Conserv-Vision Conference Proceedings

The University of Waikato

A CELEBRATION OF 20 YEARS OF CONSERVATION BY
NEW ZEALAND'S DEPARTMENT OF CONSERVATION

CONFERENCE PROCEEDINGS EDITED BY:

Dr Bruce Clarkson, Dr Priya Kurian, Todd Nachowitz, & Dr Hamish Rennie

Article Title: "Integrating the management of New Zealand's coasts: challenges and prospects"

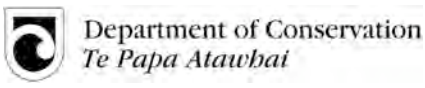
Author(s): Peart, Raewyn

Publication Date: December 2008

Source: Proceedings of the Conserv-Vision Conference, University of Waikato, 2-4 July 2007

Published by: The University of Waikato, Private Bag 3105, Hamilton, New Zealand

Stable URL: www.waikato.ac.nz/wfass/conserv-vision



Integrating the management of New Zealand's coasts: challenges and prospects

Raewyn Peart
Senior Policy Analyst
Environmental Defence Society
PO Box 95 152
Swanson
Waitakere City 0653
New Zealand
email: <raewyn@eds.org.nz>
web: <www.eds.org.nz>

Abstract

There has long been international recognition of the need to integrate the management of coastal areas in order to achieve improved conservation outcomes. Achieving integration in practice has, however, proved problematic in many countries. This paper explores the challenge of integrating the management of New Zealand's coasts at a regional level. It explores the underlying reasons for the lack of integration between key management areas including catchment management, coastal planning, marine protection, marine biosecurity and fisheries management. It also describes approaches to integration which are being developed by coastal managers and their effectiveness. These issues are investigated in the context of case studies examining the management of the Hauraki Gulf and the Kaipara Harbour, both located in the northern half of the North Island of New Zealand. The paper concludes with proposals for increasing integration through a stronger statutory framework.

Key words: coastal management, integrated management, New Zealand coast

Introduction

The concept of integrated coastal management has developed over the past forty years and has now been widely accepted as the appropriate approach to apply to the management of the coast (Vallega 2001:122). It is a broad concept that has no prescribed meaning, and which has been defined in many different ways. A common approach is to define integrated coastal management as a *process* rather than an outcome:

> "Integrated coastal management can be defined as a continuous and dynamic process by which decisions are made for the sustainable use, development, and protection of coastal and marine areas and resources" (Cicin-Sain and Knecht 1998:39).

> "ICM is a sustained participatory process of rational decision making based on the application of the best available knowledge and technology…it is a sustained and iterative process, not an end result in itself" (Coastal Resources Centre 2001:3).

The integration of coastal management can be sought across of *range of dimensions* including (Sorenson in Westcott 2004: 96):

- *Institutional integration* - integrating the activities of all agencies and stakeholders at any particular level of coastal management (horizontal integration) and across various levels of government (vertical integration);
- *Ecological integration* – planning for and managing the catchment, coast and marine area as an interlinked and interdependent system;
- *Inter-disciplinary integration* - integrating disciplines such as natural science, social science, kaitiakitanga, economic and politics that study specific aspects of the coastal environment.

A key requirement for integrated coastal management is that coastal managers are able to work together on interrelated or shared issues. This necessitates broad agency alignment, so that coastal managers are seeking to achieve compatible outcomes. It also requires a climate of trust, where coastal managers feel comfortable working together and in trialing new approaches. Engagement in networking opportunities, undertaking joint projects, adopting a participatory approach to decision-making and applying effective conflict resolution procedures when conflict arises help foster a collaborative environment (Tobey & Volk 2002, Treby & Clark 2004).

Several commentators suggest that coastal managers need to adopt new roles that are facilitative, proactive and entrepreneurial rather than bureaucratic, reactive and regulative. Institutions need to be less hierarchical and coastal managers should focus on adopting consensus-building techniques. Effective integration requires managers who can act as 'boundary spanners', to connect participants, knowledge and strategies, reinforce shared activities and maintain people's willingness to remain engaged (Jentoft & Buanes 2005:158, Kay et al. 2003, Cowell 2006).

