

Assemblage of species associated with open-coast salt-wedge estuaries of western and central Victoria ecological community

Consultation Guide

The Assemblage of species associated with open-coast salt-wedge estuaries of western and central Victoria was nominated for protection as a nationally listed ecological community under Australia's national environment law, the EPBC Act.

The nomination was accepted in 2013 and a scientific assessment is now under way. This assessment culminates in a Conservation Advice and will:

- clarify what kind of estuary is covered by the proposed listing and the name and location of these estuaries;
- identify what evidence shows these estuaries to be threatened; and
- recommend what can be done to minimise further damage to the ecological community and help restore natural water flow regimes.

This guide briefly explains the proposed listing and its implications.

The draft scientific assessment, or Conservation Advice, is now available for comment.

Your feedback on the proposal to list the ecological community as threatened is welcome.

See back page for details of how to get consultation documents and provide your comments.

Images

Maps were prepared by ERIN (Environmental Resources Information Network) of the Department of the Environment and Energy.

What is the ecological community?

The open-coast salt-wedge estuaries of western and central Victoria ecological community consists of the assemblage of native plants, animals and micro-organisms that are associated with the dynamic salt-wedge estuary systems found in the Mediterranean climate, microtidal regime (< 2 m) and high wave energy coastline of western and central Victoria.

The ecological community occurs within 25 salt-wedge forming estuaries in the coastal region defined by the border between South Australia and Victoria (to the west) and the most southerly point of Wilsons Promontory (to the east). These are intermittently opening and closing estuary systems with sand bars (berms) at the entrance. They typically have a highly stratified water column, with saline bottom waters forming a wedge (salt-wedge) below the inflowing fresh water layer from the parent river system. They usually have a well-formed

halocline boundary layer between the two water-column layers, which may vary from a few centimetres to over 1.5 m.

Salt-wedge estuaries are typically ecosystems of high ecological value which are increasingly under threat. They contribute high levels of productivity to coastal and nearshore marine environments, and provide important refuge, nursery or breeding habitat for a wide range of invertebrates, fish and birds.

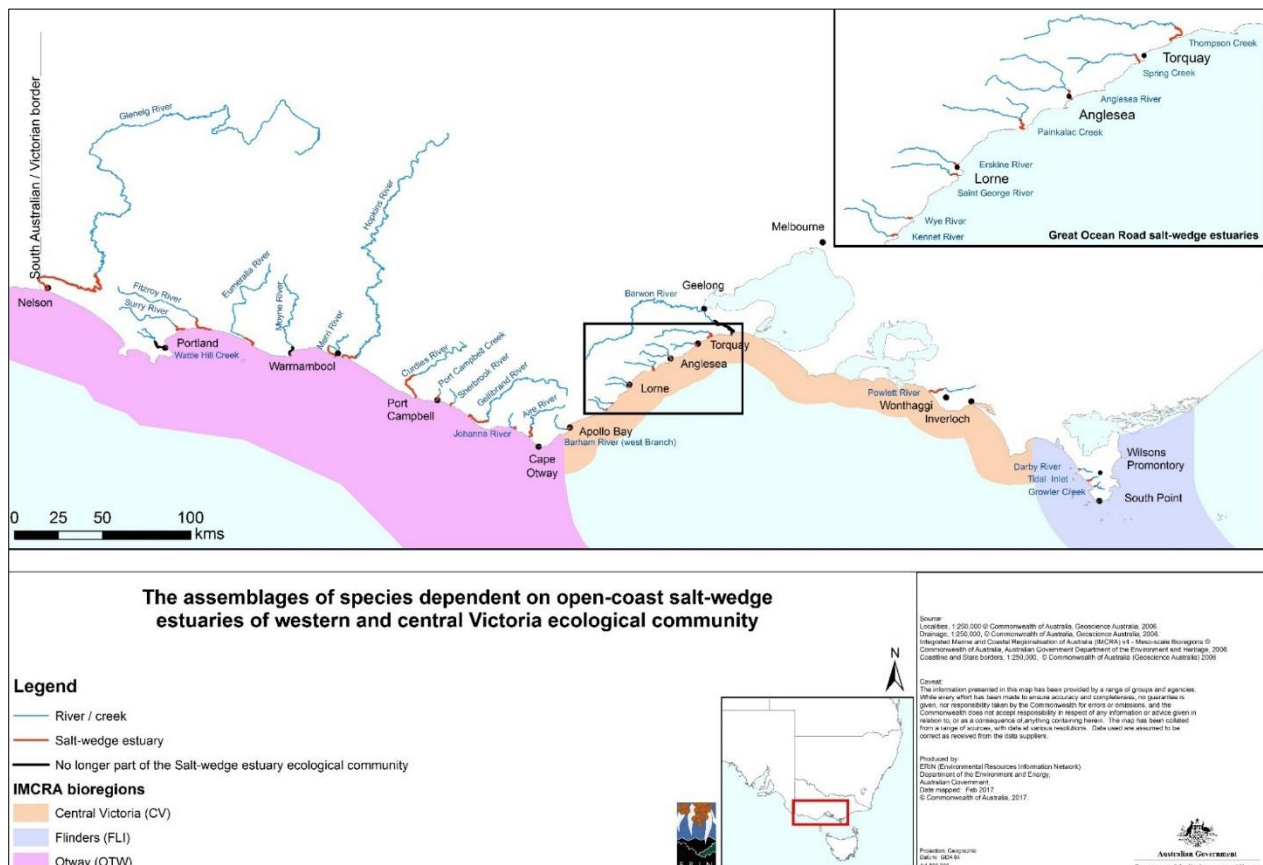
The ecological community requires a natural seasonal hydrological regime that supports salinity stratification and salt-wedge dynamics, and connectivity and ecological function between the estuary, river and ocean (and floodplain wetland components where applicable).

