

**Standing Committee on the Environment and Energy**

Answers to questions on notice

**Agriculture, Water and the Environment Portfolio**

**Committee:** Standing Committee on the Environment and Energy

**Inquiry:** Climate Change (National Framework for Adaptation and Mitigation) Bill 2020 and Climate Change (National Framework for Adaptation and Mitigation) (Consequential and Transitional Provisions) Bill 2020

**Question No:** 1

**Hearing Date:** 24 March 2021

**Division/Agency:** Climate Adaptation and Resilience Division (CARD)

**Topic:** Blue carbon systems

**Hansard Page:** 6

**Question Date:** 24 March 2021

**Question Type:** Spoken

**Mr Wilson asked:**

Mr JOSH WILSON: I am particularly interested in the blue carbon world. Understandably we have a predominantly terrestrial focus. But is there anything that you can say about the work that's being done to look at not just ocean warming but particular marine heatwave events? I know that in Western Australia we had a bad one in 2011 and some were saying that we're at risk of one now. Early this year I know there were some indications that the temperatures off the Western Australian coast were pretty bad. The 2011 heatwave resulted in a really significant loss of seagrass and damage to kelp. When forests catch fire, we focus on the loss of fixed carbon into the atmosphere. That sort of impact in the marine environment is pretty stark. So is there anything that's being done at the moment to look at that and consider adaptation in the marine ecosystems?

Ms Stuart-Fox: Yes. There is extensive work underway to protect the barrier reef, to protect blue carbon systems—so seagrass systems, mangroves. I talked about the development and transplanting of heat-resistant corals, for example. We can provide you with extensive information on the details of that work and the value of that work.

Mr JOSH WILSON: I'd appreciate that.

**Answer:**

- The Australian Government is taking action to help the Great Barrier Reef adapt and recover from coral bleaching caused by rising ocean temperatures.
- In April this year, the government announced the next phase of the Reef Restoration and Adaptation Program (RRAP), following a comprehensive \$6 million feasibility study led by the Australian Institute of Marine Science.
- This innovative and ground-breaking Program will put Australian reef researchers and managers at the cutting edge of global efforts to help coral reefs adapt to climate change.
- The government is committing \$100 million through the \$443.3 million Great Barrier Reef Foundation – Reef Trust Partnership with a further \$50 million in research and scientific contributions from the consortium partners. Ten per cent of the Reef Trust Partnership funding will be allocated to Traditional Owner-led restoration and adaptation activities.
- The Great Barrier Reef Foundation proposes to raise another \$100 million in philanthropic donations from the private sector, with R&D providers committing to a

matching \$50 million in-kind investments, lifting overall investment in this critical effort to \$300 million.

- This phase of RRAP will investigate 43 technological interventions to see if they can be successfully deployed on the Reef, at scale.
  - : These include possibilities such as seeding reefs with coral larvae that are more resilient to warmer waters; improving coral larvae survivability; and an ambitious concept to shade and cool large areas of reef at risk of bleaching, by spraying microscopic saltwater droplets into clouds to make them more reflective of sunlight.
- The Great Barrier Reef Foundation's Raine Island Recovery Project is bringing together Traditional owners, science, government and business to ensure a future for green sea turtles.
  - : The project is restoring turtle nesting habitat, installing fencing to reduce fatal cliff falls, rescuing fallen and trapped turtles and tracking turtles thousands of kilometres to learn how to help them, while also applying 60,000 years of traditional knowledge.
  - : Activities also help protect endangered sea birds such as the Red-tailed tropicbird and protect and restore this vital ecosystem.
- Climate adaptation in marine ecosystems is also being supported through the National Environmental Science Program (NESP). The NESP is a long-term commitment by the Australian Government and funds environment and climate research through an investment of over \$145 million from 2014-15 to 2020-21, and a further \$149 million from 2020-21 to 2026-27.
- Outcomes from projects under the first phase of NESP include:
  - : The Marine Biodiversity Hub worked with Magana Indigenous rangers to assist the recovery of seagrass meadows lost at Shark Bay following the extreme marine heatwave in 2010/11.
  - : Research from the cross-hub collaboration project, *Assessing mangrove dieback in the Gulf of Carpentaria*, helped improve understanding of extent, patterns, condition, trend and the recovery of dieback affected mangroves to inform monitoring and management responses.
  - : The Tropical Water Quality Hub identified genetic markers that underpin bleaching tolerance in coral. This research can be used to identify the corals most likely to resist bleaching on reefs and assist in transplanting and restoration.
- Australia is leading the way on measurement and accounting of oceans and coastal blue carbon ecosystems:
  - : As part of the Environmental Economic Accounting National Strategy, Australia is leading regional efforts to develop integrated measurements of biodiversity, livelihood and climate benefits against economic indicators.
    - Under the High-Level Panel for a Sustainable Ocean Economy, Australia is leading global efforts to develop national environmental economic accounts for oceans (ocean accounts), and has committed to develop a complete sequence of national ocean accounts.

- Australia works with global experts on ocean accounts, including the UN Statistical Commission, Global Ocean Accounts Partnership, and the UN Economic and Social Commission for Asia and the Pacific.
- : Australia is a founding member of the International Coral Reef Initiative and is supporting its Global Coral Reef Monitoring Network (\$1 million) to help monitor coral reefs for protection from climate change.
- : Australia holds world class expertise in measurement, reporting and verification of land-sector greenhouse gas accounting, and is one of only a few countries to include coastal wetlands in our international carbon reporting under the UNFCCC. We share our expertise through capacity building in countries in our region and via knowledge exchange in international partnership.
- Australia is leading several international engagements on coastal blue carbon protection and restoration, including bilateral programs with the Indo-Pacific (Papua New Guinea, Fiji (\$6 million); Indonesia (\$2 million); and Sri Lanka (\$300,000)) and the Indian Ocean Rim Association (IORA) Blue Carbon Hub (\$750,000). These initiatives are supporting the inclusion of blue carbon in national climate change policies, providing capacity development in carbon measurement, demonstrating on-ground project viability for blue carbon protection and restoration, and building mechanisms for blue carbon market revenue.
- Australia has led the International Partnership for Blue Carbon (IPBC) since its inception and launch at the 2015 United Nations Conference of Parties in Paris (COP25). In that time the partnership has grown to 48 partners which include NGOs, research organisations and government agencies across 17 countries. Partners work under a joint vision to protect and restore blue carbon ecosystems by working collaboratively and supporting each other on international commitments, national policies and on-ground project development.