



## **NRM Regions Australia Submission to Climate Change Authority Issues Paper- Setting, Measuring and Achieving Australia's Emissions Reduction Target**

NRM Regions Australia welcomes this opportunity to contribute to the discussion of achieving Australia's emissions reduction targets. We appreciate the diversity of content and questions raised in the issues paper, including the multitude of impacts that will occur as a result of the changing climate and our responses to it.

NRM Regions Australia is the national representative body of Australia's 54 regional NRM (natural resource management) organisations. As noted in the issues paper, regional, remote and very remote communities are likely to be more adversely affected by climate change than urban areas of Australia. Over the last few years, regional NRM organisations across Australia have witnessed the destruction of natural environments and horrific adverse impacts on regional communities brought about by extreme weather events, often sequential, including severe drought, and catastrophic bushfire and flood events. We have been dealing with the cascading and compounding nature of these events, knowing that this (or worse) is the new 'normal'.

The core business of regional NRM organisations is to support management of natural resources to deliver social, economic, cultural and environmental benefits to regional communities - all of which are put at higher risk in the rapidly warming climate. These extreme impacts also place at risk the collective ability to sequester carbon through natural systems, as ecosystems are pushed to, and beyond, limits of recovery. For this reason, we fully support the Australian Government in its ambition to become a global leader in climate change action. We also urge the Government to adopt an ambitious 2035 emissions reduction target and deliver net zero emissions sooner than 2050 in line with the best available science on what is needed to maintain global average temperature increases as close as possible to 1.5 degrees Celsius and to avoid the most catastrophic impacts of climate change.

Regional NRM organisations have a key role to play in Australia's climate change response. We already lead and support an enormous diversity of climate change mitigation and adaptation measures, from revegetation to sustainable agriculture, from coastal protection to First Nations fire and land management. NRM organisations work closely with local partners, including local governments and community organisations, providing a strategic viewpoint, access to data and analysis, national and jurisdictional linkages, and continuity, to knit together local actions and priorities into more effective and strategic regional approaches to nature-based resilience and adaptation.

To limit the impacts of climate change on regional economies, landscapes and communities, detailed planning is required. All regional NRM organisations across Australia develop and implement plans to manage and enhance natural resources within their regions to benefit

regional economies, communities and environments. It is an integrated landscape approach. The plans aim to:

1. Incorporate the best available environmental, social, cultural and economic data, along with community and First nations knowledge. The plans are regularly reviewed and refined ensuring that up to date and context specific information and research is available to inform investment.
2. 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 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.
3. Apply participatory based planning processes - so they reflect the issues and priorities of local communities.
4. Align with existing efforts - including national and state-based NRM policy and legislation, including land use planning and statutory approvals.

The role of regional NRM planning in climate adaptation and mitigation work has been acknowledged previously with the Climate Smart planning investment 10 years ago. Regional worked with NCCARF and CSIRO to incorporate climate projections and implications into their plans. 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.

Working with regional NRM organisations to prioritise actions to adapt to, and mitigate, climate change provides a streamlined approach to supporting the ecosystems and communities that are most vulnerable to climate change impacts. The value regional NRM organisations can add, along with suggestions for additional priorities, are described in more detail through the following sections.

### **Conservation/Bio-carbon targets:**

Page 25 of the Issues Paper notes that “ecological conservation and restoration activities can greatly improve local environmental function, with significant benefits for biodiversity, water quality, soil quality, local climate regulation, disaster resilience and more. Healthy natural environments can generally also capture and store more atmospheric carbon as biomass”

NRM Regions Australia has been a long-term proponent of carbon farming projects that deliver additional or co-benefits, called core benefits by First Nations groups. Regional NRM organisations support participation in carbon farming projects for this reason too in line with regional NRM plan goals.

There is a strong need to increase investment into biodiversity and habitat restoration projects that will also deliver carbon sequestration and mitigation benefits. While the Australian Government has ambitions to increase private investment in biodiversity in Australia through the development of the Nature Repair Market, this initiative is yet to be passed into law and will necessarily take some time to attract investment and participation.

