

# ESTUARINE WETLAND HEALTH ASSESSMENT AND INVESTMENT PRIORITISATION

## overview of the project

Under the guidance of technical experts, Wetland Care Australia developed a scientifically rigorous method for assessing the health of estuarine wetlands. The method has been designed for use by both natural resource professionals and the community to assist in assessing and prioritising wetlands according to various health indicators. Previously there was no widely accepted methodology for rapidly assessing and prioritising wetland ecosystems requiring management or rehabilitation.

The method was trialled on estuarine wetlands in four major coastal catchments of the north coast, and a comprehensive training manual and field sheets were developed to support the assessment methodology. Over 200 people were trained in the assessment methodology during the grant, with more training planned for the future. The project has also developed a wetland database for storage of the field data that allows the production of summary reports of wetland health, and wetland health mapping of priority wetland areas on the north coast.



Field days were an important part of the training

## how the project was carried out

A Technical Reference Group guided all phases of the project and provided feedback on the indicators and method being considered. The first step was the compilation of a literature review of existing wetland assessment methods which identified potentially useful techniques for development of the Estuarine Wetland Assessment Technique.

Field assessments were carried out in the Tweed, Brunswick, Richmond and Clarence River catchments. The indicators chosen for inclusion in the field trials were based on a number of factors including repeatability, simplicity, representativeness, and their relationship to wetland management. Each indicator was trialled by at least two assessors,

and all techniques and indicators were tested on a range of estuarine wetlands. Field sites in each catchment were chosen by a Local Steering Group that had a working knowledge of the wetlands and their history.

A scoring system for indicators was developed based on an existing system for swamp forest and open freshwater wetlands. It consists of a series of 'health scores' that reflect the health of different aspects of the wetland. A consultant was contracted to develop a database to enter, store and interpret the data collected by the field assessment methods. The database carries out the scoring of the indices and summarises the scores into a simple 'Wetland Health Report'.

## outcomes now and in the future

The literature review and field trials resulted in the selection of seven indicators for general wetland assessment — connectivity; human disturbance; acid-sulfate soils; vegetation diversity and condition; habitat potential; hydrological change or tidal restriction;

and bank condition. In addition there are specific assessments for different wetland types (Paperbark Swamps, Open Freshwater Wetlands and Estuarine Wetlands).

The assessment method for each indicator are detailed in a comprehensive Wetland Assessment Techniques Manual. The trials of the assessment method resulted in the collection of baseline health data and associated mapping for 73 wetland sites in the Brunswick, Tweed, Richmond and Clarence catchments.

A total of 225 people on the North Coast were trained in the assessment techniques through eight workshops and six field days. The training was aimed at estuarine wetland managers including landholders, state and local government and community groups.

## benefits, challenges & lessons learned

Feedback from the early one day workshops showed that the workshop alone did not equip people with a high enough level of experience or confidence to implement the assessment techniques on their own. The field days were therefore seen as a very important aspect of the training so that people had the opportunity to put the techniques into practice.

Through this project a scientifically rigorous methodology has been developed that is relevant to coastal wetlands throughout the state. WetlandCare Australia hopes that the methodology will become the standard technique used in estuarine wetland health assessment. Through the Environmental Trust's Dissemination Program, WetlandCare Australia has extended the methodology and training to other communities along the NSW coast.



Mangrove seedling in saltmarsh