



Old Wives. Photo: Dave Bryant

## Victorian marine national parks & sanctuaries

### What is a marine national park?

Marine national parks are areas of the marine environment where the seabed, waters and all plants and animals are fully protected by law, offering an insurance policy against environmental impacts. They protect areas of the sea in their natural condition for the benefit of current and future generations as places where people can experience the ocean and its inhabitants in a natural state.

Marine sanctuaries are also highly protected areas that are generally smaller than marine national parks but still conserve significant habitats.

### What can I do in a marine national park?

There are generally no restrictions on access for a range of recreational activities, such as surfing, swimming, diving, snorkelling, ecotourism operators, education and research. Scientific monitoring and research are also allowed when necessary and under the guidance of the relevant regulatory body.

### What can't be done in a marine national park?

Extractive or damaging activities such as dredging, waste disposal, aquaculture, mining, and commercial and recreational fishing are not permitted in marine national parks and sanctuaries.

A loophole in the Victorian National Parks Act does allow petroleum exploration in marine national parks and sanctuaries, despite new mining leases being banned. The VNPA opposes petroleum exploration in all marine protected areas.

### How many marine national parks are there in Victoria?

In 2002, 5.3% of Victoria's marine waters were protected through the creation of 13 marine national parks and 11 marine sanctuaries. However, little work has been done over the past eight years.

The creation of the marine national park system, which had the bi-partisan support of both major political

parties in Victoria, followed 10 years of reports and recommendations by State Government advisory bodies including the Land Conservation Council and the Environmental Conservation Council, precursors to the current Victorian Environmental Assessment Council. This investigation processes involved input from all stakeholders and the community, and was based on the best available information at the time.

Non-government organisations and groups led by the Victorian National Parks Association and the Marine and Coastal Community Network campaigned for more than a decade to create the world-first system of marine national parks and sanctuaries that Victoria now enjoys.

Victoria's network of marine protected areas includes kelp forests, sponge gardens, seagrass meadows, sandy plains, mangrove forests and saltmarsh meadows.

### What's so special about Victoria's marine environment?

Victoria's seas and shores are extraordinarily diverse, with many of the plants and animals found in them occur nowhere else in the world.

Within Victorian marine waters can be found an estimated:<sup>1</sup>

- 700 species of fish.
- 1000 species of seaweeds and seagrasses.
- 2000 species of molluscs (snails, shellfish and squid).
- 3000 species of crustaceans (crabs, lobster, prawns, etc).
- 1000 species of sponges.
- 1000 species of polychaetes (bristle worms).
- 1000 species of cnidarians (jellyfish, corals etc).

### Do we need more marine national parks?

Leading scientific and conservation organisations from around the world, including the Australian Marine Sciences Association and the International Union for the Conservation of Nature (IUCN), have called for an increase in the number and size of marine national parks

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as the best way for marine ecosystems to survive and thrive.

Marine national parks play a crucial role in enabling scientists to assess the ecological effects of marine industries and other extractive activities. They serve as ecosystem control areas that can be compared with other non-protected areas.

As the Victorian population continues to grow, there will be increased pressures on our marine environment (see the 'Threats' section of this FAQ sheet).

In June 2010, more than 260 scientists from 39 countries confirmed their support for the creation of large-scale ocean marine parks as the best way to protect biodiversity and help fish stocks recover.<sup>2</sup>

The principal purpose of marine national parks is to protect marine biodiversity, but there are potential secondary benefits for fisheries management, marine research, tourism and education. These protected areas can have immediate and long-term benefits for recreational and commercial fish species by promoting fish breeding and providing spillover benefits into neighbouring fishing grounds.

In 2009 a review of 149 scientific publications on 124 no-take marine reserves in 29 countries revealed that within these areas there were significant average increases in density, biomass, animal size and species richness of the communities within reserve boundaries. These communities included groups of fish species and invertebrates (e.g. lobsters, crabs and sponges etc) as well as seaweeds. On average, fish populations were greater within the 124 no-take marine reserves than in surrounding waters.<sup>3</sup>

The review also found that marine reserves are just as effective in protecting habitats and their communities in temperate areas (e.g. Victoria) as compared to tropical ones (e.g. the Great Barrier Reef), particularly for reef ecosystems.

### Why do we need at least a 20% increase Victoria's network of marine national parks and sanctuaries?

International benchmarks suggest we need to protect 20-30% of marine and coastal habitats.

