



Implementing Integrated Coastal Zone Management Through the Use of Coastal Action Plans: Lessons from Victoria

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There are currently no performance indicators in place for assessing the successful implementation of Victoria's strategic plans (Coastal Action Plans, CAPs) in achieving Integrated Coastal Zone Management (ICZM) at a regional level. This article explores the findings of a study which assessed the success of the approach adopted in Victoria under the State Coastal Management Act 1995 to implement ICZM through CAPs. The study developed a set of criteria for measuring this success. We conclude with a discussion of how appropriate such an approach may be in other jurisdictions.



Introduction

An outcome of the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro was the recognition of threats to coastal resources and the recommendation to draft guidelines for the international concept of Integrated Coastal Zone Management (ICZM).

For the purpose of this article ICZM is defined as: "the integrated planning and management of coastal resources and environments in a manner that is based on the physical, socio-economic, and political interconnections both within and among the dynamic coastal systems, which when aggregated together, defines a coastal zone. An integrated approach requires both the horizontal (cross sectoral) and vertical (the levels of government and non-government organisations) coordination of those stakeholders whose actions significantly influence the quantity or quality of coastal resources and environments" (Sorenson, 1997).

In Australia where the States and Territories have the constitutional responsibility for coastal planning and management (out to the limit of state waters, usually 3 nautical miles) the Commonwealth Coastal Policy (CCP, Faulkner 1995) currently comes close to a national

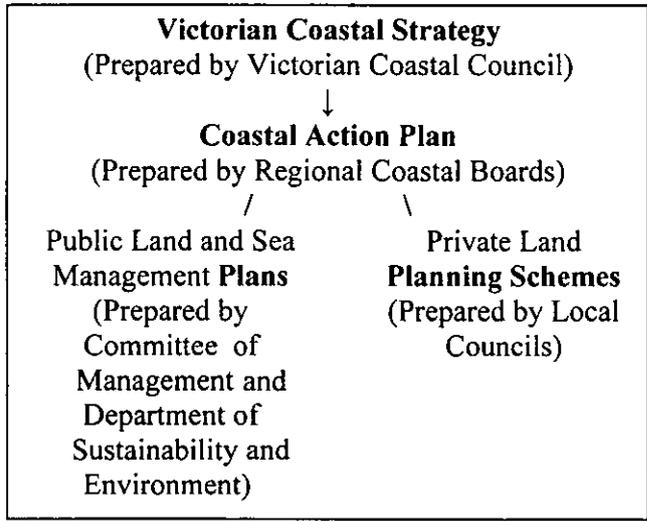


Figure 1. The Victorian Coastal Management System (updated from Wescott, 1998).

coastal policy (Wescott 2002). The CCP is based on ICZM principles and was used as a basis for negotiating a series of inter-governmental agreements.

Wescott (1998) described in full the current legislative approach and institutional arrangements operating in Victoria to deliver coastal planning and management across the State's 2,000 kilometres of coastline and coastal waters (as summarised in Figure 1).

Here we investigate the success of the approach adopted in Victoria under the *Coastal Management Act 1995* to implement ICZM using Coastal Action Plans as a link between the Victorian Coastal Strategy (which is based on ICZM principles) and local implementation approaches, such as planning schemes and management plans, etc. As such, the value of this regional tool between State and Local Government will be of interest to other Australian jurisdictions.

Two types of CAPs are studied here - 'issue based' and 'geographically based.' 'Issue-based' CAPs have differing aims/objectives. For example, some CAPs are primarily prepared for the conservation of water quality (i.e. the Gippsland Coastal Water CAP); some for

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recreational purposes (i.e. the Gippsland Boating Strategy) and others have tourism objectives. A geographically based CAP focuses on all issues within a geographical area such as the Skene's Creek to Marengo CAP.

Methodology

To assess the success of CAPs in implementing ICZM, criteria were derived based on the principles of ICZM. One of the tenets of ICZM is that coastal planning and management is integrated into other Government policies at the relevant jurisdictional level - part of 'horizontal integration'.

