

SHARK BAY — SEAGRASS REHABILITATION

Grievance

MR R.S. LOVE (Moore — Leader of the Opposition) [9.40 am]: I rise today to grieve to the Minister for Environment concerning seagrass rehabilitation in Shark Bay. Brother and sister Liam and Jade Standen-Ridgley's family owns and operates a small ecotourism business in Shark Bay specialising in wild dugong encounters from their vessel *Aristocrat 2*. This business, in conjunction with the Indigenous traditional owners of Shark Bay, the Malgana rangers, is working hard to self-fund a venture to restore some of the 1 000 square kilometres of seagrass that was destroyed by the catastrophic marine heating event in 2011. During this heating event, the water temperature rose to 30 degrees Celsius, the perfect temperature for algal bloom to thrive. This algae attacked the seagrass and impeded the chain of photosynthesis, turning it black and restricting sunlight to the sea floor. As a result, there was a loss of 1 000 square kilometres of the world's largest seagrass meadows—up to 37 per cent of this huge carbon sink. Globally, seagrass meadows are degrading at a rate of seven per cent per annum. The statistics on the Western Indian Ocean remain vastly unknown due to a lack of research and isolation, which is another priority of Jade, Liam and the family.

Since the 2011 marine heating event, the water clarity has returned to normal levels, but, as a consequence, we have been left with an eroding underwater desert. This has affected much of the marine life, including fish, prawns, crab stocks, turtles and the much-loved dugongs. We are very lucky in Western Australia to be home to the Shark Bay World Heritage area, one of the world's largest seagrass meadows, spanning 4 000 square kilometres and home to 12 species of seagrass. Thanks to research from the University of Western Australia and Flinders University, we now know that we are also home to the world's largest single living organism—a 180-kilometre-long seagrass plant. Why is this important? One square kilometre of seagrass is 270 per cent more effective as a carbon sink than a terrestrial forest. Although it makes up only 0.2 per cent of the world's oceans, they are responsible for absorbing 10 per cent of the carbon.

In 2023, *Aristocrat 2*, along with UWA and the Malgana rangers, was granted a licence to lay 2.5 kilometres of snaggers onto protected dugong banks that were deemed fit for restoration. During this restoration process, 1 600 snaggers, or 37 tonnes, were laid. To fill sandbags with 37 tonnes of sand is very labour-intensive and time-intensive work, as those sandbags, which are called snaggers, were each filled by hand with 30 kilograms of sand from a hopper. This manual labour was done by volunteers, the rangers and *Aristocrat 2* crew and staff. I have seen the hand-sewn bags used by the *Aristocrat 2* team to carry out the restoration. A number of items have been purchased, including an industrial sewing machine and five rolls of hessian—all out of their own funds. That is not to mention the hours that Jade and Liam's dad, Greg, had put into sewing them together. These sandbags were then deployed onto the decimated seagrass banks via a chute from the stern of *Aristocrat 2* in seven deployments. Snorkellers then arranged the snaggers on the seabed. Sandbagging is a proven, non-invasive and highly successful method of restoring seagrass habitat. Currently, 1 000 square kilometres of the sea floor lies barren. Seeds released from nearby meadows that are carried across by the currents cannot settle and take root due to the nature of the sea floor and lack of cover. The snaggers provide a place for those seeds to take root and grow. Sandbagging is far more economical than alternatives such as translocating and does not distribute foreign seabed meadow to other locations. It costs only five to 10 per cent of the cost of translocating and can be done on a very large scale.

The success of the efforts of *Aristocrat 2*'s crew and staff were shown through the tremendous result that saw 80 per cent of the snaggers have surviving seedlings in the months post-deployment—an extremely positive result. They have also recently purchased a jet boat and refitted the vessel to carry out sandbag deployment in the future. This entire effort by the *Aristocrat 2* crew and staff and the community has been funded entirely by Jade, Liam and the family business. They have not applied for any government grants because the licensing has proven to take so long. They were unavailable to apply for available Department of Biodiversity, Conservation and Attractions grants without that licence. Because of this, they have had to significantly reduce the goal of laying sandbags across 10 hectares due to time constraints. Nonetheless, they have set a target of two hectares for this year, which, although smaller, still shows their persistence in continuing to take action. I also note that due to the lack of availability of grants, they will be forced to make the bags by hand yet again, which is a slow and very tedious process. Next year, they have their sights set on laying 20 hectares to make up for the backlog this year, with an estimated cost of about \$600 000.

I know that I am not telling the minister anything that he does not know, but seagrass serves as an extremely important breeding ground for species such as the blue manna crab, squid and tiger prawn, and countless species of fish, and is the habit of the endangered dugongs. Shark Bay is home to 10 per cent of these vulnerable creatures; therefore, it is imperative that we do everything we can to protect them. We know that they are slow-breeding animals, and we see the ongoing effect on, and the current low point in, the population due to a lack of food source available to support the existing population.

