

# AUSTRALIA'S estuaries

ASSESSING THEIR CONDITION



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Estuaries are valuable resources from ecological, social and economic perspectives. Most Australians live in towns and cities near estuaries.

Australia has over 1000 estuaries. Approximately half of these are in near pristine condition. Most near pristine estuaries are located away from population centres in tropical northern Australia and in temperate western Tasmania.



NEAR PRISTINE ESTUARY



There has been no comprehensive Australia-wide assessment of this valuable national resource.

Estuaries are subject to a range of direct and indirect impacts due to land use in the catchment, changes to hydrology and direct estuary use.

Nutrients, sediments and toxins that enter a catchment as a result of agricultural activities, urbanisation, vegetation clearing and industry eventually end up in the estuary and affect water quality and estuarine ecology. In this way, estuaries are the report cards of catchments.

Dams and barrages on rivers alter the hydrology of estuaries and lead to increased sedimentation, closed entrances, altered freshwater flows and changes in tidal flushing.


AGRICULTURAL IMPACTS



LEISURE • RECREATION

Estuaries are often used for dumping; sand or water extraction; and construction of marinas, ports and canal estates. They are dredged, filled in and artificially trained, and wetlands associated with them are often destroyed.

Less than 50 of Australia's estuaries have been intensively studied and most of these were severely degraded. An Australia-wide assessment of estuaries, including those that are near pristine, is needed to assist in the wise use and management of these assets.



For too long estuaries have slipped between land and marine management responsibilities. During the past 200 years they have had no guardian angel, no institution watching over their health and welfare.

WILDLIFE HABITAT

# ASSESSING their condition

An Australia-wide partnership has been forged to assess the state of Australia's estuaries and to ensure an ongoing interest in their condition. The assessment will help determine management priorities and set mechanisms in place to assist ongoing restoration and protection. It will provide a blueprint for the future management of estuaries.

**The assessment is a starting point towards a coordinated Australia-wide approach to estuary management.**

## CLASSIFICATION

- classifying Australia's estuaries by condition and key ecological processes

## DATA

- developing an Australia-wide, estuarine database in conjunction with State and Territory agencies
- ensuring databases are readily accessible and able to be updated

## MODELS

- developing simple models of estuarine processes and indicators
- developing diagnostic models for the assessment of estuarine condition
- applying the models to assess management options

## PRODUCTS

- a handbook detailing our understanding of key estuarine processes, management challenges and opportunities for estuary types
- guidelines for collection of data to monitor estuarine condition
- reports on data collection, models and synthesis of information
- a website with management-oriented information on all Australian estuaries

## LONG-TERM OUTCOMES

Implementation of this assessment and monitoring framework will lead to:

- protection and management measures for near pristine estuaries
- restoration programs for severely modified catchments and estuaries

**The success of the estuaries assessment depends on the involvement of communities, industries and governments in both developing and implementing recommendations for improved estuary management.**



FISHING



TOURISM



ENTRANCE WORKS



TOWNS • CITIES



PORT FACILITIES

# ESTUARIES ASSESSMENT

## partners

### National Land & Water Resources Audit

*A program of the Natural Heritage Trust*



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Department of the Environment and Heritage

CRC for Coastal Zone  
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THE UNIVERSITY  
OF QUEENSLAND  
AUSTRALIA

STATE OF THE  
ENVIRONMENT  
REPORTING

## Further information

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