It is recommended that the Government consider ways to support more significant investment in nature restoration that will also store carbon, with possible avenues such as:

- Investment in a strategic abatement layer to be incorporated into, and leverage, regional NRM plans, to enable the identification of potential carbon sequestration and biodiversity 'hotspots' for targeted investment, both government and private
- Expansion and continuation of the Australian Agricultural Stewardship Pilot in the short to medium term to continue to build learning and understanding of the support landholders need to participate in environmental markets and enable on-ground action now.
- Direct investment into biodiversity certificates developed through the Nature Repair Market when possible, to provide confidence in the market and a supported pathway for both buyers and sellers.
- Support for regional NRM organisations to build partnerships and collaborate with the private sector to identify and support at-scale projects for nature repair, including aggregated landscape-scale projects that provide greater impact and enable participation.

### **Nature-based solutions for increased climate extremes**

A key strategy for addressing the twin challenges of climate change mitigation and adaptation, and one that is frequently less visible and under-resourced, is to rapidly scale up our investment in 'nature-based solutions': actions that harness the innate benefits of natural resources and ecosystems to reduce emissions and support climate adaptation. For example, wetland restoration and waterway management can provide diverse economic, social and environmental benefits, including, reduced methane emissions, flood mitigation, water retention in landscapes during drought, reduced water treatment costs, improved amenity and recreational opportunities for local residents and visitors, and improved habitat for fauna and flora.

Regional NRM organisations can play a key role in identifying and enabling community supported nature-based solutions. In fact, many of our projects already do this, so working with regional NRM organisations along with industry, such as the insurance and agricultural industries, to maximise the benefits from nature-based solutions makes sense. Recent examples of how regional NRM organisations are innovating in this space include the work of North Coast LLS (NSW) [https://www.lls.nsw.gov.au/what-we-do/our-major-projects/riverbank-rehabilitation-project?SQ\\_VARIATION\\_1388389=0](https://www.lls.nsw.gov.au/what-we-do/our-major-projects/riverbank-rehabilitation-project?SQ_VARIATION_1388389=0) Limestone Coast Landscape Board (SA) <https://www.landscape.sa.gov.au/lc/news/making-every-drop-count-landscape-board-innovative-new-approach-to-water-in-the-limestone-coast> and

North Central Catchment Management Authority (Vic) who are breeding endangered fish in urban stormwater ponds: <https://timesnewsgroup.com.au/bendigotimes/news/little-fish-have-big-future/> .

## **Improving the knowledge base**

A recent comprehensive review of the environmental Protection Biodiversity Conservation Act by Graeme Samuel (2022) found that “decision-makers, proponents and the community do not have access to the best available data, information and science”. Further “There is insufficient capability to understand the likely impacts of interventions made, particularly in a changing climate. Unacceptable information gaps exist, and many matters protected under the EPBC Act are not monitored at all. Poor data and information are costly for all.” The recent Bushfire Royal Commission report also recommended better quality and more complete biodiversity data to prioritise investments in environmental assets.

In response, the Australian Government recently established Environment Information Australia (EIA) to make new and existing information accessible and searchable, and to report on progress on environmental laws and policies. The goal is for the best available trend data to underpin National Environmental Standards, monitoring, assurance, and compliance. This would include supporting the setting, measuring and achieving Australia’s emissions reduction target.

NRM regions will be critical partners and can play a key role in this work. NRM regions currently hold, and continue to collect, a significant amount of environmental data and information through not only the Regional Land Partnerships Project (RLP), a major component of Australia’s National Landcare Program, but also from a range of other public funding sources including state government investment. The value of regional data and information held or used by NRM regions is vast. Improving the quantity, quality and reliability of regional data and information, and supporting systems to align this data with the EIA, would realise significant benefits. These include supporting an enhanced understanding of environmental impacts from on-ground investment; assisting in identifying biodiversity restoration and conservation hotspots for targeted investment; and identifying climate change mitigation and adaptation priorities. In addition, improved and more comprehensive data and information would enable more effective monitoring to track progress towards Australia’s environmental goals, targets, and commitments more accurately. NRM regions are well placed to do this.

## **Preparedness for extreme events – fire, flood, storms and drought**

NRM regions are at the forefront of climate extremes and natural hazard recovery. Our landscapes and natural resources are increasingly impacted by climate change, while at the same time NRM organisations play a crucial role in recovery of natural resources, productive landscapes and ecosystems during extreme events and in their aftermath. This includes providing information to emergency management agencies informing protection of priority natural and cultural assets during emergencies (though more of this is required), prioritising recovery actions for natural resources, and knitting together community networks and resources for immediate, medium term and longer-term recovery of biodiversity, ecosystems, agriculture, private land and waterways. During the Black Summer bushfires, NRM organisations across fire-affected regions played a crucial role in knitting together recovery networks and actions for natural resources, ecosystems and resilient productive landscapes. In addition to protecting and

recovering our natural resources, working with communities through the recovery of natural resources has had significant benefits for community wellbeing and recovery.

