specific Australian Government programs that could easily be scaled up include:

- **Carbon Farming Outreach Program**: the Australian Government is developing a carbon farming and emissions reduction training package that will be delivered by a network of providers, including some regional NRM organisations, across Australia. Where regional NRM organisations were not successful in their bids to deliver the program, the

Government could still draw on their expertise and experience to leverage this investment by:

- Investing in the roll-out of the training to all interested regional NRM organisation staff and other 'trusted independent advisors' to build capacity and understanding among all practitioners that regularly work with landholders.
- Continuing investment in regional NRM organisations to act as knowledge brokers, as well as training providers, in the longer term. This would support ongoing learning and capacity building in the regions, and help to retain staff with that knowledge/experience to roll out further relevant training, for example in the Nature Repair Market.

- **The Agricultural Stewardship Program**

  The Australian Agricultural Stewardship program involved 12 regional NRM organisations in a pilot program to support participation in the government's Carbon plus Biodiversity and Enhanced Remnant Vegetation programs. These programs offered important benefits for landholders- providing a low-risk, supported pathway to consider carbon storage and biodiversity payment programs. The program also provided policy makers with insights into financial and other incentives and enablers that will be required to garner widespread participation in such initiatives. We recommend continuing this program in other regions to help to support and inform emissions reduction, carbon storage and nature repair market programs, as well as enabling abatement activities in the short term.

4) How can the Australian Government bring together existing efforts and new initiatives into one coordinated plan?

Jurisdictions across Australia have roadmaps to net zero, with varying amounts of detail on the contribution of the agricultural and land sectors to decarbonisation. Many of these plans have been developed in consultation with stakeholders from the agricultural and land sectors. At the same time, the Australian Government has significant insights from its own research, including the 2022 CSIRO report *"Australia's carbon sequestration potential: A stocktake and analysis of sequestration technologies"* that can be drawn upon. The plan needs to acknowledge the ambition and targets of all jurisdictions, highlight the key resources and gaps (including technological and financial) required to significantly reduce emissions, and prioritise actions and investment based on those findings.

NRM Regions Australia has welcomed the opportunity to contribute to the Agriculture and Land Sector emissions reduction plan through this submission, as well as the opportunity to participate in a small stakeholder workshop in Canberra on Wednesday 29 November. Setting the plan with reasonably short-term review targets i.e., 24 months, and committing to ongoing stakeholder engagement at the review points, will enable continuous improvement of the plan.

5) What are the most important options to be further adopted or supported, looking in the short and the longer-term?

Climate scientists suggest that significant emissions reductions, rather than carbon storage, must be the focus of efforts if the world is to keep the goal of limiting dangerous warming to within 1.5-2 degrees Celsius increase. Moreover, the risks to agricultural production increase with every small increase in temperature. Given this imperative, and the high contribution of enteric methane emissions from livestock production to the emissions footprint of agriculture and global emissions overall, it seems that rapid escalation of investment in solutions such as feed additives and vaccines to reduce methane emissions from livestock should be a high priority.

Development of cost-effective and deliverable technologies to reduce methane emissions from livestock also offers additional opportunities and benefits for landholders. There are currently limited actions that graziers can take to significantly reduce emissions, which makes them reliant on in-setting their carbon storage potential through vegetation or soil if they want to reduce their overall on-farm emissions footprint. However, reducing emissions from livestock and other significant sources such as fertilisers or more efficient irrigation practices to reduce nitrous oxide greenhouse gases, will allow on-farm carbon storage to be used to offset or abate emissions from hard to abate sectors including some of those covered by the Safeguard mechanism or contribute to the 'mopping up' of carbon dioxide emissions in line with the 1.5 degree goal, whilst also providing landholders with an additional revenue stream that may not be available in the absence of such a solution.

6) What are the practical solutions to increase uptake?

As mentioned in our key points, having clear, accessible, and available information on pathways and benefits of actions landholders can take, as well as having trusted, independent knowledge brokers & extension advisors on the ground to support landholders to incorporate emissions reduction and carbon storage activities into their businesses, will increase the participation of landholders in emissions reductions now.

8) How can the Australian Government better support agriculture and land sectors to:

a) drive innovation,

b) build capacity,

c) ensure the system enables emissions reductions?

Regional NRM organisations have a history of supporting innovation through use of novel technologies, innovative stakeholder engagement approaches, and whole landscape/circular economy approaches to emissions reduction. Some examples of this innovation include:

- The Wimmera Catchment Management Authority's partnership with Federation University as part of the Soils Cooperative Research Centre (Soils CRC), which is using an Artificial Neural Network (ANN) to determine levels of soil organic carbon for cereal farmers and land managers wanting to understand carbon sequestration potential and management.
- NRM South in Tasmania has launched Australia's first blue carbon project, working with a landholder to restore tidal inundation to an area of degraded saltmarsh: https://nrmregionsaustralia.com.au/wp-content/uploads/2022/10/NRM_Blue-carbon-002-1.pdf
- Corangamite Catchment Management Authority (CMA) successfully brokered a partnership between ten local governments (councils) and the regional NRM organisations (CMAs) within the Barwon South West region of Victoria to design and test the feasibility of a circular carbon offsets program.https://nrmregionsaustralia.com.au/wp-content/uploads/2022/10/NRM_Local-govt-regional-solutions-1.pdf

Investing in regional NRM organisations to deliver novel programs will support more coordinated, strategic emissions reductions across the agriculture, land, and other sectors of the economy.

10) A consistent and trusted approach for assessing and reporting emissions is often raised as a barrier to reducing emissions. Is there a role for the Australian Government in addressing this concern, and how can producers and land managers be supported?

As noted in our response to question one, a one-stop shop emissions reduction hub could provide all the information needed for landholders considering their emissions footprint (including recommended emissions calculators) and emissions reduction pathway, and a national network of extension officers based out of regional NRM organisations would provide

the necessary support to help landholders decide what opportunities would work best for them in the context of their whole-farm plan. The benefit of having an information and knowledge 'hub' that links to agricultural industry information and other resources also means that information accessed via the hub can evolve independently of the government.

11) What skills, knowledge and capabilities do you think producers and land managers need to implement change? What information and data would help them make decisions about emissions reductions and sustainable land management in the short and longer-term?

As noted previously, landholders require a clear value proposition for why they will benefit from the change, and accessible information on how to go about it; an Australian Government knowledge hub could provide this information. In the absence of clear market or regulatory drivers, landholders may also need to be incentivised to reduce emissions, and will need support to understand what incentives they are able to pursue; support we think should be provided through a national extension network of regional NRM officers. In addition, the continuation and expansion of programs like the national Agricultural Stewardship program and additional ongoing investment into the Carbon Farming Outreach program provide good opportunities to build on the government's previous work and existing relationships.

Thank you for the opportunity to contribute to the Australian Government's Agriculture and Land Sector Plan. If you have any questions about our submission, or would like to discuss the ideas further, please do not hesitate to contact our Carbon Farming and Environmental Markets Knowledge Broker Rachel Clarke at rachelc@nrmregionsaustralia.com.au or 042222 3930.

Regards,

Emma Jackson, Chair NRM Regions Australia.