In order to obtain a better understanding of the extent to which coastal management is integrated at a regional level within New Zealand, and how integration might be strengthened, research was undertaken during 2005 and 2006 into the environmental management of the Hauraki Gulf and the Kaipara Harbour. Both are partially enclosed marine areas, with complex management regimes, located in the upper North Island of New Zealand. They are bisected by regional council boundaries as well as being managed by multiple territorial authorities and conservancy offices of the Department of Conservation (DOC). The two areas provide an interesting contrast in terms of environmental pressures, with the Hauraki Gulf being adjacent to the country's largest metropolitan area while the Kaipara Harbour's land catchments are largely rural.

The material for the analysis was primarily gathered through undertaking semi-structured face-to-face interviews with 60 environmental managers and stakeholders who were actively involved in coastal management within one or both of the case study areas (see Figure 1). The largest number of interviewees came from regional councils. This was primarily because regional councils have the broadest mandate for coastal management and are involved in a wide range of activities related to catchment and marine management.

Sector	**No. people interviewed**
Regional councillors	4
Regional council staff	19
Territorial authority staff	9
Department of Conservation staff	5
Ministry of Fisheries staff	4
Biosecurity New Zealand staff	1
Iwi	4
Environmental/community NGOs	5
Recreational fishing NGOs	2
Scientists/consultants	4
Private sector	3
TOTAL	60

Figure 1: Sectoral breakdown of interviewees

The interviews, which were audio-recorded and subsequently transcribed, typically took around one and a half hours. The material in the interviews was written up into nine case studies focused on key management challenges within the case study areas including coastal planning, managing coastal

development, sedimentation and fishing activity, marine biosecurity, provision for aquaculture and initiatives to integrate management. The full findings of the study have been reported in Peart (2007).

This paper investigates the underlying conflicts embedded in the coastal management system which make achieving integrated management at a regional level difficult. It then describes the approaches that coastal managers have been developing in order to overcome these conflicts and achieve greater integration within the Hauraki Gulf and Kaipara Harbour. Finally the paper suggests how these initiatives might be given stronger legislative support.

Conflicts within New Zealand's coastal management system

Conflicts can arise within coastal management systems because different management agencies are trying to achieve different outcomes, through different management approaches, which benefit different stakeholders. The various approaches adopted by individual coastal management agencies were explored in the case studies of the Hauraki Gulf and Kaipara Harbour.

The research found that although most coastal management agencies were seeking to manage similar values, they were doing so in very different ways. Regional council planners interviewed talked about identifying the different 'values' of the coastal environment and seeking to maintain these while enabling activities to take place, or maintaining a balance between them. This enables people to co-exist with nature. The approach assumes that there are multiple differing values, all of which have legitimacy, and that somehow a delicate balance is negotiated between them. Discretionary decision-making within a regulatory planning framework is seen as the prime tool to adjudicate conflict between values.

Because of their focus on land use, territorial authority planners are more concerned with managing the coastal land development process, which includes the availability of land for development and the provision of supporting infrastructure such as roads, water and waste water treatment services. This can result in the management process focusing more on meeting the needs of people rather than nature.

The Ministry of Fisheries has a utilitarian approach to the management of natural resources. Its corporate goal is:

> "…to maximize the value New Zealanders obtain from the sustainable use of fisheries resources and protection of the aquatic environment" (Ministry of Fisheries, 2005: 1).

This goal refers to 'maximising value', in a singular sense. The approach is aligned with a more typical economic valuation approach which is based on the concept of maximising utility. It implies that different values can be converted into the same measurement framework (often monetary) and then added together. The management response is to allocate the resource to the combination of uses

that derive the highest additive value as determined by the measurement framework. The market mechanism can be potentially harnessed to achieve the highest value allocation of the resource. The approach in its simplest form does not address equitable allocation issues.

The Department of Conservation is more focused on maximising conservation values, which is only one category of the values Councils and Ministry of Fisheries are addressing. The Department's corporate goal is (DOC 2006):

> "To conserve New Zealand's natural and historic heritage for all to enjoy now and in the future."