The contractual arrangements that regional NRM organisations have with the Australian Government meant that resources could be mobilised quickly - a standing capability. There is more required to enable surge capacity, and to ensure the 'soft' infrastructure of these organisations, knowledge and networks is maintained.

NRM regions also invest over time in essential management strategies to improve the resilience of our natural resources to climate extremes and natural hazards. Actions such as managing weeds and invasive animals, improving connectivity, enhancing vegetation cover and managing waterways ensure that ecosystems and landscapes are strengthened to continue to support a diversity of species and processes through extreme events, are more resistant to damage such as erosion and drying, and allow for natural recovery (e.g. from fire and flood) over the medium and longer term.

One of the key challenges in a changing climate lies in providing sufficient capacity to respond to repeated extreme events, and continuity to ensure essential recovery efforts are maintained over the longer term, and tied to landscape-level and organisational preparedness and resilience.

As climate events become more frequent, unpredictable and extreme, more investment in climate adaptation and standing capability for recovery will be vital to support the ongoing health of our natural resources and ensure our communities continue to benefit.

### **Carbon crediting and the integrity of buffers**

NRM Regions Australia has made a number of submissions to the Australian Government questioning whether currently modelling adequately considers the impacts of the changing climate on generation of Australian Carbon Credit Units, and whether this might also impact whether current buffers are adequate. The FullCAM model is based on a back-ward looking climate forecasting model. Over time the recent historical meteorological data is incorporated, to align projections with the current climate, but not forward looking to align projects with the most up to date climate change projections over the next 25-100 years. As a tool based on FullCAM, LOOC-C (Landscape Options and Opportunities for Carbon Abatement Calculator), which is generally used under the Streamlined Environmental Plantings method to predict carbon yield, also lacks predictive modelling based on the likely future climate change scenarios.

In addition, one of the criticisms of the Human Induced Regeneration method raised during 2022 was that regeneration of vegetation in the more arid areas of Australia is much more dependent on rainfall than grazing management. While we do not wish to comment explicitly on the veracity of this claim, it is likely that over time more marginal agricultural land in central Australia will become increasingly dry, making periodic loss of vegetation cover even more likely.

As the climate warms, the risk of carbon farming projects reversing or failing to meet projected sequestration targets will increase. This increases the risk to both the climate, as more greenhouse gases will be released, and to all carbon market participants, if projected sequestration targets are not achieved or previously stored carbon is lost. Thus, it is critical that better modelling is developed to incorporate best available projections of the impacts of climate change on both the applicability of methods in certain geographic regions, and the impacts on individual projects. This would include consideration of both:

- impacts of increased temperatures on soil and vegetation respiration rates, carbon sequestration, and vegetation persistence; and
- likelihood of increased incidences of extreme weather events, including prolonged drought, heat waves, bushfire, and flooding on all carbon farming projects.

It is acknowledged that the scheme applies a 5% risk of reversal buffer to certain projects, but better modelling is needed to assess the appropriateness of this risk buffer. As the number and geographic extent of carbon farming sequestration projects increases in response to market demand over the coming decades, it is important to consider increasing buffers to account for large scale losses from natural disasters such as the 2019-20 bushfires which are predicted to increase as the climate warms.

Additional measures that could be considered to help reduce risk include requiring carbon farming project developers to demonstrate how climate change is likely to impact on projects, including:

- a risk management plan to minimise impacts for severe climatic events; and
- for soil and vegetation projects, a statement on how climate change has been considered, including (where applicable) in selection of plant species where plantings are a method activity.

Guidance should be issued to ensure such information is provided to landholders and eligible interest holders to assist their decision making.

As provided above we believe that there is room to improve how Australia sets, measures and achieves reduced emissions. This includes building upon the institutional foundations that exist in regional NRM organisations, and regional NRM planning.

Thank you again for the opportunity to provide a submission on the Issues Paper- Setting, measuring and achieving Australia's emissions reduction targets.

For further information please contact NRM Regions Australia CEO Dr Kate Andrews: 0403 604 823. We look forward to ongoing engagement with the Climate Change Authority on these matters.