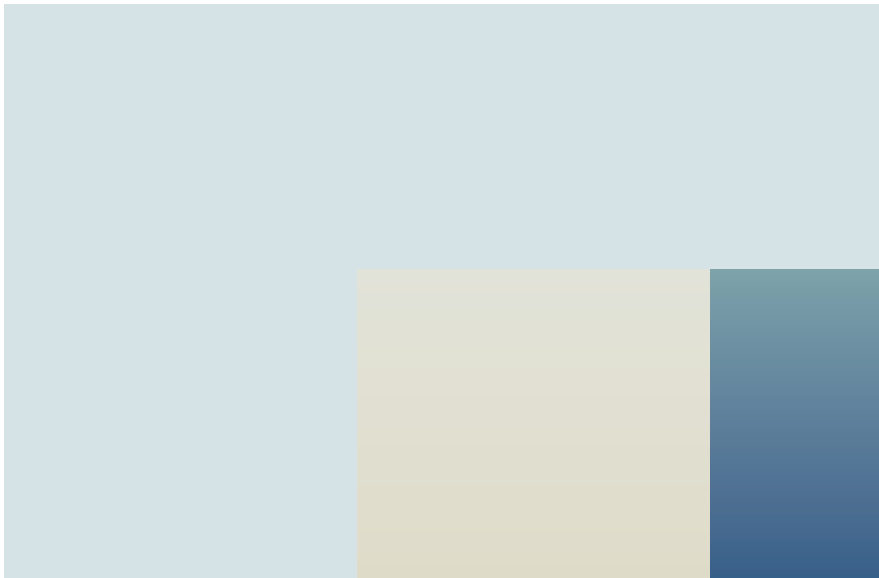


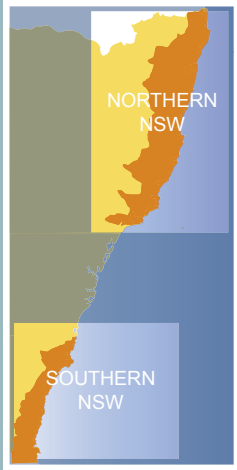


NSW GOVERNMENT  
**Department of Planning**

# PROTECTING OUR COAST

## THE COMPREHENSIVE COASTAL ASSESSMENT TOOLKIT





COMPREHENSIVE COASTAL ASSESSMENT Study area



## Introduction

The NSW coastline includes a range of stunning natural features, including beaches, headlands, wetlands, coastal lagoons, native vegetation and littoral rainforests, along with important water and agricultural land resources. People are attracted to these natural values and the coast's unique and diverse cultural elements that blend to provide an ideal lifestyle for visitors and residents.

Strategic planning for coastal areas is a challenging task. Planners must balance the need to provide new jobs, housing, facilities and transport for a growing population, along with protecting important environmental and natural resource assets.

The Comprehensive Coastal Assessment (CCA) toolkit is part of the NSW Government's Coastal Protection Package. It helps councils, government agencies and others undertake important strategic land-use planning. The CCA toolkit study area extends from Port Stephens to the Tweed in northern NSW and from Shellharbour to Bega Valley in the south.

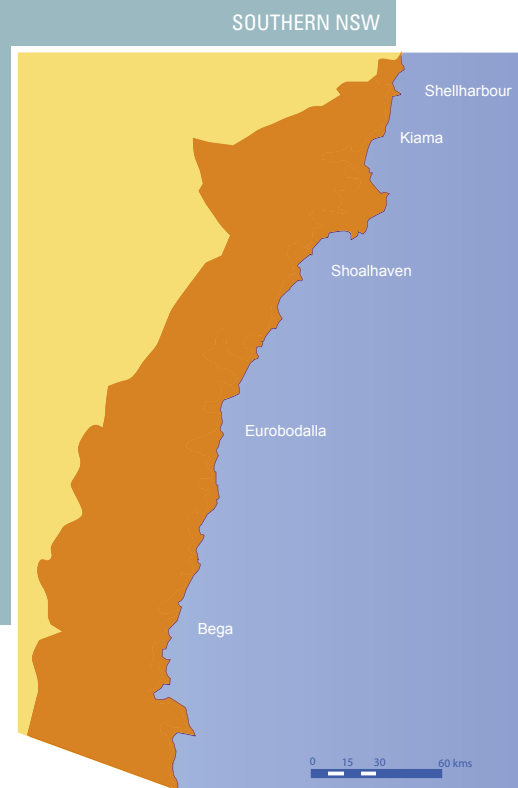
### WHO WILL USE CCA

The CCA toolkit is primarily designed to help coastal councils and catchment management authorities in the CCA study area to undertake strategic land-use planning. A council can use the product, together with its own information, when developing a new comprehensive local environmental plan or a long-term strategic plan. It helps councils calculate the potential positive and negative impacts of certain land-uses on an area's environment, community and economy.