In the Australian context this means that if ICZM is to be successfully implemented then the State's coastal and planning system must be consistent with both Federal and State environmental policies. Hence the criteria need to reflect how successful CAPs are at the implementation of policies such as Ecologically Sustainable Development (ESD) (Commonwealth of Australia, 1992) and the Commonwealth Coastal Policy (Faulkner, 1995) at the national level and the objectives of the *Coastal Management Act 1995* (which set the State policy context for coastal planning and management) and the Victorian Coastal Strategy (VCS) at the State level. Using these policy contexts and the principles of ICZM the following criteria were derived:

Nationally focussed criteria:

- Implements the principles of ESD (Criterion 1)
- Provides adequate community participation (Criterion 2)

Criteria representing ICZM principles:

- Incorporates the concept of vertical integration (Criterion 3)
- Incorporates the concept of horizontal integration (Criterion 4)

Criteria with a State/Coastal Management Act focus:

Social

- Considers cultural and social values (Criterion 5)
- Provides for recreation and tourism (Criterion 6)
- Enhances public knowledge, education and understanding (Criterion 7)
- Provides clear long-term strategic direction for planning, management and future use (Criterion 8)

Economic

- Provides for economic development (Criterion 9)
- Provides adequate funds and support for implementation of CAP (Criterion 10)

Environmental

- Offers strategies to improve coastal water quality (Criterion 11)

A literature review identified a wide range of stakeholders involved in the management of the Victorian coast. Due to the range of interest groups (and individuals), the success of CAPs in meeting the principles of ICZM would only be accurately demonstrated by a review that required the involvement of people who were closely involved in the preparation and implementation of CAPs.

It was therefore decided that to obtain a practical assessment of the success of CAPs in meeting the principles of ICZM, the opinions of stakeholders would be used to rate the chosen criteria alongside the independent assessment of the senior author. The form of an interview (both face to face and telephone) was chosen to allow for higher response rates and permit a longer questionnaire (Neuman, 2000).

To offer an unbiased opinion of the effectiveness of CAPs the questionnaire involved two groups of participants. The first group (to offer a professional opinion/analysis) required participants who were involved in some way with the writing and preparation of the CAP being reviewed. The second group (to offer a community opinion/analysis) required participants from the community who had prepared submissions to the Regional Coastal Board (RCB) but who were not directly involved in the writing and preparation of the CAP. To add a third dimension, an independent review of all CAPs was conducted by the senior author. This process is called 'triangulation' (i.e. it looks at something from several angles rather than only one) and offers alternative perspectives, backgrounds, and social characteristics that will reduce the limitations (Neuman, 2000).

Results

Ten CAPs were used in this study, all of which are listed in Table 1: Assessment of each Coastal Action Plan. (See Cornish, 2001, for details). The given rating for each question against each criterion was added together and divided by the maximum score possible (i.e. 4 questions on Criterion 1 rating between 0 and 5 = maximum score

Table 1. Assessment of each Coastal Action Plan.

| | Warrnambool | Lorne | Skene's Creek | Moyne | Anglesea | Waterfront Geelong | Gippsland Lakes | Gippsland Coastal Waters | Gippsland Boating | South West Estuaries |
|--------------|-------------|-----------|---------------|-----------|-----------|--------------------|-----------------|--------------------------|-------------------|----------------------|
| Criterion 1 | 65 65 | 35 43 | 55 20 | 90 100 | 70 75 | 35 20 | 80 85 | 35 40 | 55 28 | 90 90 |
| Criterion 2 | 80 95 | 95 68 | 35 80 | 85 85 | 80 75 | 40 55 | 70 100 | 50 65 | 15 100 | 75 100 |
| Criterion 3 | 93 80 | 87 57 | 100 73 | 87 73 | 93 67 | 87 80 | 100 100 | 73 87 | 93 93 | 100 100 |
| Criterion 4 | 80 80 | 90 60 | 50 60 | 80 60 | 60 70 | 80 50 | 80 90 | 80 50 | 80 100 | 50 100 |
| Criterion 5 | 93 80 | 80 53 | 53 60 | 100 47 | 87 73 | 67 67 | 80 87 | 47 27 | 27 33 | 87 80 |
| Criterion 6 | 84 88 | 88 66 | 60 24 | 80 0 | 88 72 | 64 84 | 96 84 | 52 36 | 76 80 | 40 52 |
| Criterion 7 | 70 50 | 80 20 | 50 20 | 50 100 | 70 40 | 50 10 | 100 60 | 60 80 | 40 50 | 80 80 |
| Criterion 8 | 48 92 | 64 30 | 76 44 | 72 84 | 52 64 | 88 56 | 60 72 | 28 56 | 72 72 | 72 76 |
| Criterion 9 | 100 90 | 100 68 | 85 50 | 90 70 | 100 65 | 90 50 | 100 100 | 85 55 | 85 100 | 85 65 |
| Criterion 10 | 53 67 | 60 17 | 0 40 | 80 67 | 20 60 | 53 20 | 0 40 | 20 40 | 33 33 | 73 67 |
| Criterion 11 | 80 80 | 10 0 | 95 85 | 90 90 | 75 60 | 55 70 | 95 100 | 90 95 | 75 0 | 100 65 |
| Over all | 78.75 | 57.3 | 59.9 | 75.85 | 69.95 | 59.2 | 81.55 | 55.65 | 61.65 | 74.34 |

achieved with a review of existing guidelines for preparing CAPs and the establishment of more specific guidelines.