International commitments and the current global consensus on establishing marine protected areas<sup>4</sup> consistently back up the need for increased marine protection:

- The 5<sup>th</sup> World Parks Congress recommended increasing marine protected area (MPA) networks to at least 20-30% of each marine habitat.
- The IUCN has set a minimum target of 20% of global

marine waters to be in marine national parks by 2020.

- The World Summit on Sustainable Development (2002) called for the establishment of a global network of marine protected areas by 2012.
- The Evian Agreement signed by the G8 group of nations in 2003 called for ecosystem networks of marine protected areas to be established by 2012.
- In 2004 the Convention on Biological Diversity agreed to the establishment and maintenance of marine protected areas to contribute to a global network.

A network of marine national parks creates connectivity throughout marine waters and ensures that habitats and communities critical to the healthy functioning of our underwater ecosystems are protected and resilient in the face of threatening processes.

### Do marine parks benefit biodiversity?

According to the Australian Marine Sciences Association, Australia's professional association for marine scientists:<sup>5</sup>

*"The use of marine protected areas to protect biodiversity values is well documented, and marine protected areas have been accepted at the international level as essential marine conservation tools for nearly three decades. Statements suggesting that the biodiversity conservation benefits of no-take marine protected areas have not been demonstrated are incorrect and misguided."*

Marine national parks provide the following benefits:

- They repair ecological damage and restore ecosystem health.
- They build resilience into ecosystems so that they can better cope with the impacts of climate change.
- They protect marine biodiversity.
- They protect rare and threatened species.
- They can help maintain or increase fish stocks.
- They protect habitats, including nursery areas such as seagrasses.

Marine national parks should not be seen as a substitute for well-managed fisheries as well as an ecosystem-based marine planning framework – we need all three.

The Fisheries Research Branch of Victoria's Department of Primary Industries recognises the major natural assets of Port Phillip Bay and state that 'it is also home to important marine national parks and marine sanctuaries where all biodiversity is protected'.<sup>6</sup>

Marine protected areas have provided a range of



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biodiversity benefits in north-east New Zealand, with increases in the number, size, biomass and fecundity of snapper and rock lobsters as well as a decrease in the numbers and dominance of sea urchins.<sup>7</sup>

For further information about the biodiversity benefits of marine national parks, see page 7 of the VNPA's Nature Conservation Review Summary.

### Do the majority of Victorians support marine national parks?

There is widespread public recognition of and support for marine national parks in Victoria.

Research funded by the Victorian Government in 2007 on community attitudes towards marine protection showed that more than 90% of Victorians support marine national parks.<sup>8</sup>

Deakin University post-graduate research in 2009 demonstrated that 64% of Victorians support an increase in the size of our marine national park network.<sup>9</sup>

An Essential Research survey commissioned by Pew Environment Group found that 82% of Victorians supported an increase to marine national parks in Australia's south-west.<sup>10</sup>

More recently, 80% of respondents to a Weekly Times poll in July 2010 supported new marine parks for Victoria.

### What are the threats facing our marine environment

**Climate change** is likely to have profound impacts on the marine environment, and so we need to ensure that this environment is resilient enough to survive in a changing climate.

Rising sea levels, storm surges, increasing ocean temperatures and growing ocean acidity are just some of the many pressures climate change will place on our fragile marine world.

**Introduced pest plants and animals** can dramatically alter ecosystems, often with devastating effects. Pest species such as the carnivorous Northern Pacific Seastar are invading the southern Australia coastline, preying on native species.

**Fishing:** The Victorian State of the Environment (SOE) report in 2008 stated that 'commercial and recreational fishing can have widespread effects on the marine ecosystems' and that 'in general, all major Victorian fisheries are considered to be either close to full exploitation or are already fully exploited, which means that the current level of fishing pressure is at the maximum sustainable level, given awareness of threats

and stock status.<sup>11</sup> All large edible fish species have been dramatically reduced in biomass and abundance since European settlement.

As discussed in the Nature Conservation Review (pg 53), fishing pressures occur at or above ecologically sustainable levels throughout all marine habitats, excepting the larger marine national parks. The size and boundary location of many smaller parks and sanctuaries are unlikely to significantly reduce fishing pressure as discussed in Section 6: Gap Analysis of the Nature Conservation Review [www.marinereport.vnpa.org.au](http://www.marinereport.vnpa.org.au).

