

Action statement

Flora & Fauna Guarantee Act 1988

Eastern Curlew (*Numenius madagascariensis*)

Taxon ID: 10149

Action statements are developed under the *Flora and Fauna Guarantee Act 1988* (FFG Act). Their preparation and implementation complement the FFG Act strategy *Protecting Victoria's Environment – Biodiversity 2037* and its vision that "Victoria's biodiversity is healthy, valued and actively cared for".

Species and Distribution



Eastern Curlew. Image by Dan Pendavingh.



This habitat distribution model displays the indicative range of the Eastern Curlew based on occurrence records and likely habitat. See [NatureKit](#) for an interactive map. The Eastern Curlew also occurs outside of Victoria.

Conservation Status

Critically endangered

Listing criteria: 3.1.1 of the Flora and Fauna Guarantee Regulations 2020.

This means that:

The Eastern Curlew has undergone, is suspected to have undergone, or is likely to undergo in the immediate future, a very severe reduction in population size.

Corresponding International Union for the Conservation of Nature (IUCN) criteria: A2(a).

More information on IUCN listing criteria can be found here: [IUCN Red List criteria](#).

Species Information

Species information such as its description, distribution, ecology and references are provided in the [Eastern Curlew Conservation Advice](#).

Threats

Threats listed below have been identified through expert consultation and published literature.

Threat	Description
Habitat loss, degradation or modification	
Loss of key habitat features	<ul style="list-style-type: none"> Loss, modification, damage/destruction or abandonment of high tide roosts and foraging habitat due to coastal development.
Human disturbance	
Construction, development and/or infrastructure	<ul style="list-style-type: none"> Coastal development has the potential to destroy and degrade habitat. Construction of barrages, land reclamation and stabilisation of water levels, can destroy feeding habitat. Coastal protection works (such as sea walls) may impact foraging and roosting sites through loss of mudflats/reduce the exposure time of tidal flats. While not presently a threat, offshore wind farms, if positioned in the pathways of these migratory birds, may present an emerging risk.
Recreational activities	<ul style="list-style-type: none"> Eastern Curlew is an especially wary species. Human disturbance along the coast, can interrupt feeding or roosting. Higher rates of human visitation and coastal-based recreational activities including dog walking, water sports and aerial activities can cause increased disturbance, impacting the Eastern Curlew's preparation for migration and/or force them to abandon otherwise suitable habitat. The use of vehicles on the beach can also cause disturbance and abandonment of suitable habitat.
Climate change	
Extreme weather	<ul style="list-style-type: none"> Climate change may increase occurrence of extreme storms and coastal flooding events. This will produce greater storm erosion, and realignment of coastlines, resulting in threats to the feeding and roosting habitat and displacement of birds from mudflats.
Sea-level rise	<ul style="list-style-type: none"> Sea-level rise will displace coastal foraging habitat/sites. In addition to the direct impact of sea-level rise, receding shorelines and engineered coasts may result in 'coastal squeeze,' reducing available habitat. As the threat of storm surges increases, sediment particle size and seaweed deposition will be impacted with flow on effects for foraging habitat.
Temperature extremes	<ul style="list-style-type: none"> An increase in temperature extremes due to climate change may result in reduced food availability.
Introduced species	
Introduced plants	<ul style="list-style-type: none"> Introduced plants compete with native species and degrade habitat. Invasion of tidal flats by <i>Spartina</i> can reduce access to feeding habitat and roost sites. Taller vegetation can make roost sites unsuitable and may promote predator ambush.

Threat	Description
Pollutants and toxicants	
Water pollution	<ul style="list-style-type: none"> Pollution in localised areas, especially around ports, may reduce the availability of food. Pesticides and other chemicals in run-off from urban and agricultural areas may contaminate the sediment, degrade mudflat habitat, and reduce the availability of food. Oil spills can lead to hypothermia or poisoning through ingestion (when preening). This can cause individual mortality and may significantly impact available prey.
Native species	
Problematic native plants	<ul style="list-style-type: none"> Mangrove encroachment into new areas can reduce available habitat for roosting and foraging. This is likely to become a more significant issue with climate change. Encroachment by other native shrubs and grasses can impact high tide roosts.