Where is the ecological community found?

The ecological community includes the salt-wedge estuaries of the Otway, Central Victorian and Flinders Bioregions in Victoria. The ecological community occurs within a group of 25 open coast salt-wedge estuaries located along the western and central coastlines of Victoria in the West Gippsland, Corangamite and Glenelg Hopkins NRM regions.

The following map represents the present distribution of the ecological community. Further information on each of the 25 estuaries that have been assessed as meeting the key diagnostic characteristics to be the described ecological community is included in Table 4 of the draft Conservation Advice.

Other estuaries are located within the geographic region but were found not to meet the diagnostic characteristics of the ecological community and are therefore not included.



Why is the open-coast salt-wedge estuaries ecological community threatened and why is it important to keep protecting it?

The draft conservation advice recommends the open-coast salt-wedge estuaries of western and central Victoria may be eligible for listing nationally as **Endangered**.

The draft assessment found that:

- The naturally restricted geographic distribution (i.e. area of occupancy) and specific physico-chemical regime of these highly stratified, dynamic salt-wedge systems, combined with multiple threats make it likely that the ecological community could be lost in the 'near' future (e.g. the next 20 years)
- The distribution of the ecological community along a coastline hosting relatively high density human population and coastline utilisation (including agricultural activities and town centres) makes this ecological community susceptible to a variety of threats, including continued modification of the natural flow regime, climate change impacts, reduced water quality, pathogens, invasive weeds and animals, and inappropriate extractive and recreational activities.
- The combined impact of multiple and cumulative threats (in particular water extraction, climate change, and pathogens) has reduced the integrity of the ecological community. These reductions in integrity have impaired the resilience and function of the ecological community due to ongoing natural and anthropogenic pressures.

There are many reasons why it's important to protect the estuaries of this ecological community:

- Estuaries provide spawning and nursery areas for fish and shellfish, and often include significant fisheries (commercial and/or recreational).
- They are important as breeding and foraging areas for birds. Many Victorian estuaries also support rare and threatened flora and fauna, in addition to internationally significant bird species, such as the hooded plover and eastern curlew.
- Estuaries and their wetlands have an important function as natural sediment and nutrient filters. This function provides cleaner water to both the estuary and to inshore marine zones.
- In addition to providing habitat for plants and animals, ecosystem services include flood control, transportation, purification of human and industrial wastes, and production of fish and other foods or marketable goods.
- Many of the estuaries are popular tourist destinations and are valued for the recreational opportunities they provide. These include activities such as fishing, swimming, bird watching and boating.
- Many recognised Indigenous cultural sites are in close proximity to waterways and estuaries are of particular cultural importance for their abundance of plant and animal resources, such as fish, waterfowl, crustaceans and eels.

Listing is intended to further support land and water managers, farmers and fishermen who want to continue managing rivers and estuaries for future benefits.

How can I tell if the salt-wedge estuaries ecological community is present?