Although this goal includes public enjoyment of nature, the underlying concept behind conservation is that people are separate from nature and have a negative impact on it. The logical management response to this approach is to protect nature by excluding people, or at least exclude them from undertaking extractive and damaging activities, such as through the establishment of marine protected areas.

Tangata whenua are seeking to apply a whole different set of values to resource management that are founded on the spiritual connection between people and nature, and between past, present and future generations. The approach incorporates concepts of preservation, use and equitable sharing of resources. It eschews conservation for its own sake, which values nature apart from people, potentially putting it in conflict with the underlying approach behind marine reserves. For example, a tangata whenua representative argued, in his submission to the Ministry of Fisheries on the Great Barrier Island marine reserve application, that "the marine reserve application as it stands, alienates *tangata whenua* from its *rohe moana* and our ability to exercise our most fundamental rights and obligations as *rangatiratanga* and *kaitiakitanga*" (Gorter 2006).

These different approaches, which were articulated in the interviews, have been synthesised into a proposed framework of agency orientation (see Figure 2). Although the research design did not enable firm conclusions to be drawn about the validity of the approaches and assumptions in Figure 2, it provides a conceptual framework which could be usefully tested in future research in this area.

Management agency:	**Underlying approach:**	**Assumption about people-nature relationship**
Territorial authorities	Managing development	People are more important than nature
Ministry of Fisheries	Maximising value	People utilise nature
Regional councils	Balancing values	People co-exist with nature
Tangata whenua	Maintaining inter-relationships between people and nature	People are part of nature
Department of Conservation	Maximising conservation values	People are in conflict with nature

Figure 2: Proposed framework for underlying orientation of different coastal management agencies in New Zealand

Conflicts over issues such as the establishment of marine reserves can be understood in terms of different underlying purposes. The fisheries sector can oppose marine reserves because this management mechanism excludes utilisation of marine life which is the rationale of the sector. Tangata whenua can oppose such reserves on the basis that they extinguish customary fishing rights within the area and permanently exclude people from nature rather than maintaining an ongoing relationship where seafood may be harvested in the future when stocks have recovered.

As well as having differing underlying purposes, each management regime within the marine area focuses on a different core approach, utilises different mechanisms to allocate access to the resource, adopts different measures of success and has different approaches to conflict resolution.

Resource Management Act 1991 (RMA)

Under the RMA, the focus is on minimising the adverse environmental effects of activities. The framework of the Act is based on the assumption that the market should be left to allocate the use of resources, as this will result their allocation to uses generating the highest value, whereas regulators should focus on controlling the effects of activities. As a result, the RMA does not satisfactorily deal with allocation issues regarding publicly owned resources where the market does not operate. The default position has been that allocation is on a first come first served basis, where marine space and access to marine resources is allocated to the first person to lodge a resource consent application and demonstrate acceptable environmental effects.

The difficulties in proactively allocating resources under the RMA to specific uses were highlighted in the case of managing aquaculture within the Kaipara Harbour. Both the regional councils managing the harbour experienced difficulties in proactively allocating marine areas to this use though identifying aquaculture management areas (AMA) in their regional coastal plans. They backed off in favour of an invited private plan change procedure, where aquaculture proponents are invited to apply to change the regional coastal plan to establish an AMA in an area where they wish to undertake aquaculture. This reinstates a more reactive approach to aquaculture planning, although within a broad framework where councils can identify areas (excluded areas) which may not be suitable for aquaculture. It is not yet clear who will get priority if several parties apply for a private plan change applying to overlapping areas.

The prime purpose of resource management under the RMA is stated as being 'sustainable management'. In practice this has meant enabling development to occur while seeking to maintain environmental quality. For example, in aquaculture, this translated into regional councils considering it appropriate to accommodate the use in their marine areas rather than to exclude it, and they sought to locate marine farms where they would have the least environmental impact and create the least conflict with other uses of the marine area. The approach ran into problems because some

members of the community challenged the initial assumption that provision should be made for aquaculture at all, at least in the part of the marine area they valued.