**Pollution, outfalls and runoff:** Outfalls for effluent discharge and runoff from catchments are major pollutants of Victoria's coastal waters. Their impacts on water quality include changes in salinity and increased nutrients, which can cause algal blooms that remove oxygen and result in fish kills.

Land-based activities contribute up to 80% of all marine pollution and are a major threat to the long-term health of near-shore marine systems.

**Coastal Development:** More than 80% of the Australian population lives within 50km of the coast. As the population grows, subdivision and urbanisation of coastal areas is also increasing, resulting in the removal of important habitat.

The Nature Conservation Review undertook a region-by-region analysis of key threats in Victorian marine and coastal environments. The table on page 57 of the review summarises these threatening processes. The threats are not listed in any particular order or comparative weighting.

### Does recreational fishing have an environmental impact?

While the general perception is that commercial fisheries have a larger footprint on the marine environment, due to the methods used and overall catch levels, the total recreational catch of some species is equal to or greater than the total commercial catch.

According to the 2008 Fisheries Victoria status report there have been no comprehensive surveys conducted on recreational fish catches since 2001.<sup>12</sup> A 2001 desktop review of available research showed that recreational fishing removes large amounts of fish from our marine environment and that recreational fishing pressure is building.<sup>13</sup>

More recent published research specifically about Port Phillip Bay (PPB) from the Department of Primary Industries states that "Victoria has the largest recreational snapper fishery in Australia, most of which



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is caught in Port Phillip Bay". Furthermore, "recreational catches of snapper, flathead and King George whiting from PPB are usually larger than the commercial catch of these species".<sup>14</sup> These 2010 findings are consistent with the 2001 literature review.

In 2003 a national survey identified the top 10 fin fish species caught and kept by Victorian recreational fishers between May 2000 and April 2001<sup>15</sup>. These were:

1. 3.3 million Flathead.
2. 975,000 King George Whiting.
3. 950,000 Redfin Perch (freshwater).
4. 542,000 Australian Salmon.
5. 507,000 Black Bream.
6. 475,000 Snapper.
7. 345,000 Trout (freshwater).
8. 328,000 carp (freshwater pest)
9. 302,000 Mullet.
10. 255,000 Garfish.

The loss of large numbers of popularly fished species, which usually keep other plant and animal numbers in check, can lead to disturbed marine populations further down the food chain as they are released from usual predation.

For example, research in Tasmania looking at sea urchin (*Heliocidaris erythrogramma*) infestations shows much higher rates of mortality inside no-take marine reserves where this native pest's predators were abundant compared to adjacent fished areas where predators were fewer.<sup>16</sup> Rock lobsters were found to exert significant predation mortality on the sea urchin, with only the largest rock lobsters able to consume the large adult sea urchins. This research sheds further light on underlying mechanisms that cause sea urchin 'barrens' on shallow temperate rocky reefs.

Recreational fishing has a number of other actual or potential impacts that add to the pressure of coastal use. These include mortality of released animals, retention of undersized fish, lost gear, habitat damage, hydrocarbon release by outboard motors and the impacts of fish removals on the wider ecosystem.

Fishers generally preferentially target larger fish, which are often the better breeders in a population, producing larger numbers of eggs. Because marine national parks are designed to fully protect all marine life, recreational fishing is inappropriate within them.

### What impact do marine national parks have on regional economies?

VRFish, the peak body that represents Victorian recreational fishers, has produced its own State Government funded economic report showing that

existing marine national parks have no discernable impacts on regional communities. This report shows that between 1996 and 2008 the contribution of recreational fishing to the Victorian economy has roughly doubled.<sup>17</sup>

A 2009 economic analysis of the South West Marine Region of Western Australia demonstrated that marine national parks provide substantial economic benefits to commercial fisheries from fish and rock lobster spillovers (up to \$2.4 million), direct benefits to ecotourism operators (\$5 to \$10 million), significant biological discoveries that can be used to create better medicines and agricultural biotechnology and environmental non-market values (\$100 million).<sup>18</sup>

Marine national parks can bolster local coastal communities through:

