MEDIA STATEMENT **Thursday 23 July 2020**

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OVERLOOKED BLUE CARBON FOUND IN KELP FORESTS

Researchers from The University of Western Australia have discovered that Australia's biggest reef contains the equivalent of locking up the annual carbon emissions from one million Australians and, in the process, removing the emissions of almost 100,000 Australians from the carbon cycle.

Vegetated ocean habitats capture and store large amounts of carbon dioxide, termed 'blue carbon' and researchers from UWA's Oceans Institute and School of Biological Sciences have found that a substantial amount of this blue carbon is held in Australia's kelp forests.

The study, published today in *Scientific Reports*, reveals that kelp forests along Australia's Great Southern Reef contribute more than 30 per cent of total blue carbon stored and sequestered around the continent, and approximately three per cent of the total global blue carbon on Earth.

The reef covers more than 71,000km of coastline along the southern half of Australia, from Kalbarri in WA to northern New South Wales and including Tasmania.

The researchers found that kelp forests covered up to 7.1 million hectares, storing 10.3–22.7 million tons carbon and contributing 1.3-2.8 million tons per year in sequestered carbon.

The ability of vegetated coastal ecosystems to store and sequester carbon has led to their increasing inclusion in global carbon budgets and carbon offset schemes.

However, blue carbon from kelp forests has been overlooked in these evaluations, which have been limited to tidal marshes, mangrove forests and seagrass beds.

The researchers determined the continental-scale contribution to blue carbon from Australia's kelp forests by measuring their extent, biomass and productivity across the entire Great Southern Reef.

Dr Karen Filbee-Dexter said the study added to growing evidence that kelp forests could help mitigate climate change by drawing down atmospheric CO_2 and storing it as organic carbon.

"These ocean forests are often overlooked," Dr Filbee-Dexter said.

"Kelp forests are astonishingly productive and have great potential to solve some of our greatest challenges, including increasing the world's carbon sinks."

Associate Professor Thomas Wernberg said the omission of kelp forests from blue carbon assessments significantly underestimated the carbon storage and sequestration potential from vegetated coastal ecosystems globally.

"It is an excellent example of how seaweed, which many people don't think much of, actually makes a significant positive contribution to our society," Professor Wernberg said.

MEDIA REFERENCE

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