

# WENTWORTH GROUP

## OF CONCERNED SCIENTISTS

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Submissions  
Climate Change Authority  
Canberra ACT 2600

Dear Climate Change Authority,

### ***Submission to Action on the Land Issues Paper***

We commend the Authority's efforts to find innovative ways in which to strengthen carbon farming in Australia to better coordinate actions that reduce emissions, and provide a financial mechanism to improve multiple environmental outcomes and that benefit agricultural productivity.

While such outcomes will require stronger economic incentives for landscape repair and conservation than presently available, we note the general goodwill that exists amongst rural communities, farmers, indigenous land managers, conservationists, scientists and landholders to embrace such reforms and to restore and uphold healthy landscapes for both Australia's economy and environment.

This submission makes the following key points:

1. Healthy landscapes store more carbon
2. A price on carbon is an economic opportunity for rural communities
3. Going beyond 'lowest cost emissions reductions'
4. There are solutions to encourage carbon offset co-benefits
5. Partnerships are critical to long-term policy success

#### **1. Healthy landscapes store more carbon**

Without global action, climate modelling suggests global temperatures will increase by 4 degrees or more, a level the world has not experienced for around 40 million years.<sup>1</sup> This would have profound implications for Australia – our cities and coastal regions, agriculture, the health of the Australian environment and its people. It is therefore in our nation's self-interest that global greenhouse gas emissions are reduced to hold "the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels".<sup>2</sup> Australia needs to make its contribution<sup>3</sup>. We need a pathway for a net zero emissions economy by 2050. To do this we need deep emissions cuts, we need a price on carbon, and we need stronger incentives to store carbon in the landscape.

The focus of climate change mitigation must be on reducing emissions from energy generation, manufacturing, agriculture and transport. Whilst this is fundamental for reducing Australia's emissions, it is near impossible to achieve the scale of reductions required unless we also harness the full potential of our landscapes to remove carbon from the atmosphere and store it in vegetation and soils. Harnessing this potential presents Australia with an opportunity to transform the way we manage Australia's landscape - repairing degraded land and river corridors, improving the condition of agricultural soil, and conserving Australia's biodiversity.

Healthy landscapes store vast quantities of carbon. CSIRO has estimated the biophysical potential of the Australian landscape to store carbon<sup>4</sup>. While only a proportion of the total potential is practically achievable, if Australia were to capture just 15% of the biophysical potential of our landscape to store carbon, it would offset the equivalent of 25% of Australia's current annual greenhouse gas emissions, every year for the next 40 years<sup>5</sup>.

## 2. A price on carbon is an economic opportunity for regional communities

Food and fibre production provides the backbone of many regional economies, as well as the resource base for the valued-added industries that support regional jobs. A long-term carbon price presents an opportunity to restore landscape health, enhance agricultural productivity and support regional employment<sup>6, 7</sup>.

Realising the co-benefits of storing carbon in vegetation and soil requires Australia to commit to a long-term cap on emissions, to provide long-term investment security to landholders, and to create a sufficient carbon price that covers the cost of landscape restoration<sup>8</sup>. The *Emissions Reduction Fund* has spurred a modest level of investment in revegetation, avoided deforestation and soil rehabilitation, and technology solutions such as capturing methane from piggeries for energy use<sup>9</sup>. However, so long as the government is the only *effective* large-volume buyer of carbon offsets from these projects, the available investment will be constrained.

To realise the full potential of abatement in the land sector, the carbon offset market must be expanded through the creation of an economy-wide price on carbon<sup>10</sup>. Regardless of the type (be it a cap-and-trade emissions trading scheme or energy intensity scheme) the overarching design should create sufficient demand for carbon offset credits. This will encourage carbon offset projects that not only reduce Australia's domestic emissions, but also repair agricultural soils and improve production whilst restoring native vegetation, conserving biodiversity and improving water quality through the mitigation of streambank erosion.