- **Direct employment of park ranger and enforcement officer positions.** Marine parks and sanctuaries also stimulate employment in other areas such as nature-based tourism, diving, snorkelling, charter-boat hire, educational activities (with spinoffs to local accommodation, take-away businesses etc) and research scholarships.
- **Servicing of infrastructure.** Marine national parks will require the servicing of equipment, for example boats and the provision of materials and equipment to ensure staff can successfully carry out their functions.
- **Stable, sustainable fisheries.** By acting as reference areas and benchmarks, marine national parks will generate a better understanding of fisheries management and lead to further progress towards sustainability. Spillover fish stocks from the parks will ensure recreational fishing continues into the future.
- **Marine research.** Marine national parks will generate a considerable research effort in regional areas within government agencies, but also tertiary institutions and possibly through local research consultancies.
- **Boosting tourism.** Well-established marine reserves, such as major reserves in tropical Queensland and Western Australia, or the Leigh and Poor Knights reserves in New Zealand, are important tourist attractions, and produce substantial economic benefits for local and regional communities.
- **Environmental education.** Environmental education programs will attract schools to the parks and sanctuaries in their regions. The visiting schools require accommodation, food and other resources that will be generated within the coastal region.

For more information see the IUCN report which lists



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worldwide case studies of marine national park networks and their benefits.<sup>19</sup>

### Is the Victorian National Parks Association anti-fishing?

The Victorian National Parks Association is not anti-fishing. We recognise the importance of recreational fishing to the lifestyles and livelihoods of many Victorians. An expanded marine park system would need to take this into account. We consider that marine national parks ensure fish for the future, while protecting habitats critical to ecosystem function.

A well planned, comprehensive marine parks system would be a win-win solution – protecting the marine environment and increasing fish stocks. Even with 30% of Victorian waters in marine national parks, 70% would be available for other uses.

### Are marine national parks good for fishing?

Marine protected areas can play a leading role in renewing fish stocks by:

- Rebuilding fish stocks and safeguarding against future collapses.
- Replenishing depleted fish populations by providing safe havens within which fish can breed.
- Helping to rebuild fish populations after catastrophic events.
- Creating sources of fish moving from protected areas into waters where fishing is allowed.<sup>20</sup>

Highly protected, no-take areas also have an important role to play, and should be established in heavily fished areas to protect our most highly threatened fisheries.<sup>21</sup>

There is now a significant body of evidence pointing to the important role marine protected areas play in increasing fish stocks.<sup>22</sup>

Marine protected areas offer vital insurance for fisheries and must form the core of a comprehensive approach to managing Victoria's marine environment in the face of climate change.

### Why are seismic testing and oil exploration allowed in marine national parks?

A loophole in the Victorian National Parks Act allows petroleum exploration and associated seismic testing in marine national parks and sanctuaries, even though new mining leases are banned. The VNPA strongly opposes

this legislative arrangement.

We have prepared a briefing paper on a recent Origin Energy seismic testing proposal in the Bay of Islands Coastal Park. It can be downloaded from [www.marine.vnpa.org.au](http://www.marine.vnpa.org.au).

The VNPA and the Nature Conservation Review it commissioned do not condone or recommend oil exploration, drilling or seismic testing in marine national parks. The VNPA believes that oil exploration and drilling should not be allowed in any of Victoria's national parks, whether terrestrial or marine. Parks are for people and nature, not for oil and gas wells or mines

Our position is, and always will be, that national parks should be conservation reserves, and should be consistent with IUCN categories I to IV, excluding all extractive activities.

