VICTORIAN NATIONAL PARKS ASSOCIATION
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NATURE CONSERVATION REVIEW: MARINE & COASTAL ECOSYSTEMS

Six years in the making, the VNPA's fourth Nature Conservation Review, Natural Victoria – Conservation priorities for Victoria's natural heritage, 2014 was released.

Chapter 2 (85 pages, fully referenced) focuses on marine and coastal environments in recognition of their tight ecological links and the need for integrated management. The area of focus is waters under the jurisdiction of the Victorian government, which extend 5.5 kilometres seaward from the high water mark, and land within 500 metres of the shoreline.

The chapter describes the high natural, social and economic values of Victoria's marine and coastal ecosystems and the major habitat types. It outlines the status of biodiversity and protected areas, and the condition of bays, inlets and estuaries. Major threats to marine and coastal nature – particularly climate change, coastal development, invasive species and fishing – are described. A gap analysis of Victoria's marine protected areas is summarised, which identifies bioregional priorities for new and expanded marine national parks and sanctuaries. This is based on an extensive review carried out by Australian Marine Ecology in 2010.

Similarly, for coastal subregions, the chapter summarises an analysis of values, threats and priorities for upgrading the national park and conservation system based on a detailed review carried out for the VNPA, called 'The Coast is Unclear', released in 2013. Finally, policy gaps and high priority reforms are identified in three major areas: improving knowledge; creating a comprehensive, adequate and representative national park and conservation system; and integrating and strengthening management of marine and coastal environments.

MARINE AND COASTAL ECOSYSTEMS - A SNAPSHOT

- Victoria's marine and coastal nature has outstanding environmental values, created from 80 million years of geological isolation and the convergence of several oceanic influences overlapping with the coastline.
- Australia's southern waters, particularly in the southeast, are more species-rich than most other temperate seas worldwide and host many more unique species than the more celebrated Great Barrier Reef.
- Port Phillip Heads Marine National Park alone has at least 115 sponge pecies endemic to the park, and the wider bay is rich in many other species as well, with a combination of diverse habitats such as seagrass meadows, mudflats and reefs providing a home for about 300 fish species and hundreds of species of molluscs, crustaceans, seaweeds, bristle worms and cnidarians.
- Victoria's coastline winds and wriggles for more than 2000 kilometres and is where wetlands, sandflats and mudflats merge with beaches, sand dunes, cliffs and shore platforms and provide many different habitats for coastal plants and animals.
- The terrestrial coast also has high habitat diversity, containing one-third of Victoria's total vegetation types, five wetland sites of global significance recognised under the Ramsar Convention and twenty important bird conservation areas.
- A greater but less representative proportion of the coast is securely protected, with about 37% of the area from the shoreline to 500 metres inland in the national park and conservation system.

SUMMARY OF KEY THREATS

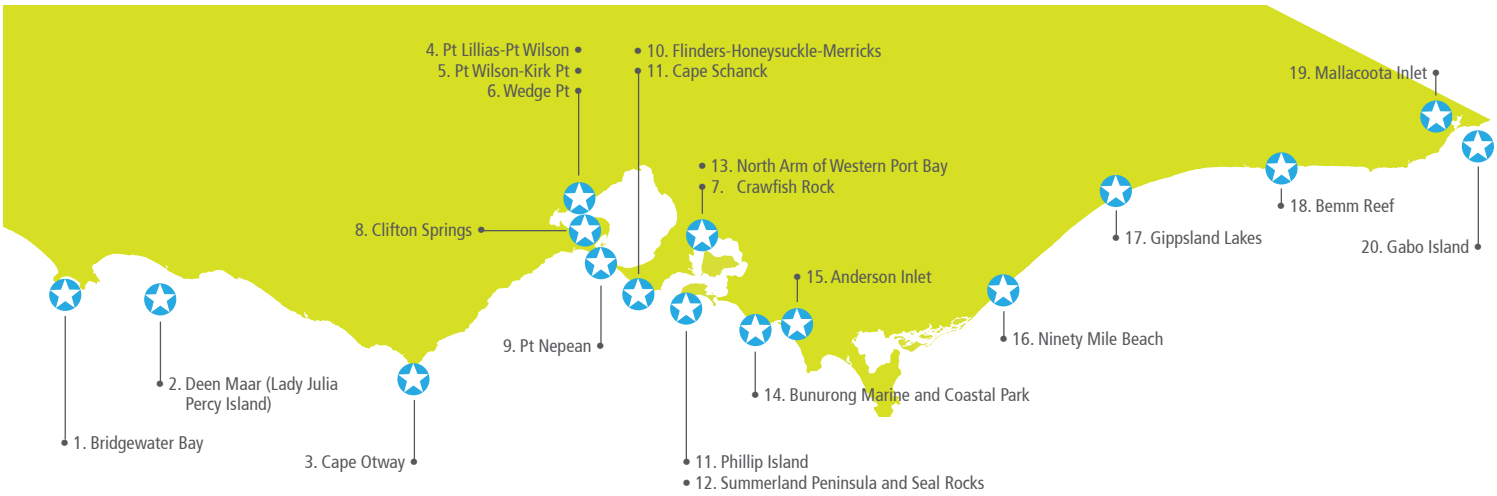
Victoria's marine and coastal environments are straining under the pressure of unsustainable development (e.g. port expansions, housing subdivisions, etc), invasive species, overexploitation (e.g. fishing and oil/ gas exploration) and climate change (e.g. storm surges, sea level rise and warming currents). Much of what lures people to the coast is at risk.