There are no clear measures of success under the RMA, which has made the monitoring of progress and providing clear accountability for results, problematic. Monitoring has generally been patchy, although both the Auckland Regional Council (ARC) and Environment Waikato (EW) are gradually implementing a more comprehensive monitoring regime for marine ecology. Because of a lack of good information, it is difficult to assess how successful marine management under the RMA has been.

The conflict resolution processes under the RMA have a broad scope of enquiry, the ability to balance various interests in the decision making process and the availability of an accessible formal conflict resolution process through council hearings and appeals to the Environment Court.

Marine protection

Marine protection has focused on the allocation of space for conservation through the creation of marine reserves, although it also includes many other activities such as protecting marine mammals and sea birds. The allocation of space is largely achieved through central government regulation under the Marine Reserves Act 1971. Although that Act establishes as the sole purpose of marine reserves, the preservation of marine areas for the scientific study of marine life, they have in practice been used as a key marine conservation tool. A target of 10 percent of New Zealand's entire marine area in marine protected areas by 2010 has been formally established in the New Zealand Biodiversity Strategy (DOC & Ministry for the Environment (MFE) 2000:67). This target includes not only marine reserves but other less stringent forms of protection such as areas closed to fishing activity under the Fisheries Act 1996. More detailed policy on how this is to be achieved is contained in the Marine Protected Areas Policy and Implementation Plan (DOC & Ministry of Fisheries 2005).

The study areas have not been well served with marine protection with the current marine reserves in the Hauraki Gulf covering less than 0.3 per cent of the marine area (Hauraki Gulf Forum 2005:118) and with there being no marine reserves in the Kaipara Harbour. A range of fishing restrictions do apply in both harbours which, although primarily put in place to reduce conflicts between recreational and commercial fishers, also incidentally provide some protection for marine habitats.

The focus of marine reserves to date has been on excluding fishing activity from marine areas in order to derive conservation benefits within the reserves. The potential of marine reserves to increase the ecological health of the broader marine area, and therefore to increase fish stocks, has not been a major goal to date. Such benefits are hard to demonstrate scientifically, because of the small size of current reserves in comparison to the balance of the marine area, and the dynamic nature of marine systems. In addition, monitoring of marine reserves has not been strategically designed or well funded and there has been little research into broader effects. Some research has, however, provided

evidence of improved fishing along the boundaries of reserves in New Zealand (Taylor and Buckenham 2003:31).

Marine reserves in New Zealand, therefore, are currently designed to benefit conservation interests rather than all marine users. In addition, because of their exclusive use of marine area, they can be seen as being in direct conflict with the operation of fishing rights that have non-exclusive spatial rights. The proposed establishment of marine reserves has in some cases been characterised by high levels of conflict. This was especially the case with the proposal to establish a large marine reserve off the north-eastern coast of Great Barrier Island at the outer edge of the Hauraki Gulf. There are no formal conflict resolution procedures under the Marine Reserves Act, apart from judicial review proceedings in the High Court. This means that conflicts are left unresolved and potentially spill over into other marine management issues and future marine reserve proposals.

Fisheries management

Fisheries management is primarily focused on manipulating the levels of fish extraction. The allocation of fisheries rights is split between a market mechanism consisting of tradeable rights for commercial fishers, restricted open access for amateur fishers and collective management for customary fishers. Under the Fisheries Act 1996 commercial fishers must acquire individual transferable quota in order to fish. Quota is initially allocated by the Crown and then can be bought off existing quota holders. A quota is a right in perpetuity to extract a proportion of the total allowable commercial catch (TACC) within a specified (usually large) quota management area. Changing the level of the total allowable catch (TAC), which is the amount which can be taken by both commercial and non-commercial fishers, and the TACC are the prime mechanisms used to manage fisheries.

Amateur fishing is not subject to allocation and does not require authorisation. The main restriction on amateur fishing is the amount each fisher may take, which is referred to as a bag limit. The bag limit, however, is hard to enforce and information on the total fish extracted by amateur fishers is very poor. Recreational take is therefore primarily limited by the availability of fish in the water that can be caught by recreational equipment and fishing methods.