### Endnotes

- 1 Department of Sustainability and Environment (2010) Marine National Parks for all Victorians, for the future: Victoria's unique and diverse marine waters, The State of Victoria, sourced from <http://www.dpi.vic.gov.au/dse/nrenem.nsf/FID/-043997C351E36BFBCA256B8F001B37CA?Open&Layout=DSE~PrinterFriendly>, August, 2010.
- 2 Global Ocean Legacy statement (2010) Pew Environment Group, June 8, sourced from <http://bit.ly/aTRWaB>, July, 2010.
- 3 Lester, E et al. (2009) Biological effects within no-take marine reserves: a global synthesis, Marine Ecology Progress Series, Vol 384: 33 – 46.
- 4 Throughout the world there are various regional types and forms of marine protected areas. The most widely accepted definitions of marine protected areas are those recommended by the World Conservation Union or IUCN. Victoria's marine national parks and sanctuaries are equivalent to IUCN category II National Parks – protected and managed to preserve national condition. However, Victoria's marine protected areas do not have any stated objectives with reference to the IUCN categories and were established under the National Parks Act 1975. Overall arrangements for Parks Victoria's management responsibilities are set out in a Management Agreement in accordance with the Act. For a more detailed description of the IUCN categories and Victoria's system of marine protected areas, see page 74 – 89 of VNPA's Nature Conservation Review Summary, which can be downloaded from [www.marinereport.vnpa.org.au](http://www.marinereport.vnpa.org.au).
- 5 Australian Marine Sciences Association (2008) Position Paper on Marine Protected Areas, sourced from [https://www.amsa.asn.au/PDF-files/Submissions/AMSA\\_MPA\\_2008\\_Paper.pdf](https://www.amsa.asn.au/PDF-files/Submissions/AMSA_MPA_2008_Paper.pdf), July 23, 2010.
- 6 Department of Primary Industries (2010) Port Phillip Bay: fish in our waters, Fisheries Research Branch, Victoria, pg 8.
- 7 Ballantine, W.J & Langlios, T.J (2006) Marine Reserves: The need for systems, Leigh Marine Laboratory, University of Auckland, sourced from <http://www.marine-reserves.org.nz/papers/EMBSpaperJan07.pdf>, July 2010. For more information on marine protected areas in New Zealand see <http://www.marine-reserves.org.nz/index.html>.
- 8 Ipsos Consultants (2007) Victorian Coastal and Marine Environment Community Attitudes and Behaviour Research: Wave 3 Final Report, prepared for Victorian Coastal Council, Department of Sustainability and Environment, sourced from [http://www.vcc.vic.gov.au/publications/Final\\_Report\\_no\\_append.pdf](http://www.vcc.vic.gov.au/publications/Final_Report_no_append.pdf), July 27, 2010, pg 128.
- 9 Galloway, D (2009) Six Years On: Public Perceptions Of The Implementation Of Victoria's Marine Protected Area System, Postgraduate Studies, School of Life and Environmental Sciences, Deakin University.
- 10 Essential Research (2009) Save Our Marine Life Survey, Pew.



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- 11 Commissioner for Environmental Sustainability Victoria (2008) State of the Environment Victoria 2008. Commissioner for Environmental Sustainability, Melbourne, Victoria, page 476.
- 12 Department of Primary Industries (2008) Fishery Status Report 2008, Fisheries Management Report Series No 63, Melbourne.
- 13 Norman M (2001) A review of the impacts of recreational fishing on the marine environment, University of Melbourne, commissioned by the Victorian National Parks Association.
- 14 Department of Primary Industries (2010) Port Phillip Bay: fish in our waters, Fisheries Research Branch, Victoria, pg 13.
- 15 Henry, G & Lyle, J (2003) The National Recreational and Indigenous Fishing Survey, Australian Government Department of Agriculture, Fisheries and Forestry.
- 16 Pederson, H & Johnson, C (2006) Predation of the sea urchin *Heliocidaris erythrogramma* by rock lobsters (*Jasus edwardsii*) in no-take marine reserves, *Journal of Experimental Marine Biology and Ecology*, Volume 336, Issue 1, pgs 120-134.
- 17 VRFish (2009) Economic Study of Recreational Fishing in Victoria, Ernest & Young.
- 18 The Allen Consulting Group (2009) The Economics of Marine Protected Areas: Application of Principles to Australia's South West Marine Region, Report to the Conservation Council of Western Australia, November, sourced from [http://www.saveourmarinelife.org.au/Media/The\\_Economics\\_of\\_Marine\\_Protected\\_Areas\\_Allen\\_Consulting.pdf](http://www.saveourmarinelife.org.au/Media/The_Economics_of_Marine_Protected_Areas_Allen_Consulting.pdf), July 2010.
- 19 IUCN World Commission on Protected Areas (IUCN-WCPA) (2008). Establishing Marine Protected Area Networks – Making it Happen. D.C.: IUCN-WCPA, National Oceanic and Atmospheric Administration and The Nature Conservancy. 118 p. sourced from <http://www.wdpa-marine.org/MPAResources/MPAPlanningResources/Docs/Establishing%20resilient%20MPA%20networks-making%20it%20happen.pdf>, July 29, 2010.
- 20 IUCN World Commission on Protected Areas (IUCN-WCPA) (2008) op cid.
- 21 Edgar, G.J, Barrett, N.S, Stuart-Smith, R.D. (2009) Exploited reefs protected from fishing transform over decades into conservation features absent from seascapes, *Ecological Applications* (19)8, pp 1967-1974.
- 22 For example: Dudley et.al. Natural Solutions: Protected areas helping people cope with climate change, IUCN-WCPA, The Nature Conservancy, UNDP, Wildlife Conservation Society, The World Bank, and WWF, Gland, Switzerland, Washington DC and New York.

