

2. PERSPECTIVE on the region

2.1 A brief history

The Port Phillip and Western Port region holds evidence of 500 million years of the Earth's history in its rocks and fossils¹. Its landscape was formed by ancient sedimentation in deep ocean and shallow marine environments, by massive continental shifting and spectacular volcanic activity.

Some 100 million years ago the area was part of a giant continent that included Antarctica. Around 30,000 years ago enormous herbivorous mammals called diprotodons browsed for their favourite grasses, fruit and leaves, and 20,000 years ago a vast exposed plain stretched all the way south to the area now known as Tasmania.

Between 6,000 and 14,000 years ago the climate warmed markedly, sea levels rose and the landscape took on the approximate form that we see now, with mountain ranges, a vast basalt plain in the west of the region, large freshwater swamps and the two major bays.

At the time when white settlers first came to Australia, Port Phillip Bay was much as it is now, with diverse marine life in its deep protected waters. Western Port was generally shallower but with some deep channels, lush seagrass meadows and large intertidal zones daily exposing mudflats and mangroves. Together these water bodies supported a vibrant array of marine and bird life.

The region then was home to indigenous people in a number of tribes, most being part of the Kulin Nation of peoples, with each group made up of several clans². The total Aboriginal population of the region may have numbered hundreds rather than thousands. Their ancestors had been in this area for around 40,000 years, through the last Ice Age and when the last volcanoes erupted.

The tribes managed the region's natural assets for productive purposes. Extensive use of fire on the volcanic plains kept the plains largely grassy and productive for hunting. However, Aboriginal culture and management practices were based on an understanding of the regional environment and sustainable use of the natural resources. Groups made up of one or two families would collect food and other materials locally, periodically moving to other areas and allowing former locations to regenerate.

The area was an important meeting and trading place. Corroborees involving several clans were performed often in the region, and for many reasons. Trading between clans and nations occurred, evidenced by axe stones that were shaped at a site many weeks travel away.



Their country included important rivers and streams and the associated catchments. Key waterways included those now known as the Werribee, Maribyrnong, Yarra, Lang Lang and Bass rivers, all with their origins in the uplifted hills in the northern or eastern parts of the region. Each river travelled through a mix of forest, woodland, scrub, grassland and heath on its way to wetlands, estuaries and the bays. The riparian zones were typically heavily vegetated, providing sheltered habitat for the reclusive platypus and a range of native freshwater fish species.

The prolific and often dense native vegetation of the catchments was home to fauna species including koalas, wombats, kangaroos and wallabies, eastern quolls, emus, snakes and extensive birdlife such as parrots and eagles. Large freshwater wetlands were common near the coast and were a hub for birdlife

feeding, nesting and resting on the way to destinations elsewhere around the globe.

The region held significant untapped deposits of sand, rock and minerals that would later aid building and construction. Underground layers of ancient sands and gravel acted as aquifers and held substantial quantities of high quality groundwater. The climate and soils, though variable across the landscape, offered the opportunity for the establishment of a variety of introduced and productive food crops.

Overall, the region had exceptional natural beauty and diversity shaped by geological processes, climate and the ecosystems unique to this part of the world.



¹ *Introducing Victorian Geology*
² *The last land of the Kulin Nation*

2.2 The region today

Little has changed geologically in the 200 years or so since the region was first settled by Europeans. Looking to the horizon, the landscape is impressive in every direction.

But the region is much more populous, with around 3.4 million residents³. The population saw rapid growth from the 1830s onward, with significant migration from overseas and interstate in the second half of the 20th century. The Aboriginal culture, initially so dominant, is far less evident even though the region is home to almost half of Victoria's Indigenous population⁴.

The banks of the Yarra River have remained an important meeting place and Melbourne is a major metropolis, the population centre of the region and the State, a hub of social interaction and activity, and a centre of trade, tourism, business and industry, learning and technology with around 1.4 million dwellings and more than 180,000 business locations⁵.

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The activities and lifestyles of residents and visitors rely, however, on the diversity and continued health of the stunning catchment assets that provide its environmental, economic and social values.

Key assets in the region range from rural landscapes to parks and reserves, indigenous flora and fauna and the catchment features that include rivers, wetlands and the bays, and French and Phillip Islands.

The rural landscapes around Melbourne support agricultural industries of high value. Of the 1.3 million hectares in the region, around 45 per cent is rural farmland⁶ accommodating some 4,500 enterprises⁷. The annual gross value of agricultural production exceeds \$1 billion, from industries such as horticulture, dairying, poultry farming, beef farming and viticulture. This figure could be significantly higher if the income from small

properties and value-adding industries was included⁸.