The 'issue-based' CAPs generally rated lower than the 'geographically based' CAPs. This may indicate that within a strongly focussed CAP, it is inherently more difficult to couch its findings within the broader framework of ICZM or that in fact in the limited attempts so far at issue-based CAPs there is a failure to set the issue within a broader framework of ICZM. Whichever is the case there appears to be a need for stronger leadership from the Victorian Coastal Council (VCC) and RCBs on the content and guidelines of these types of CAPs. The alternative would be to narrow CAPs down to be solely geographically based. CAPs were most effective at meeting the requirements of vertical integration and assisting in economic development. Successful vertical

20) and multiplied by 100 to give a percentage rating for that criterion. This percentage rating given by the 25 respondents (including opinions of three groups - professional, researcher and community) gives the percentage compliance of each CAP in relation to the derived criteria. The overall rating given at the base of the table is an average of compliance of criteria by each CAP.

Table 2 Analysis of CAPs by Criteria uses the data obtained from the interview process and shows the combined rating of CAPs overall in complying with each criterion. It illustrates how each criterion is being handled in general.

Discussion

In general CAPs are identifying the principles of ICZM but are not always assisting with their implementation in practice. CAPs are meeting the criteria to a moderate standard (with no criteria receiving a percentage rating averaging below 40 per cent) and are valuable as a concept for implementing ICZM principles at a regional level. Increasing the success of these criteria could be

integration suggests that the aim of having CAPs bridge the gap between state strategic policies and local implementation is working well.

The effectiveness in encouraging economic development is possibly a reflection on how important the coast is in providing local economic benefits and that CAPs are capturing this importance. The benefit of a CAP as a mechanism for integrating economic and resource management elements is probably underestimated and may well be one of its strongest characteristics.

The implementation of ESD principles (other than integration of economic and ecological goals), the provision for funding and the enhancement of public understanding and education were criteria which CAPs met to a lower standard. The low performance in the implementation of ESD principles while disappointing is however, not entirely unexpected. Although CAPs and the *Coastal Management Act 1995* are based on ESD principles, the latter are not explicitly referred to in the Act (which may explain the lack of reference in all CAPs). The recent passing of the *Commissioner for*

Table 2. Analysis of CAPs by Criteria.

| Criteria | Rating | Comment |
|---|--------|---|
| Implements the principles of Ecologically Sustainable Development. | 1 | Reference should be made to the Federal <i>Environmental Protection and Biodiversity Conservation Act 1999</i> and the inclusion of ESD principles. |
| Provides adequate Community Participation. | 2 | Sufficient advertisement and the consensus was that a period of 4 weeks for public inspection was sufficient. |
| Incorporates the concept of ICZM Vertical Integration. | 3 | Every CAP identified existing policies and programmes which shall complement the plan. |
| Incorporates the concept of Horizontal Integration. | 2 | Focus on foreshore limits, possibility for integration with different sectors and curtails management possibilities. |
| Considers cultural and social values. | 2 | CAPs identify and manage sites of cultural, social and historic significance. |
| Provides for recreation and tourism. | 2 | Provide for diverse range of rec & tourism opportunities. |
| Enhances public knowledge, education and understanding. | 1 | |
| Provides clear long-term strategic direction for planning, management and future use. | 2 | Generally identifying long-term directions but provision for ongoing monitoring and review was only present in some CAPs. |
| Provides for economic development. | 3 | |
| Provides adequate funds and support. | 1 | Not adequately addressed; suggest better ways to manage existing funds & it was suggested that further guidelines be prepared for instructing CAPs to identify where their funding shall be available & illustrating its importance to the successful implementation of the Plan (i.e. prioritise). |
| Offers strategies to improve coastal water quality. | 2 | Lead agency identified, water quality issues and management action were provided where water quality was a major objective of the CAP. |

The rating system used is:
 1 = CAPs are meeting criteria satisfactorily (overall average rating between 40-60%)
 2 = CAPs are meeting criteria well (overall average rating between 60-80%)
 3 = CAPs are meeting criteria very well (overall average rating between 80-100%)

Environmental Sustainability Act 2003 may provide an opportunity for the VCC to incorporate an explicit reference to implementation of ESD principles in the guidelines for CAPs in the future.

