



## 5. Discussion

It is to our collective shame that out of ignorance or apathy many of our estuaries and near shore marine ecosystems and habitats have been damaged, degraded or destroyed. The consequences of pollution, habitat alteration and the removal of far too much of its life has led to a situation that dictates immediate and effective action.

Low natural productivity, increasing coastal human populations and over-exploitation of marine and estuarine habitats and species have left our marine environment at risk of irreversible damage.

Toxic red tides and marine dead zones are becoming increasingly prevalent elsewhere in the world where environmental degradation is more advanced. In NSW there is still time to avoid some of these worst consequences of marine ecosystem collapse. But time is running out to turn the tide.

According to scientists, climate change impacts will take a terrible toll on marine ecosystems, with NSW waters perhaps being impacted more than any other marine jurisdiction of Australia. Of the few options available to quickly rebuild resistance into marine ecosystems, no-take marine sanctuaries offer unique benefits. Marine sanctuaries can lead to the re-establishment of natural processes after serious disturbance and allow entire ecosystems to recover. These are the very goals that need to be rapidly met before the onset of accelerated temperature increases expected due to climate change.

Our fisheries have not been managed well in NSW. While significant reductions in commercial fishing effort have occurred over the past decade, progress has been slow, expensive and relatively ineffective in reducing fishing impacts.

No meaningful stock assessments have occurred for the majority of fished populations and assessments of fishing impacts have been undertaken for only a handful of non-fished species. The majority of those fished populations that have been assessed are either overfished or fully-fished, and those assessments that have occurred for non-fished species indicate unacceptable fishing impacts.

DPI Fisheries – the agency responsible for managing our marine life – has admitted to not knowing enough about the ecological interactions and requirements of marine species to oversee a sustainable fishing industry in NSW or the preservation of marine biodiversity. No-take marine sanctuaries are, therefore, essential to provide a buffer against stock collapse and further biodiversity and fisheries declines.

In NSW we now have about 6.5% of our marine waters in marine sanctuaries. However, many of these areas are not functionally connected and do not provide the ecosystem benefits required. To allow natural processes and diversity to recover to the point where our marine ecosystems can best withstand the oncoming ravages of climate change, we need at least 20% in fully protected sanctuaries where animals and plants can proliferate in a natural environment free from many of the most disruptive human activities. These sanctuaries need to be established based on sound ecological principles and not left to political interference and vagaries.

Many habitats and ecosystems are poorly represented or unrepresented in the existing marine protected area system. Estuarine ecosystems and habitats are particular under-represented in IUCN Category Ia and VI reserves, but all NSW mapped habitats and ecosystems require significant increases in area protected.



There are many ways of achieving the targets set out in this report. For example, areas of estuarine and marine habitats and ecosystems within National Parks and reserves and grey nurse shark aggregation sites should all be “no-take” sanctuaries.

Additionally, new appropriately-zoned Marine Parks and Aquatic Reserves are required to maximise functional connectivity between protected areas and provide adequate representation of protected habitats and ecosystems.

The marine and estuarine foreshores of National Parks and reserves need to become part of the park tenure to allow appropriate management of the intertidal zone of terrestrial reserves. Estuaries, particularly wave-dominated systems are very poorly represented in MPAs in NSW. These highly productive ecosystems must become a priority for conservation.

The NSW Government has committed to a CAR reserve system for its marine jurisdiction. To meet this commitment, it is clear that at the very least a large Marine Park must be established in the Hawkesbury Shelf Marine Bioregion and a smaller Marine Park in the NSW section of the Twofold Shelf Bioregion. Appropriately zoned Marine Parks in these two marine bioregions should bring the total proportion of sanctuaries in NSW marine waters to at least 10%.

However, removing fishing from at least 20% of the NSW marine jurisdiction is necessary to provide for the long-term sustainability of many of our most popular coastal activities. In addition, the powers vested with managers of Marine Parks and Aquatic Reserves that provide concurrence over developments and activities that may impact on marine protected areas need to be vigorously exercised to limit foreshore development and catchment impacts. The question of whether there is the political will to properly exercise these powers remains unanswered.

Fisheries management in NSW has largely failed, leaving marine sanctuaries as the last best hope for many of our marine species, populations, habitats and ecosystems. Once marine sanctuaries are established, recovery may take many years, but if we do not begin to reinstate the natural resilience of our marine environment soon, it may be too late.

As with global marine ecosystems, NSW coastal waters remain vulnerable, and require a comprehensive, adequate, representative network of marine protected areas to ensure a viable future for marine and coastal communities, economies, ecosystems and species.

Part 2 of this report makes recommendations for significant additions to the NSW marine protected area system. Recommendations will be made for 35,000 ha of additional marine sanctuaries to be established by 2011 and a further 100,000 ha of additional marine sanctuaries to be established by 2020.