The region has an array of parks and reserves that support rare and diverse flora and fauna species as well as providing highly valued recreation and tourism areas. It is at the intersection of seven bioregions, the bay and ocean environments, and includes eight National Parks, six State Parks, eight Marine Protected Areas and a wide range of regional, metropolitan and local parks and conservation reserves.

Almost one third of the region retains remnants of its locally indigenous vegetation, including important areas of grasslands seldom found elsewhere⁹. Of this vegetation, 41 per cent is protected in parks or reserves and managed for conservation, a further 31 per cent is on other public land, and the remainder – on private land – is also highly significant. A number of vegetation classes are severely depleted in extent and quality, in particular the grasslands.

The extensive range of vegetation types and natural ecosystems in both the terrestrial and marine environments houses more than 1860 species of native flora and more than 600 species of native vertebrate fauna, making the region one of the most biologically diverse in the State¹⁰. Of the species here, 296 flora species and 128 fauna species are considered threatened.

The region's water supply catchments, water storages and waterway systems provide certainty of potable supply for the population as well as a range of other economic, social and environmental benefits. Some 8,000 kilometres of waterways attract more than 50 million recreational visits annually¹¹. There are also more than 900 wetlands¹² including three internationally recognised Ramsar sites.



The jewels in the crown - Port Phillip Bay and Western Port and its islands - are found where the catchments meet the sea. Each has unique and wondrous ecological, economic and community values. The bays support commercial fishing, a growing aquaculture industry, three major ports and provide the most popular recreational fishing areas in Victoria. In these bays and the nearshore areas of Bass Strait are eight recently established Marine Protected Areas that safeguard marine habitats and species, natural features, cultural heritage and aesthetic values.

Not surprisingly, tourists make some 70 million visits a year to the bays and the attractive and accessible 600 kilometres of bay and Bass Strait coastline and beaches that lie within the region.

In the region the environment, as measured by indicators such as air and water quality, is generally good by world standards and living conditions are of a very high standard. These factors are fundamental to Melbourne's reputation as one of the world's most liveable cities¹³.

However, there are numerous threats to our catchment assets and some important declining trends in catchment health. Increasing population, new urban development and our modern lifestyles are affecting catchment hydrology, water use and soil health at an unprecedented rate. Salinity is emerging as a major problem in urban and rural areas. Native vegetation is still being cleared at a greater rate than it can be re-established through revegetation programs. Nitrogen inputs to Port Phillip Bay are high and the health of this bay is critically poised¹⁴. Sediment inputs to Western Port are contributing to losses of seagrass and slow recovery rates.

We do not seek to return the region to how it was in the past. But the challenges confronting us today include understanding catchment processes, managing the changes in our catchment condition, modifying our collective patterns of consumption and resource use, and developing initiatives to protect and enhance key assets.

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This task is complex due to the number of people and organisations having an impact on the environment and being involved in its management. As well as the substantial resident population there are numerous Government agencies, local councils, non-government organisations, agricultural and industry groups, Indigenous organisations, and hundreds of volunteer community groups including Landcare, CoastAction/Coastcare, Bushcare, Rivercare and various 'friends' groups. The awareness, understanding, attitudes and actions of these people and organisations will have a strong influence on the future health of our catchment assets.

We must understand the existing interrelated and cumulative pressures on the catchment assets and those that are looming for the future — pressures such as increasing population, high per capita consumption and waste, changing land-use, urban development, water consumption, energy use, inappropriate land management practices, habitat and species loss, pest plants and animals, climate change, salinity and water pollution. Then we must find effective and innovative ways to manage them.



³ ABS Census of population and housing.

⁴ Strategy for Aboriginal managed lands in Victoria.

⁵ ABS Regional Statistics Victoria 2002.

⁶ Land use map - Port Phillip and Western Port Region. (GIS Layer).

⁷ ABS 1999/2000 Agricultural Commodity Survey - Value of Agricultural Production

⁸ Challenges and opportunities for agribusiness on the urban fringe - Yarra Valley Region

⁹ Vegetation (EVC) Mapping of the Port Phillip and Westernport Region.

¹⁰ Flora Information System and Atlas of Victorian Wildlife.

¹¹ StreamWatch Annual Report 1994.

¹² Current wetlands environment and extent (GIS layer).

¹³ Cost of Living Survey.

¹⁴ Port Phillip Bay Environmental Study.

2.3 Our vision for the future

The Port Phillip and Western Port region will have people working to achieve productive land, habitat for native plants and animals and clean water in the catchments, rivers and bays, making it a healthy, attractive and prosperous place to live, work and visit

In realising this vision we expect that during the next 30 years major work will be undertaken across the region, so that by 2030, significant changes will be clearly visible in the landscape, both urban and rural.