Conservation Objectives

Conservation objectives are informed by the conservation status and criteria under which the species was listed under the FFG Act. This provides a framework to understand how we can work towards recovery and improve the species' conservation status over time as per the objectives of the FFG Act.

The key objectives of this action statement are:

Mitigate threats to populations, including disturbance at key roosting and feeding sites, and maintain/enhance important habitat to increase resilience and minimise future population decline.

Increase the extent and suitability of Eastern Curlew habitat by providing opportunities for foraging and roosting.

Increase knowledge of biology, ecology, distribution, demography, emerging threats, and conservation requirements.

Support community participation and improve awareness of the Eastern Curlew and conservation of tidal flat environments and adjoining shorelines.

Conservation Actions

The actions below have been identified through expert consultation, published literature and spatial analysis. Actions are listed in alphabetical order to allow all interested parties to prioritise based on their context, capacity and capability. Landscape scale actions may mitigate threats for other species. For more information on where to undertake actions that benefit multiple species and identify the most beneficial locations to undertake actions for this species, please refer to [NatureKit](#).

Action	Description
Community engagement and awareness	<ul style="list-style-type: none"> Increase community and landholder awareness of the Eastern Curlew, its ecological requirements, threats to its survival and persistence, and strategies for reducing the impact of human disturbance on migratory shorebirds and their habitat.
Compliance and enforcement	<ul style="list-style-type: none"> Undertake risk-based compliance and enforcement activities to limit the impacts of identified threats to the species.

Action	Description
Conservation management planning	<ul style="list-style-type: none"> Ensure that provisions for shorebirds are considered in oil spill response management plans and response training exercises Ensure Victoria's Resilient Coast Guidelines are followed for the design of coastal adaptation strategies.
Control introduced plants*	<ul style="list-style-type: none"> Implement effective management and control of introduced plants including <i>Spartina</i>.
Manage problematic native plants	<ul style="list-style-type: none"> Implement effective management and control of native plants where they present problems.
Protect key habitat	<ul style="list-style-type: none"> Manage human disturbance at sites where Eastern Curlews are present. Consider requirements of the Eastern Curlew (such as foraging and roosting habitat) and impacts from the construction of coastal protection assets (such as rock-armouring, seawalls, pile fields) and other activities such as mangrove introduction in the planning phase. Consider the requirements of the Eastern Curlew in the placement, design and operation of coastal wind farms. Support initiatives to maintain and improve habitat management at key roosting and feeding sites. Support efforts to protect and manage key migratory staging sites along the East Asian-Australasian Flyway. Wind farm proponents identify site-specific mitigation actions for operating onshore wind energy facilities in Bat and Avifauna Management Plan.
Research	<ul style="list-style-type: none"> Conduct research into foraging ecology to identify reasons why large prey items might be diminishing in abundance at some sites, and its impact on the species. Improve knowledge about dependence of Eastern Curlew on key migratory staging sites, and wintering sites to the north of Australia. Conduct research into sea level rise projections, identifying areas where suitable habitat will change over time for protection purposes. Investigate opportunities in Swan Bay and Andersons, Shallow and Corner inlets to remove old bunds and levees to restore original tide regimes and allow landward migration of systems. Investigate the impacts of disturbance and appropriate disturbance buffer sizes for terrestrial, water-based, and aerial recreation. Increase knowledge of the impact of introduced predators on avoidance of roost and adult mortality. Increase knowledge of impacts of pollution on sediments, food availability and bioaccumulation.
Survey and monitoring	<ul style="list-style-type: none"> Enhance existing migratory shorebird population monitoring to include an assessment of habitat quality and food availability, identify critical foraging and roosting sites, assess threats, and derive accurate population estimates.

**Indicates landscape-scale actions that may deliver benefits to multiple species*

Past Actions

The key conservation management actions listed below have been delivered in the past 10 years..