The most recent *Emissions Reduction Fund* auction closed with an average carbon price of \$11.82<sup>11</sup>. Modelling by the CSIRO, ABARES, Climate Works Australia and other reputable institutions suggest that a carbon price of \$25 tonne CO<sub>2</sub>e could have the potential to unlock \$2 billion per annum into carbon farming investments across the continent<sup>12,13, 14, 15,16, 17</sup>. A long-term carbon price would be a transformative economic policy, particularly for rural economies and incomes through, boosting sustainable agricultural intensification and through the fast-tracking of new technologies that contribute to the repair and conservation of the Australian landscape<sup>18,19</sup>.

## 3. Going beyond "lowest cost abatement"

The *Emissions Reduction Fund* is presently designed to purchase "lowest cost abatement". Going beyond "lowest cost abatement" will produce multiple benefits – for people, for regional economies and the environment. Achieving these outcomes requires a suite of institutional arrangements to manage the carbon offsets market so that carbon farming is guided into areas of highest co-benefits, and away from areas of potential high risk such as prime agricultural land and monoculture plantings in water catchments.

Without complementary land use controls and water use accounting arrangements in place, there is a risk that carbon forests could take over large areas of agricultural land, affect water availability, and impact cultural values. Evidence suggests that recent reforms to native vegetation clearing laws, particularly in Queensland and New South Wales, have in many cases reversed the carbon abatement, biodiversity and natural resource management gains from carbon offset projects paid for through the *Emissions Reduction Fund*<sup>20,21</sup>.

Carbon offset projects are investments, and like for all investments Government's role is to put in place sufficient protections for investors – the last thing the land sector needs is another Managed Investment Scheme type failure. The challenge for Australia is therefore to use this new terrestrial carbon economy to drive investments towards improving the health of our agricultural soils, and using the best available science and Australia's existing natural resource management and land use planning systems to protect areas of high conservation significance and high value agriculture, and repair degraded landscapes.

From a branding and reputation perspective, it is critical that Government is mindful of not 'greenwashing' the benefits stemming from its carbon offset scheme. The Carbon Farming Initiatives 'positive list' was a simple means of streamlining project assessment against the 'additionality' requirements, and the negative list was a way of preventing carbon farming activities that have a high potential for perverse outcomes. The Government should reinstate both these lists and also the additionality requirements to reduce the risk of unintended negative consequences both to the scientific-based integrity of the scheme and its reputation.

#### 4. There are solutions that encourage carbon offset co-benefits

The original design of the *Carbon Farming Initiative* encouraged the development of a 'co-benefits index' to quantify the benefits of a given carbon offset project was proposed. This was a leading Australian innovation, and should be reinstated as a way to boost carbon offsets with a premium price where there are real and superior co-benefits. This is particularly important for the voluntary carbon offset market which often seeks projects that go beyond lowest-cost emissions reductions. Such a scheme could also assist farmers and landholders to communicate their positive contribution to land stewardship, a powerful motivation for many.

However, a voluntary market alone is not likely to fully capture the opportunity to achieve environmental and NRM co-benefits. In addition to the co-benefits index, Government should also explore other instruments to encourage private sector investment to better conserve our natural capital, for example:

- Support regional NRM bodies, Landcare groups and others, to 'top up' offset projects with additional incentives to leverage multiple public benefit outcomes;
- Create additional voluntary environmental markets through 'credit stacking' under the carbon farming rules, whereby multiple offset credits (carbon, biodiversity, sustainable agriculture, water quality) can be accredited, banked and sold under international best-practice carbon offset sustainability certification standards (such as the Gold Standard<sup>22</sup> and the Verified Carbon Standard<sup>23</sup>);
- Provide targeted taxation incentives to landholders that are engaged in accredited co-benefits projects on properties identified in regional NRM plans such as having high conservation significance, or other long-term benefits to the community;
- Issue Green Bonds that support climate mitigation and adaptation on the land, such as recently announced by the Queensland Government<sup>24</sup> and certified by the Climate Bonds Initiative<sup>25</sup>;
- Assist in the establishment of farm or sector based stewardship accreditation schemes, such as an *Australian Standard for Sustainable Agriculture*<sup>26</sup> which would include whole lifecycle analyses of energy, water, land and biodiversity inputs underpinning food and farm certification for both Australian grown and imported products.