Urban areas

New urban development will be carried out according to performance standards that embrace sustainability and make houses and buildings economical users and recyclers of natural resources, such as water-sensitive urban design, energy efficiency and waste management technologies.

Established suburbs will have been retrofitted with technologies to reduce stormwater flows, pollutant loads, energy use and water consumption, such as low-flow taps, rainwater tanks to supplement the piped water supply, and garden plants that require minimal watering. These will have reduced stormwater flows, pollutant loads, energy use and water consumption.

Vegetation will have been restored along urban waterways and integrated with recreational infrastructure such as walking and cycling tracks, making city dwellers more aware of environmental issues and what they can do to make the region sustainable.

At the same time as up to one million new residents are accommodated, urban sprawl will have been controlled by implementing an urban growth boundary around Melbourne and regional townships. Complementing this, planning protection and support for 'green wedges' will have helped the region to profit in economic and social terms from its catchment assets while promoting sustainability within the green wedges and supporting a diversity of native ecosystems and species.

Rural areas

Productive agriculture, with small and large landholders across a range of industries, will underpin vibrant rural communities and investment in improving the condition of rural land in the region. Most enterprises will use environmental management systems to guide land management and food production and give them advantages in export markets. Native vegetation on farms will have increased the natural predators of insect pests, no new weed species will have been allowed to establish, and research into weed control will have helped reduce existing weeds. Land-use that matches land capability will be achieving multiple benefits for the local landscape, including salinity control and waterway protection. The region's many small farms and lifestyle properties will be well managed, providing a high level of social and environmental value to their owners and the local community.

Spectacular valleys and escarpments in the Werribee and Maribyrnong catchments will have been revegetated with locally indigenous species to enhance biodiversity, landscape and cultural values and create new recreation facilities. Vegetation corridors will link the Brisbane Ranges, Werribee Gorge and Lerderderg parks and local agricultural enterprises will be largely protected from weeds, salinity and decline in water quality. Productive agricultural land will support innovation in rural industries such as the link between agriculture and tourism.

In the Yarra and Dandenong catchments, along Port Phillip Bay and on the Mornington Peninsula, bushland remnants and the coastline will have been protected and improved, streambanks and foreshores revegetated, belts of forest created around vineyards and other farms, major wetlands enhanced and salinity managed.

In the Western Port catchment, work will have been undertaken on private and public land to reduce sediments in waterways and to rehabilitate the coastline. Phillip Island and the steep country in the Bass Hills will have been gradually reafforested so that farmland paddocks are lined with belts of local eucalypts and acacias and with indigenous understorey plants, easing salinity problems and providing an income stream from forest products for landholders. The highly significant vegetation and wetlands on French Island will be relatively weed-free and offering a sustainable ecosystem for the many rare and endangered flora and fauna species which have become extinct in other parts of the region. Widespread coastal and marine projects will have been undertaken to help regenerate the seagrass beds in Western Port and restore healthy fish populations.

Across the region

Targets will have been achieved for river health, water quality, water recycling and the reduction of nitrogen, phosphorous, sediment and toxicant inputs to waterways, wetlands and the bays and oceans. Along the coast, separation will be maintained between valuable and popular natural areas and townships. There will be a sound understanding of the implications of climate change, which is factored into our catchment management programs. An extensive and representative array of parks and other public land will be managed for ecological sustainability while offering multiple recreational opportunities. Also, the quality and quantity of native vegetation across the region will have improved, with connections made to help reestablish a web of vegetation corridors and viable populations of rare and threatened species.

The marine environments in the bays and offshore will be ecologically rich. Sustainable aquaculture enterprises and recreational and commercial fisheries will be enjoyed alongside the network of marine protected areas. Outstanding natural values and consistently high water quality will ensure that Port Phillip Bay, Western Port and the coastline remain the premier recreational assets for Victoria with millions of people enjoying swimming, boating and fishing each year.

Residents will enjoy a quality of life that is high in global terms. Melbourne will remain a hub of trade, technology, culture and social interaction with strong links to its neighbouring rural centres that share the region's catchments. Improved public health will be a tribute to the clean water, low pollution levels and the availability of open space for exercise and enjoyment.

The management of catchment assets will be undertaken cooperatively across agencies and local government, and coordinated with economic and social planning and service delivery to provide outstanding efficiencies and results. There will be better community understanding of the issues, and more willingness to change practices. Land stewardship will be culturally ingrained so that landowners accept the responsibility to hand on their land to future generations in better condition than it was received.

Our vision is for a vibrant community that is informed, aware, consulted, active in undertaking on-ground projects and pro-active in seeking new technology and practices to achieve sustainability.