The general absence of any description of how the various actions in the plan are to be funded is of concern. The actions specified in the CAP need to identify, during plan production, possible funding sources rather than attempt to use the identification of actions in a plan as a means for seeking funding after the plan is finished. Clearly if actions are not costed and sources of funding not identified, then the recommendations in CAPs may not be implemented and the other strengths of a CAP will fail to come to fruition.

The issue of public education has been a vexed one since the *Coastal Management Act 1995* was passed. The agency whose primary responsibility it might be to implement public education remains unclear. Nor has the preparation of the CAP itself (i.e. the process) been used to its full potential as an opportunity for public education. The failure to meet this criterion is, however, symptomatic of a problem which goes far beyond CAPs and requires the attention of the VCC.

The highest rating CAP (Gippsland Lakes CAP) exhibited a clear structure linking it directly to the Victorian Coastal Strategy's management principles (sustain, protect, direct, and develop), resulting in 100 per cent compliance for Criteria 6 (Economic). Other high scoring CAPs included the Warrnambool CAP (which may have been due to the success of contracting out the preparation of this CAP to experienced coastal consultants) and the Moyne Shire CAP through its inclusion of ESD principles, identifying future use and adequately highlighting the source of funds and support. The success of these plans suggests that adopting a structural framework (e.g. of ESD or the VCS) allows the principles of ICZM to be more clearly identified. Again the VCC needs to specify a uniform structural approach in its guidelines for

CAPs. Early CAPs tended to be extended foreshore plans (i.e. they failed to look beyond the boundaries of the coastal public land domain) and this almost certainly meant their performance was poorer in meeting both principles of ICZM and ESD.

Application to other jurisdictions

CAPs would be particularly useful for aiding Australian States/Territories in meeting the concept of Vertical Integration and in implementing the principles of ICZM. It is apparent that the criteria which are supported by adequate guidelines (provided by the VCC) are also being implemented well. The success of criteria is directly related to the standard of available guidelines. In

order to improve the implementation of the remaining criteria greater guidance in the preparation of the plans appears necessary. This could take two forms: improvement in the form of legislative approaches or improvements in the guidelines for CAPs issued by the VCC.

The geographic scope of a plan needs to be better defined and more consistent (i.e. some are very site specific while others include larger stretches of coast). CAPs are valuable at the regional level as the greatest detail of the local coastal zones, issues, information and community responses can be provided at this level. Their success as a regional tool for the implementation of ICZM suggests they have potential value at the international, national, state and regional levels. CAPs were shown to be valuable for the implementation of the National ESD Strategy, to complement the objectives of the Commonwealth Coastal Policy and the Commonwealth *Environment Protection and Biodiversity Conservation Act* as well as for the implementation of the principles of ICZM, Chapter 17 Agenda 21 and relevant international treaties.

Further Study

While the authors believe this study has established the value of the CAP mechanism, further detailed work needs to be carried out on improving the guidelines issued by the VCC (VCC, 1997, 1998, 2002) for CAPs.

The improvements in guidelines should include:

- a template for the structure of a CAP which would include explicit reference to ESD principles and to identifying funds to implement the recommendations contained in the document;
- a clearer statement on how to meet the community participation and educational aspects of CAPs; and
- an explicit direction to the preparers of CAPs that the scope of the plan encompasses not only the public land in the geographic area covered, but also the private land and the intertidal and sea areas (i.e. enhancing horizontal integration).

These 'improved' guidelines should be tested and, if found insufficiently effective, a more formal legislative change may then be necessary.

Finally, the value of 'issue-based' CAPs remains unclear from this study. Until the VCC has reviewed the focus of the guidelines for these CAPs, and more are completed, the value of this type of CAP must remain uncertain.

Conclusion

CAPs provide an essential 'link in the chain' between high-level strategic policies (at international, national and sub-national levels) and ground level implementation. The existence of a 'linking plan' between the strategic and the on-ground plan/management actions seems to be very valuable in implementing the theoretical principles of ICZM and ESD. The authors believe other jurisdictions could profitably examine the use of mechanisms such as CAPs to further enhance their coastal management practices.

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