Under the Fisheries (Amateur Fishing) Regulations 1986, customary fishing can be managed by statutorily defined kaitiaki, who authorise customary harvest. In practice, implementation of the regulations has been problematic, and in many areas kaitiaki are yet to be appointed. Mechanisms for mediation, and resourcing for the process, are limited. The Ministry of Fisheries has been encouraging greater uptake of the Fisheries (Kaimoana Customary Fishing) Regulations 1998 where the first step is for tangata whenua to define the rohe moana (marine areas of authority) for each kaitiaki. While this may help resolve current conflicts around overlapping jurisdictions, responsibilities are often still ambiguous, and the amount of take uncertain.

The core management objective of fisheries, which is to keep fish stocks at the biomass level that can support their maximum sustainable yield (B_{MSY}), is the source of considerable conflict. The maximum sustainable yield (MSY) is defined in Section 2 of the Fisheries Act as "the greatest yield that can be achieved over time while maintaining the stock's productive capacity…". Although it is hard to precisely define the B_{MSY} for a particular fish stock, it is typically between 20 or 30 per cent of the virgin biomass (original size of the stock before human exploitation).

Fishing a stock down to such a small proportion of its original size benefits commercial quota holders who theoretically maximize the amount of fish they can extract over time. However, it has negative effects for both amateur fishers and the environment. For amateur fishers the fish become harder to catch and are generally smaller. For the environment, the removal of up to 80 per cent of a dominant species such as snapper can result in profound changes to the ecosystem. In the Hauraki Gulf, for example, it has resulted in extensive sea urchin barrens because the snapper and crayfish which predate on the sea urchins are substantially reduced in numbers, and the increased population of sea urchins browsing on the kelp has completely removed kelp forests and their associated habitat in some areas.

Some amateur fishers feel threatened because fisheries management does not appear to incorporate their interests, and neither does the resource management or marine protection regimes. Commercial fishers can also feel threatened by the less readily controlled nature of recreational fishing as well as other incursions on their non-spatial rights. This can result in high levels of conflict both within the commercial fishing sector and with other sectors such as recreational and environmental interests.

Although there are conflict resolution provisions in the Fisheries Act, these are limited, cumbersome, and not often utilised. They only apply to disputes amongst people with fishing interests and exclude disputes between stakeholders and the Minister or Ministry of Fisheries and disputes about sustainability or the environmental effects of fishing (Section 114 (b)). Aggrieved parties can initiate judicial review proceedings in the High Court to challenge the Minister's decisions, but this is a cumbersome and expensive way to solve disputes. In addition, the court's enquiry is limited to the legality of the decision and does not include its merits.

Marine biosecurity

Marine biosecurity focuses on excluding new organisms from New Zealand waters. It can only achieve this through controlling practices on international vessels entering New Zealand waters and this is extremely difficult without international agreements. Such an agreement has been reached for ballast water and New Zealand has introduced regulations to control the exchange of such water in the country's marine areas. No such agreement has been reached for hull fouling, which is another major source of transport of invasive species, and there is currently no regulatory control on this within New Zealand. Instituting an effective marine biosecurity system is problematic because it is an area where international pressures, which can only effectively be controlled at an international

level, impact directly at a local level. Regional councils, which have no border control powers, are reluctant to take the job on, and Biosecurity New Zealand has little regional or local capacity on the ground.

Approaches to Achieving Integration

Efforts to achieve better integration within the Hauraki Gulf and Kaipara Harbour have focused around improving communication and information sharing, developing joint policies and plans and engaging in joint projects to address shared problems. These are described more fully below.

Improving communication

Good communication between different management agencies can help ensure that actions taken by one management agency do not have unintended consequences in another management regime. It can help to reduce duplication in effort and identify management gaps. It also can assist in the development of relationships and trust, which are both precursors to successful integrated management.

Interviewees referred to a myriad of networks and cross agency committees and forums, particularly those attended by local government councillors and planners. Often these were not solely focused on coastal management, although they included coastal issues on their agenda. Short-term cross-agency forums have been set up from time to time to deal with specific coastal issues such as aquaculture and mangrove management. The responses of the interviewees indicated that some of the strongest communication links were between councils and some of the weakest between councils and the Ministry of Fisheries, although this area requires more detailed investigation.