In addition to incentives that encourage sustainability co-benefits, the underwriting of carbon offset investments through building a system of regionally based, *National Environmental Accounts*, is critical to monitoring the health and change in the condition of environmental assets, and thus banking these co-benefits on a project and credit-by-credit basis. We are encouraged by the meeting of Commonwealth, state and Territory Environment Ministers on the 25<sup>th</sup> November 2016 where "Ministers agreed to work together to develop a common national approach to environmental accounts in 2017" and who noted that "This important work will ensure accurate and reliable information is available to governments, communities and businesses to better understand the condition of the environment and make better decisions"<sup>27</sup>. We also welcome and support Minister Freedenberg's statement with the release of the 2016 Australian State of the Environment Report that he has "committed – along with state and territory environment ministers – to develop more detailed environmental accounts for Australia to build this capacity to better understand our environment and how best to protect it."<sup>28</sup>

Though many of these incentives and initiatives will require initial government investment, there are ways in which to encourage co-investment by the private sector, and thus long-term sustainability of a well design carbon offset scheme. Green bonds, impact investment, public-private-partnerships, seed funding and setting up a robust stewardship accreditation are just a few examples. Government should consider ways in which to get the private sector more actively involved.

## **5. Partnerships on the ground are critical to long-term policy success**

There are 56 regional NRM organisations (including Catchment Management Authorities) across Australia with a long history of delivering action and outcomes on the ground, including for the *National Landcare Programme* which has a strategic objective of increasing carbon stored in soils. Regional NRM plans coupled with land use plans can help identify and manage community and environmental benefits and impacts from carbon farming. Governments should use these existing regional natural resource management institutions and state, territory and local government land use planning schemes to direct carbon offset investments to achieve these outcomes across the Australian landscape.

Existing regional NRM plans identify priorities for working with land managers to invest in improving biodiversity, soils, water and other natural resources. Existing land use plans (and development approval processes) implemented by state, territory and local governments regulate land use tenure and zoning, therefore where and how land use changes, and how land is managed. The challenge for governments is to link the carbon offsets markets with NRM plans and land use (zoning) plans. Both NRM and land use planning, when done well, involve communities and stakeholders in determining where and how land should be used and managed to achieve a variety of social, economic and environmental objectives.

The most effective approach to optimising carbon farming offsets at the appropriate scale is for state, territory and local governments to link regional NRM plans across Australia to land use planning schemes and zone land according to its suitability for carbon farming offsets<sup>10</sup>. Land use planning schemes can then guide carbon farming offsets into areas of highest benefit and away from areas of risk, without significantly undermining the carbon market.

Sincerely,

**Mr Peter Cosier**

On behalf of the Wentworth Group of Concerned Scientists

## Notes and References

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<sup>2</sup> United Nations Framework Convention on Climate Change, 2015. *Durban Platform for Enhanced Action (decision 1/CP.17): Adoption of the Paris Agreement*. UNFCCC, Bonn.

<sup>3</sup> Australian Government, 2010. *Submission to the Copenhagen Accord*, United Nations Framework Convention on Climate Change. Australian Government, Canberra.

<sup>4</sup> Commonwealth Scientific and Industrial Research Organisation, 2009. *Analysis of greenhouse gas mitigation and carbon biosequestration from rural land use*. Eds. Sandra Eady, Mike Grundy, Michael Battaglia and Brian Keating. Queensland Premiers Climate Change Council, Brisbane.

<sup>5</sup> Wentworth Group of Concerned Scientists, 2009. *Optimising carbon in the Australian landscape: How to guide the terrestrial carbon market to deliver multiple economic and environmental benefits*.  
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<sup>6</sup> Wentworth Group of Concerned Scientists, 2015. *Blueprint for a Healthy Environment and a Productive Economy Technical Paper 2: Using Markets to Conserve Natural Capital*. www.wentworthgroup.org

<sup>7</sup> Treasury, 2011. *Strong Growth, Low Pollution: Modelling a Carbon Price*. Commonwealth of Australia, Parkes.