National protection is proposed to only apply to the group of 25 identified Victorian estuaries that each have well defined boundaries, both longitudinally (i.e. mouth to upstream limit of salt-wedge penetration) and laterally (i.e. the river channel, banks and associated submerged or intermittently submerged riparian and wetland vegetation).

The 25 river systems identified as having salt-wedge estuaries that are part of the ecological community are: Glenelg River, Surry River, Fitzroy River, Eumeralla River, Merri River, Hopkins River, Curdies River, Sherbrook River, Gellibrand River, Johanna River, Aire River, Barham River, Kennett River, Wye River, St George River, Erskine River, Painkalac Creek, Anglesea River, Spring Creek, Thompson Creek, Powlett River, Darby River, Tidal River and Growlers Creek. The length of the salt-wedge estuary varies considerably between the individual estuaries. The length of the salt-wedge estuary (and therefore the extent of the ecological community) within the Glenelg River is the longest – at 67.9 km, and the Wye, Erskine and Darby Rivers are the shortest at around 1 km each. Further information regarding the exact size and location of each estuary included in the ecological community is contained in Table 4 of the draft Conservation Advice.

The application of buffer zones offers a practical, cost-effective approach to significantly enhance conservation efforts for aquatic habitats and biodiversity. Four levels of buffer zone are proposed for the estuaries of the ecological community:

- Upstream - the entire parent river length
- Downstream - adjacent marine region to a radius of 1000 m outside of the estuary mouth, including ocean, beach and dune areas
- A lateral buffer zone of a minimum of 50 m from the lateral edge of the estuary into the typically exposed adjacent riparian zone and associated wetlands, intertidal, mud and sand flats, beach and foreshore environments (up to the limit that these are affected by extremes in tidal or riverine flood events)
- Groundwater - a 200 m minimum buffer zone (an appropriate buffer may be 2000 m for example).

The buffer zones are not considered part of the ecological community and therefore in their own right do not trigger the EPBC Act. However, they should be considered when determining likely impacts on the ecological community.

For some nationally-listed ecological communities, condition classes and thresholds are specified to focus legal protection on patches that remain in relatively good condition, and retain their natural composition and ecological function to a large degree. Due to the largely dynamic nature of this aquatic ecological community, and the importance of longitudinal and lateral connectivity, it is proposed that, in this case, condition thresholds do not apply.

How will national protection affect developers and land managers?

National protection only applies to **new** actions likely to cause **significant** damage to the estuaries of this ecological community.

Activities which were routine or began before the listing of an ecological community can typically continue without referral/approval.

Activities carried out in line with state and territory laws and guidelines covering native vegetation and fishing often do not require referral under national environment law. Additionally, an ecological community listing will only apply to species that are native and natural to the ecological community. For example, fishing for introduced species is not regulated by the EPBC Act.

Routine activities not requiring EPBC referral include the following:

- ongoing grazing, horticultural or cropping activities
- maintaining existing fences, roads, bridges and firebreaks
- maintaining existing dams, water storages and storm water systems
- replacing and maintaining sheds and other buildings
- maintaining existing jetties, sea walls and boat ramps
- ongoing cultural activities
- controlling weeds by hand or minor group machinery, and
- recreational and commercial fishing under State managed regulations.

I want to preserve my waterways, river channels and riparian areas or don't plan to do anything to them.

If there are no new actions, then the listing won't affect you. Land managers who want to protect the quality of the waterways on their land and retain good quality riparian vegetation, or intend to restore any riparian areas on their properties may apply for funding to help with their conservation.

Relevant national environmental funding programs are under way (for example Landcare) that are designed to help people undertake environmental works across Australia. Regional Catchment or National Resource Management (NRM) groups also offer funding, advice and support to help landholders look after their landscape, waterways and remnant vegetation.

Many projects specifically target and support nationally listed threatened species and ecological communities that occur on properties.

Water managers who continue to implement appropriate management regimes to protect and restore natural river flows with seasonal high and low flow cycles that support the periodic seasonal formation and presence of the salt-wedge within the estuary won't be affected by the listing.

I'm just doing usual routine activities to maintain my land, business, recreation etc.

There are either exemptions in the national environment law that would apply here and most of these activities are unlikely to have a significant impact.