Past action	Description
Community engagement and awareness	<ul style="list-style-type: none"> Monitoring workshops to increase community awareness and direct participation in conservation activities. The <i>Flock Oz</i> initiative has raised awareness of shorebirds through painting of wooden shorebirds and installation of the 'flock' at community events/locations of shorebird habitat. Upskilling of observers and community members, workshops, Birds n' Bickies mentoring/training series, and stalls on both World Migratory Shorebirds Day and World Wetlands Day. These efforts have resulted in greater community participation in counts, and more robust and reliable population data.
Conservation management planning	<ul style="list-style-type: none"> Stakeholder consultation has been undertaken to formulate site-based conservation action plans for key shorebird areas that are habitat to Eastern Curlew for National sites of significance (Swan Bay and Mud Islands), International Significance (Corner Inlet, Shallow Inlet, Andersons Inlet) and others (Hamilton Lakes, Discovery Bay).
Control introduced plants	<ul style="list-style-type: none"> <i>Spartina</i> control has been undertaken at key roost and foraging areas including Corner Inlet and Andersons Inlet.
Research	<ul style="list-style-type: none"> A review of data for the 'Australian National Directory of Important Shorebird Habitat' was undertaken, with an assessment against international and national significance thresholds to identify current important shorebird habitat within Australia. This includes a chapter focused on Eastern Curlew as well as a list of sites triggered by the species for significance. A review into the value of floating artificial roost trials for shorebirds was undertaken.
Survey and monitoring	<ul style="list-style-type: none"> Summer and Winter shorebird counts have been conducted biannually at defined sites of national and international significance. This quantifies seasonal site use by Eastern Curlews (and other migratory shorebirds) and collects vital, standardised population data for this species.

Decision Support Tools

Decision making for conservation actions is supported through the following Victorian Government tools which may be of assistance in choosing the most appropriate or beneficial actions for biodiversity:

- [Choosing actions for nature: NatureKit](#)
- [Biodiversity Knowledge Framework](#)
- [CoastKit](#)

Further Information

- [Eastern Curlew Species Forecast Report](#)
- [Commonwealth Species Profile and Threats database](#)
- [Victoria's changing climate – understanding the impacts of climate change on Victoria](#)

- [Genetic Risk Index](#)
- [Commonwealth Threat Abatement Plans](#)
- [Flora and Fauna Guarantee Regulations 2020](#)
- [IUCN criteria summary](#)

Get Involved and Take Action

If you are interested in supporting this species' recovery, there are some important things you need to consider.

The Department of Energy, [Environment](#) and Climate Action (DEECA) is committed to engaging and partnering with Traditional Owners on how they wish to be involved in the planning and implementation of actions for this species. Steps must be taken to avoid harm and where appropriate ensure actions can deliver cultural benefits.

You can find advice about required approvals, land manager and/or owner permissions, options and incentives for private land conservation, and engagement with Traditional Owners and public land managers here: [Action statements \(environment.vic.gov.au\)](#)

To identify the relevant Traditional Owners, use the [Aboriginal Cultural Heritage Register and Information System \(ACHRIS\) Welcome to Country and Acknowledgements Map](#).

You can also register your interest in taking action so we can connect you to other people or organisations working to help us secure the future for this species at threatened.species@deeca.vic.gov.au

Reporting Actions

Activity data is critical to monitoring the implementation and progress of actions and evaluating action statements. These data are also used to:

- Determine progress towards achieving the contributing targets for [Protecting Victoria's Environment – Biodiversity 2037](#).
- Inform the five-yearly State of the Environment Report.

For guidance on reporting actions undertaken on this species, refer to [Activity Data](#).

Submitting Monitoring Data

The Victorian Biodiversity Atlas (VBA) provides a foundational dataset showing where biodiversity occurs across the Victorian landscape and how it may have changed over time. As a core input for decision support tools that inform conservation action, public land management, research activities and reporting, we encourage all participants in the delivery of on-ground actions to submit species records and observations, for introduced plants and animals, as they carry out their projects.

For further information see: [Victorian Biodiversity Atlas \(environment.vic.gov.au\)](#)

Sign up and begin submitting your data today at: <https://vba.biodiversity.vic.gov.au/>

Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



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