For example:

- Many marine and coastal species have become much rarer due to human impacts. More than 180 species are considered threatened (listed on government advisory lists). Threatened marine species include 17 invertebrates, 10 seabirds and five mammals, but

MEDIA BACKGROUNDER

20 PRIORITY AREAS FOR MARINE CONSERVATION



the status of most marine life, particularly marine invertebrates, is poorly known.

- Coastal species considered threatened include more than 30 plants and more than 30 birds. Only about half the species on threatened species advisory lists have been formally listed under legislation, and only about half of these have action statements to guide recovery efforts.

GAPS IDENTIFIED IN THE NATURE CONSERVATION REVIEW

Climate Change: Strengthening protection for marine and coastal ecosystems is essential, not only to protect biodiversity from multiple current threats but also to foster their resilience and adaptation to rapid climate change. Marine and coastal habitats are among the most vulnerable to climate change. With the East Australian Current strengthening, southern Australian waters have been warming very rapidly.

Lack of knowledge: Much of Victoria's marine biodiversity is yet to be described and some yet to be discovered Marine taxonomy requires a considerable boost. At the current level of investment, it will take many decades to gain a comprehensive inventory of Victoria's marine life, and species could be lost before they are even identified.

Lack of monitoring: There is also little monitoring or management of the impacts of recreational fishing, even though the recreational catch for several species is similar to or more than the commercial catch, and pressures on some species and ecosystems are substantial. Apart from species exploited for fishing (e.g. snapper and abalone) and aquaculture, little is known even about the basic biology and ecology of most marine life.

Marine National Park gaps: It is more than a decade since a network of highly protected marine areas was established, covering just 5.3% of Victorian waters, and since that time there have been no other major conservation initiatives. A gap analysis conducted for this review shows the protected areas are currently inadequate in size and scope to protect the values they were established for and to achieve the goal of a comprehensive, adequate and representative network.

Better protection for coasts: Substantial coastal areas with important natural values, including endangered vegetation communities, also lack effective protection due to development pressures, insecure tenure and inadequate management. Subregional priorities for increased protection have been identified in this review, which can be achieved by upgrading protection for crown land reserves; buying, leasing or covenanting private land; and improving land zonings.

FUTURE DIRECTIONS

Marine management is plagued by shortcomings arising from a predominant focus on single sectors (fishing, boating, mining) and single species. The complex interconnectedness of marine environments requires a more holistic focus on ecosystems and ecological processes.

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Victoria requires an ecosystem-based approach to management of the marine environment. This is in order to build natural resilience – to sustain or restore the capacity of ecosystems to resist, buffer or recover from impacts of climate change and other pressures. A new overarching legal and policy framework, and a marine and coastal authority with the mandate to achieve this outcome, are needed to make this a reality.

Although a requirement for ecosystem-based management is recognised in some Victorian fisheries, there has been no rigorous evaluation of the ecosystem effects of fishing, and knowledge of ecosystem processes on which to base evaluations is largely lacking.

Criteria to assess the ecological sustainability of all fisheries, whether commercial or recreational, should be developed, and site-specific ecological risk assessments conducted. For example, reducing fishing pressure on some targeted populations is needed to buffer ecological communities against other disturbances. Research has shown that maintaining healthy populations of large adult rock lobsters, which are efficient predators of long-spined sea urchins, can help prevent the destruction of giant kelp marine forests by the urchins.

With very high values and threats, Victoria's bays, inlets and estuaries warrant a special conservation focus. The two largest, Port Phillip Bay and Western Port, which have internationally significant values at risk from major industrial enterprises and catchment pressures, should be managed by an independent authority. .Getting serious about the ecological health of Victoria's bays and inlets requires a program with clear measurable improvement targets, monitoring and public reporting.

The formation of a marine pest biosecurity plan, with a strong prevention focus, should also be a high priority.

As the most popular zone for living and recreating, Victoria's coast is also under much pressure, placing at risk much of what lures people there. With climate change already impacting coastal nature and much more change inevitable, 'resilience' and climate 'adaptation' need to become much more than buzzwords.

As a starting point, objectives to foster resilience and adaptation should be included in Victorian planning provisions and planning framework, complemented by changes to coastal statutory zoning and overlays to provide for in situ protection of coastal habitats for as long as possible and to assist inland retreat as sea levels rise.

Coastal habitats are being burdened by an accumulation of infrastructure – roads, tracks, car parks, buildings and utilities – that compromises natural, scenic and recreational values. Much of it is unnecessary or could be sited elsewhere. An independent review of infrastructure adjacent to the coastal national park and conservation system should be commissioned, with the aim of relocating, removing or better managing it to minimise impacts on natural values.

RECOMMENDATIONS

There are 42 detailed recommendations in Chapter 2 (Marine & Coastal) around improving research and information sharing; the national park and conservation system; iconic bays and inlets, marine and coastal management; coastal protection and restoration; and fishing. Some of the key recommendations include:

1. Prepare and implement a marine and coastal research strategy and action plan.
2. Commission the Victorian Environmental Assessment Council (or other credible independent body) to conduct an inquiry into marine and coastal biodiversity to recommend areas for new or expanded marine national parks and sanctuaries.
3. Establish a coastal private land conservation program with a fund to buy, lease or covenant private land abutting coastal conservation reserves, coastal crown land reserves or the high water mark for protection and restoration.
4. Establish a Two Bays Board for strategic oversight of the health of Port Phillip and Western Port and their catchments, and produce a five-yearly State of the Bays report covering all bays and inlets.

>> For more detail see Public Summary, or Chapter 2 (Marine & Coastal Ecosystems) in the full report

FACT SHEET