The most holistic body established to focus on coastal management is the Hauraki Gulf Forum. Unlike other more informal arrangements, this forum has a statutory basis under the Hauraki Gulf Marine Park Act 2000. The Forum has political representatives from two regional councils, 10 territorial authorities, appointees from DOC, MFish and the Minister of Māori Affairs, and 6 tangata whenua representatives amongst others. The Forum meets four times a year with the supporting Technical Officers Group meeting at least monthly. For each meeting of the Forum each constituent party is required to report on coastal activities and this usefully provides an update on activities within the Gulf.

Although interviewees reported that the Forum had had little direct impact on the coastal management activities of individual agencies, it appears to have facilitated inter-agency communication and relationship building which indirectly may have had an impact through supporting a greater readiness to participate in inter-agency projects.

Integrating planning

Different approaches have been adopted to integrate coastal planning within the Hauraki Gulf and the Kaipara Harbour. They include endeavors to integrate local government coastal planning, incorporating planning under the RMA and the Local Government Act 2002. Approaches are also being developed to integrate marine protection planning across both local government and central government jurisdictions.

Coastal planning under the RMA is fragmented between different plans and different management bodies. It is split 'horizontally' between planning for catchments (through regional plans) and planning for marine areas (through regional coastal plans). It is also split 'vertically' between planning for different parts of the same marine system, different catchments draining into the same marine system, and different districts within catchments (district plans) (see Figure 3).

In the case study areas, the Hauraki Gulf marine area is managed by two regional councils, the ARC and EW. The catchments draining into the Gulf are also managed by these two regional councils as well as ten territorial authorities. The management of the Kaipara Harbour is also split between two regional councils, the Northland Regional Council (NRC) and the ARC. As well as being managed by these regional councils, the harbour's catchments are also managed by two territorial authorities, Rodney District Council and Kaipara District Council.