<sup>8</sup> The Allen Consulting Group, 2001. *Repairing the Country: Leveraging Private Investment*. Business Leaders Roundtable, Canberra.

<sup>9</sup> Emissions reduction project register, available at: <http://www.cleanenergyregulator.gov.au/ERF/project-and-contracts-registers/project-register>

<sup>10</sup> Wentworth Group of Concerned Scientists, 2011. *Submission on the Carbon Credits (Carbon Farming Initiative) Bill 2011*. www.wentworthgroup.org

<sup>11</sup> Emissions Reduction Fund Auction April 2017: <http://www.cleanenergyregulator.gov.au/ERF/Auctions-results/april-2017>

<sup>12</sup> Polglase, et al. 2013. Potential for forest carbon plantings to offset greenhouse emissions in Australia: economics and constraints to implementation. *Climatic Change*, 121 (2), pp 161-175.

<sup>13</sup> Climate Change Authority, 2014. *Reducing Australia's Greenhouse Gas Emissions - Targets and Progress review. Final Report*. Australian Government, Canberra.

<sup>14</sup> Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), 2014. *Catchment Scale Land Use of Australia 2014*. ABARES, Canberra.

<sup>15</sup> Evans et al, 2015. Carbon farming via assisted natural regeneration as a cost-effective mechanism for restoring biodiversity in agricultural landscapes. *Environmental Science and Policy*, 50 pp 114-129.

<sup>16</sup> ClimateWorks Australia, Australian National University, Commonwealth Scientific and Industrial Research Organisation, & Centre for Policy Studies, 2014. *Pathways to Deep Decarbonisation in 2050: How Australia can prosper in a low carbon world: Technical report*. ClimateWorks Australia, Melbourne.

<sup>17</sup> Commonwealth Scientific and Industrial Research Organisation, 2015. *Australian National Outlook 2015: Living standards, resource use, environmental performance and economic activity, 1970-2050*. CSIRO, Canberra.

<sup>18</sup> Garnaut, R. 2010. Climate change and the Australian agricultural and resource industries. *Australian Journal of Agricultural and Resource Economics*, 54, pp. 9-25.

<sup>19</sup> Hatfield-Dodds, S. and Adams, P. 2007. *Beyond the Double Dividend: Modelling the impacts of achieving deep cuts in Australian greenhouse gas emissions*. Paper presented at the Conference of the Australian Agricultural and Resource Economics Society, Queenstown, New Zealand, February 2007.

<sup>20</sup> The Wilderness Society, 2015. *Climate Change and Australia's Tree Clearing Crisis*. TWS, Hobart.

<sup>21</sup> Taylor, 2015. *Bushland destruction rapidly increasing in Queensland*. WWF, Sydney.

<sup>22</sup> Gold Standard: <http://www.goldstandard.org/our-work/what-we-do>

<sup>23</sup> Verified Carbon Standard: <http://www.v-c-s.org/about-vcs/what-we-do/>

<sup>24</sup> Media Statement: <http://statements.qld.gov.au/Statement/2017/2/15/green-bond-certification-to-support-environmentally-responsible-projects>

<sup>25</sup> Climate Bonds Initiative: <https://www.climatebonds.net/>

<sup>26</sup> Wentworth Group of Concerned Scientists, 2015. *Blueprint for a Healthy Environment and a Productive Economy Technical Paper 2: Using Markets to Conserve Natural Capital*. [www.wentworthgroup.org](http://www.wentworthgroup.org)

<sup>27</sup> Agreed Statement: <https://www.environment.gov.au/system/files/pages/4f59b654-53aa-43df-b9d1-b21f9caa500c/files/mem-meeting5-statement.pdf>

<sup>28</sup> Media statement: <https://www.theguardian.com/commentisfree/2017/mar/07/state-environment-report-bright-spots-much-more-to-do>