It can also be used by NSW government agencies and the private sector, such as property industry consultants.

The CCA toolkit, in the form of a double DVD set, makes existing coastal information more easily accessible, provides important new information and supplies software which aids decision-making.

All local councils, contributing agencies and catchment management authorities in the CCA study area are being provided with a copy of the CCA toolkit. The DVD set is also available to the public for a nominal fee. The DVDs contain reports, decision-support software and spatial information through interactive Geographic Information Systems (GIS) technology.



### LEGEND

-  NSW coastline
-  CCA study area



# How the CCA toolkit works

Information, resources and decision support tools to undertake Comprehensive Coastal Assessments are presented in the toolkit in the form of a 'pyramid'.



The first level of the pyramid represents base information in the form of reports, maps, tables and databases on coastal values. About 140 sets of information detail environmental, social, cultural heritage and economic issues in an interactive DVD format. These reports can be used in isolation for general reference or to contribute to the second level. It is this level that is likely to be most used by councils and others.

At the second level, the base information, along with any other relevant information available, can be used to decide key issues in the strategic planning process.

**Example** A council may decide that the most relevant criteria to be considered are impacts on an area's biodiversity, waterway nutrient load, visual quality, agricultural production and the local economy. The council can then determine and measure indicators relating to these criteria (such as nitrogen levels in waterways, agricultural economic activity or the local unemployment rate) with the support of relevant State agencies where necessary. These criteria and indicators have a major influence on the preferred land-use outcomes and should ideally be developed in consultation with the community.

At the peak or third level all the base information, criteria and indicators can be brought together in an optional process known as 'multi-criteria analysis'. A software program known as TopDec is provided to support this process. A council for instance may be able to see how different land-use options impact on the particular criteria and measures.

**Example** An industrial complex in a certain area may assist local employment near a town with a high jobless rate but could have a negative impact on a nearby waterway unless adequate management measures are incorporated. The CCA toolkit provides methods, models and integration software that can help the council rank different land-use options and also identify a preferred land-use option based on the selected criteria. In this instance, the CCA toolkit may show that by siting the industrial land slightly differently, the council may achieve both the economic benefits as well as protection of the waterway.

*The CCA Guide: CCA Integrated Decision Framework* included in the CCA toolkit explains in detail this approach and outlines the information contained in the whole kit.

# What is in the CCA toolkit

## 1 base information

The CCA project is fundamentally about providing better data and information on coastal values and attributes to enable better decision making by councils and other decision makers.

The CCA toolkit has a wealth of information on environmental, economic, social and cultural heritage issues along the coast. Highlights include:

### ENVIRONMENT

Aquatic habitat mapping for all non-metropolitan estuaries, showing the location and extent of mangroves, salt marsh and seagrasses. Important contextual information such as potential aquaculture areas, fish species distribution and biodiversity are also included.

Flora and fauna audit reports, for the first time, consolidate information on coastal biodiversity.

Also provided are soil and land feasibility maps developed from a new, GIS-based system that analysed existing information on soils and landforms.

### ECONOMY

Detailed economic statistics on employment and income, agriculture value, housing and tourist accommodation and consumer expenditure are provided. Other economic information includes:

- tourism information (including monthly visitation rates) to help plan peak loads in holiday periods
- a guide to initiatives and assistance programs by organisations involved in economic development strategies.

### SOCIAL

Detailed demographic data shows coastal population movement and projections. There is also a report on the economic value of wild resources to the indigenous community and a compilation of historical records indicating early contact between European coastal settlers and local Aboriginal peoples. Further social information is provided as part of the second level of the pyramid.

### CULTURAL HERITAGE

Aboriginal cultural landscape maps, which have been developed in consultation with local Aboriginal peoples, are an important and innovative part of the toolkit. The maps are based on soil landscapes and indicate that the entire natural landscape has value for indigenous people. The maps also show areas, in broad terms, of particular value to Aboriginal people related to cultural associations with the landscape such as historical trading routes and areas of spiritual significance.

