



20 March 2015



Greenfleet Submission – Draft Gippsland Regional Coastal Plan 2015-2020

Thank you for the opportunity to make a submission to the Gippsland Coastal Board's draft Gippsland Regional Coastal Plan 2015-2020.

Greenfleet notes and supports the Plan's Vision for "a healthy and sustainable coast for current and future generations" and its significant focus on adapting to a changing climate and the protection of coastal ecosystems and habitats.

Greenfleet is a registered environmental charity and not-for-profit organisation whose mission is to protect our climate by building our native forests. We are dedicated to helping the community implement practical climate action through the encouragement of individuals and organisations to both reduce their greenhouse gas emissions and offset remaining emissions through the establishment of a range of biodiverse native forests across Australia.

Greenfleet is constantly appraising new ways to improve our effectiveness in delivering the most efficient and environmentally beneficial offset systems. To this end, we are currently exploring the potential benefits of coastal ecosystems, such as mangrove forests, seagrass meadows or intertidal saltmarshes, as an alternative to terrestrial forests as a means by which to sequester atmospheric CO₂.

Blue Carbon is the term now being used to describe the carbon stored in these types of vegetation and their sediments, which are understood to sequester carbon more effectively and more permanently than terrestrial forests.

Greenfleet believes that the inclusion of a reference in the Gippsland Regional Coastal Plan under *Section 2.1 Environmental values*, to the capacity of coastal vegetation and sediments to sequester carbon, would strengthen the Plan. In addition, the inclusion of a reference in *Section 3.5 Emerging markets* to the potential for Blue Carbon projects to deliver real and positive coastal environmental outcomes would further ensure the Plan captures an emerging industry that, unlike the energy industries listed (geothermal and carbon capture and storage), does not present a threat to natural and social values.

Please find attached some additional information on Blue Carbon that has informed our work to date. We would be very pleased to discuss the potential of blue carbon further with you should you have any questions.



Blue Carbon Initiative

...the role of coastal ecosystems in climate change mitigation

Background

Greenhouse gas emissions from human activities are changing the world's climate and reducing them is at the centre of current climate change discussions. However, the critical role of oceans and their ecosystems has been vastly overlooked.

Fifty-five per cent of the atmospheric carbon captured by living organisms – as UNEP's 2009 report *"Blue Carbon – The role of healthy oceans in binding carbon"* noted – is taken up at sea. Between 50-71% of this is captured by the ocean's vegetated "Blue Carbon" habitats - mangroves, salt marshes, seagrasses, and seaweed - which cover less than 0.5% of the seabed, but therefore play an important role in the world's climate and in mitigating change. These habitats, the report adds (while highlighting the considerable uncertainty surrounding estimates and the level of understanding of their carbon storage) sequester between 114 and 328 Teragrams of carbon per year. Another 2009 report, by Laffoley and Grimsditch, synthesized current scientific information on carbon sequestration in coastal ecosystems and highlighted their importance in the global carbon cycle (www.iucn.org/dbtw-wpd/edocs/2009-038.pdf). UNEP and IUCN collaborated in publishing both these reports, which complement each other in providing general information and highlighting the considerable gaps in knowledge on the value of coastal ecosystems for sequestering carbon. Further seminal reports by the World Bank and Duke University have further highlighted the importance of coastal ecosystems in mitigating climate change.

These rates of carbon sequestration and storage are comparable to and often higher than rates in carbon-rich terrestrial ecosystems such as tropical rainforests or peatlands. Unlike most terrestrial systems, deposition of carbon dioxide in coastal ecosystem sediment can continue over millennia. Current rates of loss of mangroves, seagrass beds and salt marshes, driven largely by human activities such as conversion, coastal development and over harvesting are more than twice as high as the rate of rainforest loss. This is of considerable concern with respect to their role in carbon sequestration and emissions.

The response

Halting the decline of the Blue Carbon sinks is a missed opportunity in the current portfolio of climate change mitigation strategies. At the moment, there are no international regulatory frameworks or conventions to protect the value of coastal and marine ecosystems for sequestering carbon and mitigating climate change. Maintaining and managing Blue Carbon ecosystems both provides the global community with an additional tool for mitigating carbon dioxide concentrations in the atmosphere, and maintains the valuable ecosystem services they supply to local communities – including protection against storm surges and sea-level rise (important for adaptation to climate change), food security gained from fisheries, revenue from tourism and the potential medicinal value of wild species.

The UNEP/IUCN reports catalyzed the interest of international organizations and national governments in Blue Carbon science and in developing policies. So far efforts have generally been ad-hoc and uncoordinated. They must be consolidated in a coordinated way if they are to progress effectively. The proposed Blue Carbon Initiative would address this by providing support for developing policy guidance and tools for carbon accounting and ecosystem management.

The project 'Developing methodologies for carbon accounting and ecosystem services valuation of Blue Forests' - part of the UNEP Blue Carbon Initiative - focuses on measuring and managing carbon

and other ecosystem services in coastal vegetated ecosystems (the Blue Forests) and on exploring their options in international carbon markets.

There is a strong UN basis for achieving the objectives of the project. Besides the UNEP/IUCN reports on carbon sequestration in coastal ecosystems, UNEP's Division of Early Warning and Assessment (DEWA) manages a Carbon Benefits project, its Division of Environmental Policy Implementation (DEPI) has a payment for ecosystem services unit, as well as a REDD unit, DEWA-North America is working on mapping global mangrove cover, and the IOC-UNESCO manages an Ocean Carbon Coordination Project.

The objectives

UNEP's Blue Carbon Initiative aims to develop a global partnership to advance the sound management of coastal and marine ecosystems in order to ensure that their carbon sequestration and storage functions are maintained, and emissions of greenhouse gases are avoided. Furthermore, ecosystem-based management of Blue Carbon sinks should be appropriately incorporated into global climate change mitigation discussions and financing schemes. It supports the development both of global, regional and national policies for ecosystem management and of possible financial instruments to maintain and enhance sequestration in Blue Carbon ecosystems.

Its proposed key elements are:

1. Developing methodologies, standardized around the world, for carbon accounting and economic valuation of ecosystem services in coastal blue carbon ecosystems;
2. Using these methodologies in a range of small-scale interventions;
3. Filling gaps in our knowledge of ecosystem services and of carbon sequestration and fluxes in blue carbon ecosystems;
4. Exploring how the international community can adopt the methodologies to influence international climate frameworks and create incentives for protecting ecosystem services and carbon sequestration.

These objectives are aligned with the UNEP Marine and Coastal Strategy under its stream on Ecosystems for Human Well-being.

Major targets for results

The initiative aims at achieving the following overall targets by 2025:

- Reversing the current trend of the degradation of marine and coastal habitats and maintaining the amount of carbon sequestration;
- Significantly increasing the area of Blue Carbon ecosystems under effective ecosystem-based management; and
- Mobilising US\$40 million for protecting and rehabilitating coastal and marine habitats, thus enhancing their capacity for carbon storage and sequestration.

We must halt the decline of Blue Carbon ecosystems if we are to tackle climate change and make a transition to an efficient Green Economy. Conserving blue carbon – found and stored away in the ocean – is becoming yet another option on the palette of opportunities and actions for mitigating climate change, while promising to ensure generations of livelihoods through the many services these ecosystems provide.

The Blue Carbon report is available at <http://www.grida.no/publications/rr/blue-carbon/>

For more information on the Blue Carbon Initiative, please contact:

