



**BUSINESS AREA: SPATIAL SERVICES**

Case Study

# NRM Planning for Climate Change

Spatial Vision and Natural Decisions were engaged by 7 of Victoria's 10 CMAs to support NRM planning efforts in view of the likely impacts of climate change.

The objectives of the project were to:

- Identify areas in the landscape that will be most impacted by climate change;
- Propose a process to consider such impacts that is logical, comprehensive and transparent; and
- Develop recommendations for identifying priority locations for management action

The project identifies which of Victoria's natural environmental assets are most at risk from anticipated changes. In addition to incorporating direct climate stressors, the project also considers the impact of indirect climate impacts, such as sea level rise and storm surge in coastal areas. Four time frames were identified between 2030 and 2090 to gauge the likely timing of anticipated changes, and two carbon emission scenarios.

**"The results of the project have been well received by Victorian CMAs, with one expert panel member telling the project team: "You have achieved what UNESCO couldn't achieve with hundreds of scientists and a four-year timeframe."**

**Chris Pitfield**

**Strategy Coordinator, Corangamite CMA**

## Customer Profile

[www.ccma.vic.gov.au](http://www.ccma.vic.gov.au)

## Company

Corangamite Catchment Management Authority (CMA)

## Location

Victoria

## Industry

Government

## Product

NRM Planning for Climate Change

## Solution

Evaluating the likely impacts of anticipated climate change on the natural environment by identifying and defining natural assets likely sensitivity to anticipated changes, their exposure to changes, and the inherent adaptive capacity of these natural assets.

## Benefits

- Enables Victorian CMAs to better plan for the possible impacts of anticipated climate change on natural assets
- Improves general understanding about the likely impacts of climate change on the natural environmental



## The Issue

Regional NRM organisations require suitable information and resources to more effectively plan for the likely impacts of climate change. This requires a suitable spatial representation of the likely impact of anticipated climate change on natural assets to support catchment management planning, and provide outputs in a form that land managers can effectively apply in their planning activities.

A key issue is the overwhelming amount of climate information and how best to use it, in addition to issues and concepts like adaptive capacity and how this can be effectively used in planning for climate change impacts.

## The Solution

The approach taken by Spatial Vision to evaluate the likely impacts of anticipated climate change in Victoria on the natural environment involved identifying and defining natural assets from the viewpoint of their likely sensitivity to anticipated changes in climate parameters like rainfall and temperature, their exposure to anticipated changes, and the inherent adaptive capacity of these natural assets based on their current state. These elements were drawn together to first assess likely impacts over different timeframes and different carbon emission scenarios, and then used to assign a vulnerability rating based on their ability of the asset to cope with the anticipated impact based on its condition and position on the landscape.

The project concluded that based on the conceptual framework developed and applied, adaptive capacity was effectively the only parameter planners can realistically affect.

Perhaps the most significant outcome of the project is the framework it establishes for considering the likely impacts of anticipated climate change. This framework allows additional data and knowledge to be fed into the project framework as they become available.

The project also delivered a decision support framework to assist CMAs in how to apply the results of this project into their review of current catchment management strategies.

## The Benefits

- ✓ The outputs from this project were used by Victorian CMAs to update current catchment plans, enabling CMAs to account for the potential impacts of climate change.
- ✓ Using this information, informed decisions can be made based on possible climate change impacts
- ✓ The assessment framework established for considering the likely impacts of anticipated climate change allows additional new data and knowledge to be applied as it becomes available
- ✓ Project leads to improved communication about the likely risks and issues associated with anticipated climate change.
- ✓ Project outputs were delivered in a broad range of formats such that they could be incorporated into stakeholder's systems and processes.

The Catchment Management Authorities' NRM Planning for Climate Change signifies a key forecasting tool that Spatial Vision has been proud to take part in.

**We turned a wealth of information into a wealth of spatial knowledge with real world applications.**

**Get in touch.**

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