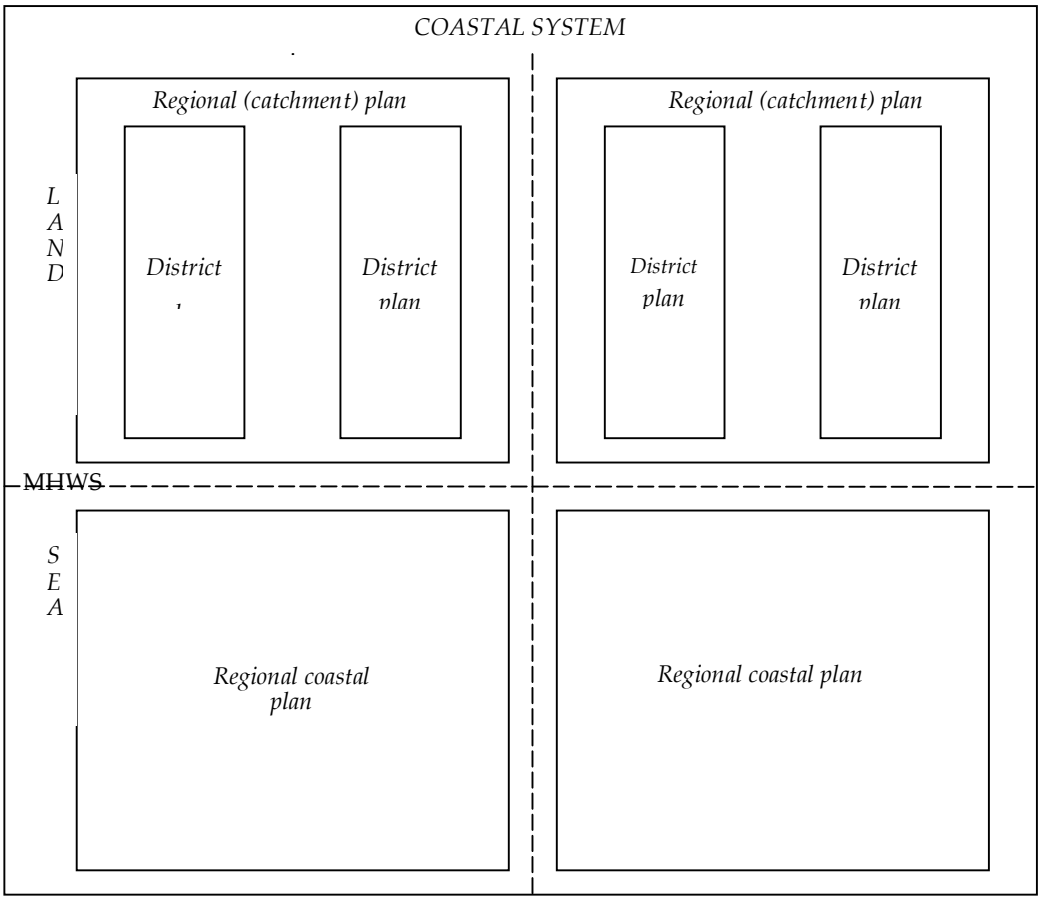


Figure 3: Fragmentation of RMA coastal planning system

There are several strategies that could potentially be used to integrate this planning system. These are described below:

Combining the two regional coastal plans for the marine area.

This has not yet been attempted in the Hauraki Gulf or the Kaipara Harbour. It seems more likely in the Kaipara Harbour where there are fewer pressures on the marine environment and therefore less complexity for management. It may result from a current joint planning initiative for the harbour being undertaken by the ARC and the NRC.

Combining the regional (catchment) plan with the regional coastal plan

This has not yet been attempted in the study areas because of the increased complexity of planning which would result. The interviews revealed that coastal managers seek to reduce undue complexity to make planning tasks manageable. Preparing a regional coastal plan or a regional catchment plan on its own has proved a difficult task, let alone combining them. The plans also have different purposes, with coastal plans more focused on spatial planning for marine uses, whereas catchment planning is more focused on non-spatial minimisation of pollution and runoff.

Some regional councils have prepared coastal environment plans which include objectives and policies for the entire coastal environment but only rules for the coastal marine area. These can help bridge the divide at mean high water springs, particularly if they effectively influence land management by territorial authorities. However, they fall short of encompassing broader catchment management.

Preparing one integrated RMA plan for the entire system

This could incorporate the regional plans, regional coastal plans and district plans. This would multiply the complexity of planning through increasing the range of issues to be addressed and the number of management agencies involved. It has not yet been attempted. An alternative softer approach is to prepare a combined non-statutory plan for the entire system, the provisions of which can then be implemented through changes to the various statutory instruments. This is the broad approach being adopted by an iwi-based group Te Uri o Hau for the Kaipara Harbour, although the scope of that planning initiative is very wide also incorporating fisheries and marine conservation issues outside the RMA. Because of its wide scope, however, this project has struggled to obtain critical financial support to enable it to proceed.

Instead of adopting these global approaches, regional councils have been approaching the integration challenge on a smaller spatial scale, so as to render the task more manageable. They have adopted

non-statutory plans as the mechanism. The main two approaches identified in the research, which are both being applied to the Hauraki Gulf, are (see Figure 4):

Stitching the regional coastal plan and district planning together across mean high water springs through preparing a series of coastal compartment plans. The plans are largely confined to the coastal edge rather than addressing catchment issues. This approach has been piloted by the ARC in the Hauraki Gulf, as well as other areas, and the plans are non-statutory. It has raised some challenges including how to scale up the planning exercise to cover the bulk of the coastal interface, and how to incorporate the provisions in non-statutory plans into the statutory framework. The plans have proved to be resource hungry and the ARC is not pursuing this approach further.

Slicing the system into chunks and undertaking combined regional and district strategic planning for the catchment and marine area. This is the approach being undertaken by EW and the Thames-Coromandel District Council in the Blueprint Coromandel project. This project is focused on developing a strategic coastal plan for the Coromandel Peninsula including the catchments and surrounding marine area. It is reliant on both councils being ready to undertake strategic planning for the same area at the same time. In this case, the Thames Coromandel District Council was planning to prepare a growth strategy and EW was looking at preparing harbour plans and the two initiatives were compatible so could be combined. Like coastal compartment plans, the plans are non-statutory.