## 2 creating indicators

At the second level, key criteria and their related indicators can be selected and measured to consider land-use options. Users can access the base information along with a number of tools and methods provided in the CCA toolkit to create environmental, economic and social indicators, such as:

### ENVIRONMENT

**Biodiversity**—the NSW Government has further developed its capacity to forecast changes in biodiversity as a response to different land use changes. In cooperation with the Department of Environment and Conservation, this tool can be applied to assist councils to select the areas to develop that would avoid or minimise impacts on biodiversity.

**Aquatic ecosystems**—models have been developed to predict the effect of land use changes on nutrient run-off and the potential impacts that this may have in estuaries and coastal lakes. They are described in detail in the CCA toolkit. The Department of Environment and Conservation is currently extending this work to develop a user-friendly interface so that these tools can be used more broadly.

### ECONOMY

Advice on how to include economic indicators such as the costs from loss of agricultural production and costs of infrastructure, is included as are models that assist in the calculation of economic and ecological impacts of development in catchments.

### SOCIAL

A social assessment guidebook is provided which outlines how to develop indicators of community wellbeing. A method on visual assessment is also provided which is based on a pilot study in the Far North Coast.

## 3 integration

Two optional tools are provided in the CCA toolkit to assist with analysis—TopDec and CLAM.

### TOPDEC TOOL

The CCA toolkit includes a user-friendly software package called TopDec, which can allow users to carry out the multi-criteria analysis process. This is when TopDec ranks the desirability of different land-use scenarios, based on their impact—positive or negative—on the developed indicators. Importantly, TopDec records such weightings, which influence the ranking, so that the decision-making process remains highly transparent and accountable.

Information that may be held by the council, local industry and environmental groups, and/or expert opinion, can also be used in this process.

It is important to recognise that multi-criteria analysis is an aid to decision-making that allows the testing of different scenarios and different weighting of criteria. It does not replace the need for coastal decision-makers to make decisions in accordance with their statutory responsibilities and within the context set by Regional Strategies. Care should be taken in relying on the tool as a substitute to merit-based decision making.

### CLAM TOOL

Another integration tool that has been developed is tailored specifically for the assessment of seven coastal lakes—Cudgen, Myall, Burrill, Narrawallee, Coila, Merimbula and Back. These seven represent a range of differing lakes in terms of geomorphology, sensitivity and land use. The Coastal Lakes Sustainability Assessment Tool (CLAM) allows local councils to assess the impacts of different land use and management options on these lakes, to assist them make integrated planning and management decisions from the perspective of sustainably managing the lake in question.



# Application

The CCA toolkit provides councils with considerable flexibility to assess important development issues in their area. All the tools, information and indicators mentioned in this brochure can be used in isolation or as part of an integrated assessment process.



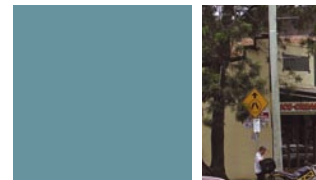
# Case study

A coastal council wants to create a new comprehensive local environmental plan for its area. It is keen to accommodate new jobs and housing in a sustainable way, to give its community some economic growth and lifestyle opportunities without undermining the beautiful and highly valuable local environment.

The council first examines the base information about its area available in the CCA system. It then holds some workshops with its community to determine the most important criteria to consider when determining land-use options. The community feedback is clear that they want more economic growth, but consider waterway quality and biodiversity levels are also highly valuable.

Equipped with this information, the council identifies and measures key indicators linked to each of these criteria. The council then uses the CCA software to examine a range of different land-use options across a wide area.

The CCA toolkit provides information on how the different land-use scenarios impact on these indicators. With the support of this feedback, the council feels more confident in deciding on the location of future development, including new industrial estates, housing growth and tourism developments.





## Contributors

The CCA toolkit would not have been possible without the collaboration and major contributions of the following State agencies:

- Department of Environment and Conservation
- Department of Lands
- Department of Natural Resources
- Department of Planning
- Department of Primary Industries
- Department of State and Regional Development

The collaboration of a number of local councils is also warmly acknowledged, in particular, Tweed Shire Council who assisted in testing the CCA toolkit.

## More information

The CCA toolkit is available as a handy set of two DVDs. To purchase copies, contact the Department of Planning Information Centre on 02 9228 6333 or email [information@planning.nsw.gov.au](mailto:information@planning.nsw.gov.au).

Further information about Comprehensive Coastal Assessment, CCA products and updates, and the NSW Government's Coastal Protection Package is also available from the Department's website at

[www.planning.nsw.gov.au/plansforaction/cca.asp](http://www.planning.nsw.gov.au/plansforaction/cca.asp)

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