Routine and ongoing activities by farmers, business and the general public engaging in recreation are rarely impacted by national listings. This has been the case for terrestrial and coastal ecological communities that have been listed in this and other areas of Australia, including the Subtropical and Temperate Coastal Saltmarsh listed in 2013 and marine ecological communities such as *Posidonia* seagrass meadows ecological community, listed in 2015. There are exemptions for:

- activities that are already legally approved. For instance, existing farming activities, legal fisheries, or developments that have already been approved, AND
- long-term, continuing or routine activities, such as normal farm practices, cultural activities, recreational fishing, tourism and other recreational activities, usual infrastructure maintenance, or weed or pest control.

How would listing salt-wedge estuaries impact on recreational fishing?

Recreational fishing is regulated in Victoria, as it is in all states and territories. These regulations restrict the activities of anglers through measures such as fishing gear restrictions; size and bag limits; and closed fishing seasons. The legal catch of a recreational angler is unlikely to constitute a significant impact on native fish species and as such, should salt-wedge estuaries of central and western Victoria be listed as a threatened ecological community, recreational fishers can continue to enjoy their fishing within the existing rules.

How would listing salt-wedge estuaries impact on commercial fishing?

Commercial fishing in Australia is managed by Commonwealth, state and territory governments. Should salt-wedge estuaries of central and western Victoria be listed as a threatened ecological community, approved commercial fishing activities can continue within existing rules.

I have a new development that might involve impacts on an estuary of the ecological community.

The main recommendation would be that you seek advice to determine if approval is required for any new activity that could significantly impact upon the estuaries of the ecological community.

Referrals usually apply to major projects, and activities likely to require referral include:

- significantly altering the natural seasonal water flow regime of an estuary that is part of the ecological community by inappropriate management of the estuary mouth
- creating large, new and unnatural water diversions or permanent water storages
- permanently draining or clearing large areas of wetlands or river flats within or adjacent to the ecological community
- dumping waste or contaminated water within or adjacent to the ecological community or otherwise changing the water quality within the ecological community
- expansion of an existing port or construction of a new port, harbour, marina or wharf
- new jetties, boat ramps, sea walls or storm water systems
- new or expanded mining activities
- new or expanded roads, particularly that impact on hydrology (including tidal connection)

- sources of new pollution, e.g. industry, sewage, aquaculture, and
- new or significantly intensified fishing or aquaculture industries may need to consider referral.

Check if your proposed action is located within the ecological community [see previous pages for some guidance or seek help from local NRM staff].

Plan to avoid or minimise impacts to estuaries, especially the natural and seasonal flow regime of freshwater and sea water in and out of the estuaries. In many cases there may be no need to refer an action if the ecological community and the ecosystem services it provides are taken into account first. Careful planning can often avoid or mitigate any significant detrimental impacts. For instance, locating public jetties and boat ramps away from the estuaries.

Talk with the Australian Government Environment Department first to check if the action may significantly impact any listed ecological communities or species and needs to be referred for national approval.

Note that your current socio-economic circumstances plus any past environmental history can be taken into account when approving any action that has to be referred under the EPBC Act. The Victorian Government also has laws on protecting wetlands and waterways that may apply to certain activities. In many cases, similar information used for state assessment may be used for referral under national environment law.

There also may be other nationally-protected matters that need to be considered, for instance any nationally threatened species likely to use the estuaries or their parent rivers as habitat. Many threatened and migratory bird species, in particular, are known to use the estuaries of the ecological community as feeding habitat. Orange-bellied parrots, southern bell frogs or other listed species may also occur at some sites.

Where do I get documents about the salt-wedge estuaries ecological community, and how to comment on the proposal?

The draft Conservation Advice and other information about how to make a submission, including questions to guide your responses, are on the website of the Department of Environment and Energy:

<http://www.environment.gov.au/biodiversity/threatened/nominations/comment>

Where do I find information about the national environmental law and Australian Government funding programmes?

Advice about Australian Government environmental funding programs (e.g. National Landcare Program) can be found online at:

<http://www.environment.gov.au/about-us/grants-funding>

Information about the EPBC Act referral and assessment process is available on:

<http://www.environment.gov.au/protection/environment-assessments>

If you have any questions, then please contact:

The Federal Department of the Environment and Energy

Tel: 1800 803 772 or email ciu@environment.gov.au

OR

contacts given with the documents open for consultation at:

<http://www.environment.gov.au/biodiversity/threatened/nominations/comment>