If Jade and Liam and their family-operated business are unable to obtain the necessary licences in a timely fashion, they will not be able to carry out their work and they will not be able to secure government and/or non-government grants to support their vital work in sustaining our dugong population. I ask that the minister and his department do everything they can to facilitate the issuance of licences and the consideration of funding for this restoration work. I thank him for taking this grievance.

MR R.R. WHITBY (Baldivis — Minister for Environment) [9.46 am]: I thank the Leader of the Opposition for the grievance. I want to make it clear in my opening point that the Cook government is committed to tackling climate change. We know the importance of the part of the world that the member is talking about because it was a Labor government that listed Shark Bay as a World Heritage site in 1991. It was a Labor government that recognised its unique and exceptional beauty and its extraordinary wildlife and ecosystems, which the member mentioned. It is the Cook Labor government that is taking sensible and practical measures to address the impacts of climate change. I appreciate what the member has said today and, from the way he speaks about the environmental values, he appears to have had a green conversion. I welcome that and I hope that that sense of protecting the environment can be replicated for other parts of the state where we are also trying to protect the marine environment. I welcome that development in his approach.

Mr R.S. Love: Just on that, minister, the marine heat wave and the loss of seagrass was right up and down the west coast and drastically affected the whole community.

Mr R.R. WHITBY: Absolutely. It impacted the Penguin Island penguins. It almost wiped out that population, so it was a severe event.

Our government has embedded climate into government policy, investing significantly to deal with the impact and challenge of climate change. As I said, Shark Bay was inscribed as a United Nations Educational, Scientific and Cultural Organization World Heritage site in 1991, meeting criteria relating to natural values representing evolutionary history, ongoing ecological and biological processes, exceptional natural beauty and wildlife refuges. Shark Bay covers approximately 2.2 million hectares and is inhabited by over 320 species of fish; 80 coral species; threatened marine reptiles, including turtles and two critically endangered sea snake species; migratory birds; and marine mammals, including dolphins, whales and a significant proportion of the world's dugong population.

The extensive seagrass banks of Shark Bay are of particular significance, as the member rightly pointed out, with the Wooramel bank being the largest seagrass bank in the world. Additionally, by restricting water flow, seagrass banks in Shark Bay create unique hypersaline environments that provide habitat for marine life, including dugongs. Seagrass meadows play an important ecological and economic role in supporting an array of marine fauna. Seagrass meadows can store up to twice as much carbon as equivalent areas of terrestrial forests and play an important role in reducing global greenhouse gas emissions.

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Seagrass restoration provides potential long-term blue carbon opportunities, and I take the opportunity now to strongly encourage the commonwealth Clean Energy Regulator to consider publishing a methodology to support seagrass restoration's eligibility for Australian carbon credit units.

Western Australia's seagrass meadows have been impacted by climate change. We discussed the marine heatwave from 2010–11. I express my appreciation of the passion, commitment and hard work of Jade and Liam in what they are trying to achieve. I am aware that a representative of Perfect Nature Cruises met with my policy officer in February and was given detailed advice on the best process to apply. I have been advised that my office is not aware of any further follow-up from the proponent seeking additional information after this meeting.

The Department of Biodiversity, Conservation and Attractions protects and manages seagrass meadows within marine parks. The evaluation of activities in protected areas such as Shark Bay are assessed on a case-by-case basis due to the unique ecological characteristics and sensitivities of the location. DBCA is working to support organisations that seek to engage in seagrass restoration in Shark Bay. I can advise the Leader of the Opposition that in June, DBCA provided approval to the operators of *Aristocat 2*, Perfect Nature Cruises, under the Conservation and Land Management Act 1984 to undertake a one-year research trial over a requested area of 0.15 square kilometres. At that time, the Shark Bay World Heritage Advisory Committee informed Perfect Nature Cruises that a referral to the commonwealth government under the Environmental Protection and Biodiversity Conservation Act 1999 is likely required for this trial due to the environmentally significant location of the project. I am not aware of the specific approvals required under the EPBC act, but would happily provide further information to the Leader of the Opposition upon seeking a request for that information from my department. We will follow that up.

Seagrass restoration is complex and a scientific report on the trial is required to demonstrate the outcomes and provide a basis for an extension of the trial. If the Leader of the Opposition would like to provide my office with

more detailed information on Perfect Nature Cruises' engagement with DBCA, I will happily raise the issue directly with the director general. It is my expectation that land and sea managers such as DBCA will assess applications in a timely manner to ensure that we can fully leverage the opportunities that come from private investment in the health of our oceans.

The Cook Labor government recognises the ecological, cultural and economic values of Shark Bay and is providing support to organisations that are seeking to undertake the complex activity of seagrass restoration. Hang on. I think I have picked up the wrong piece of paper. I have completed my response to the Leader of the Opposition's grievance, and I think I have given him some avenues to come back. I thank him for the grievance.