## OUR UNDERWATER WORLD

Dunes and Coastal Vegetation

Saltmarsh

Mangroves

Beach

Seagrass

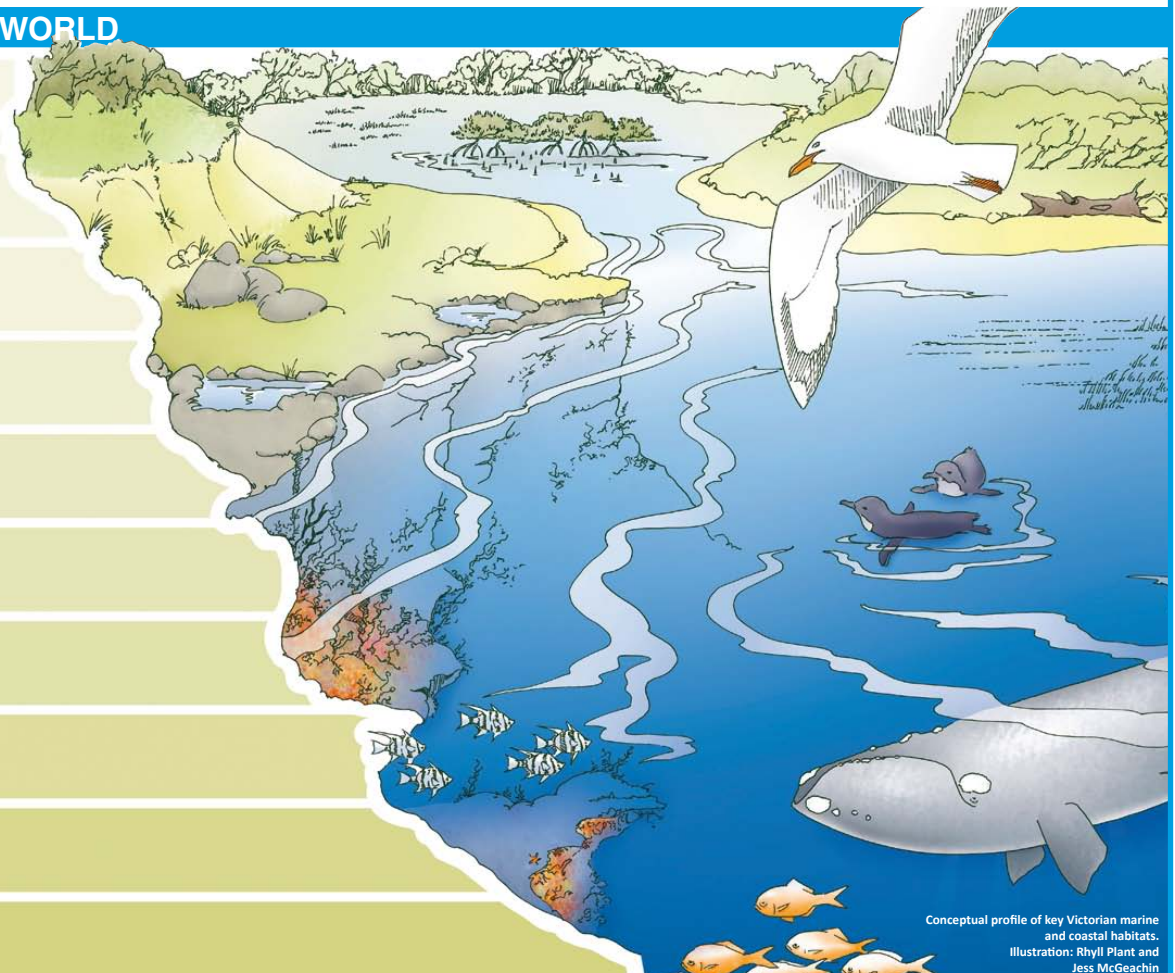
Sandflats

Rocky Shore

Nearshore Reef

Deep Reef

Open Ocean



Conceptual profile of key Victorian marine and coastal habitats.  
Illustration: Rhyll Plant and Jess McGeachin

The Victorian National Parks Association is dedicated to the protection of Victoria's unique natural environment and its biodiversity. For more information about the VNPA go to [www.vnpa.org.au](http://www.vnpa.org.au) or phone 03 9347 5188.