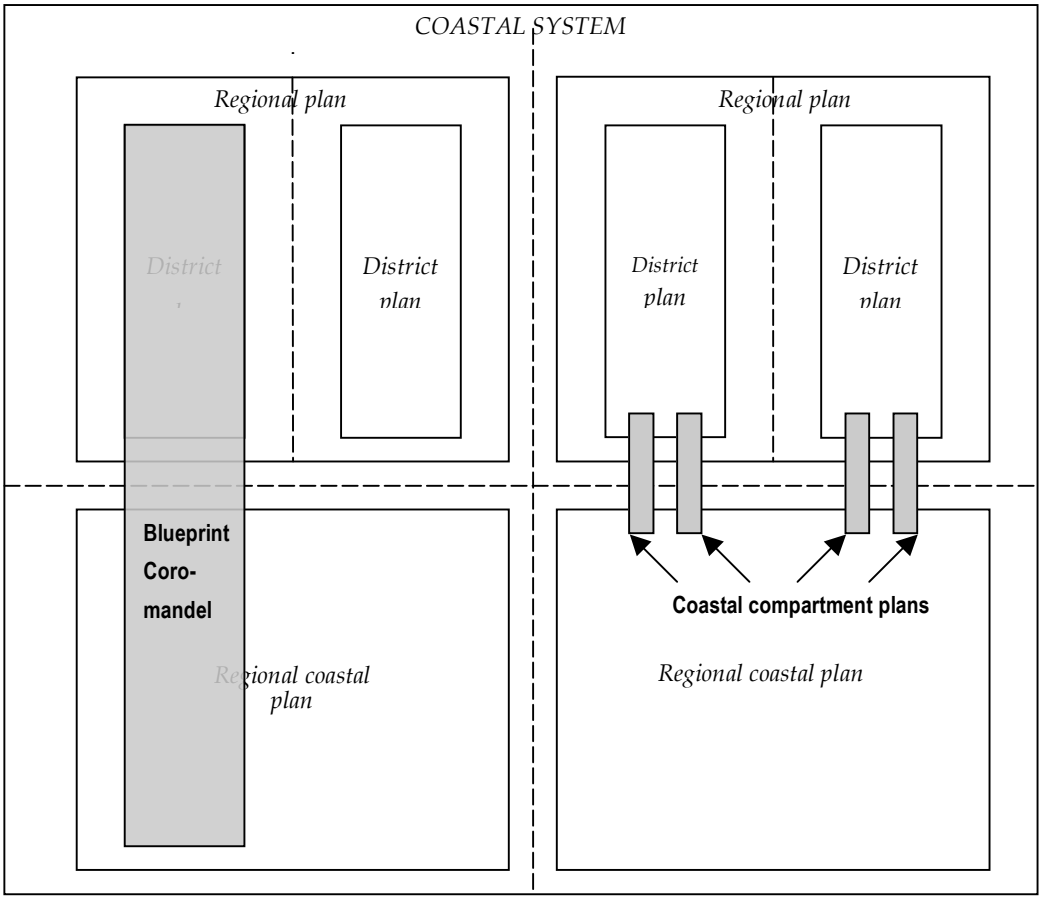


Figure 4: Integrating RMA coastal planning on a smaller scale

Marine protection planning

Marine protection planning is an attempt to integrate one aspect of marine management potentially across the marine conservation, fisheries and RMA management systems (see Figure 5) as well as others. The purpose of the marine protection plans is to identify sites and potential tools for marine protection and seek to establish a consensus on areas to be set aside as marine protected areas. The integration will be achieved through the joint preparation of a non-statutory spatial plan focusing on a common approach applied in different ways by different management agencies – excluding specified activities from spatial areas to achieve conservation objectives. Implementation relies on adoption through separate processes under at least three separate pieces of legislation which have different purposes, the Marine Reserves Act 1971, the Fisheries Act 1996 and the RMA.

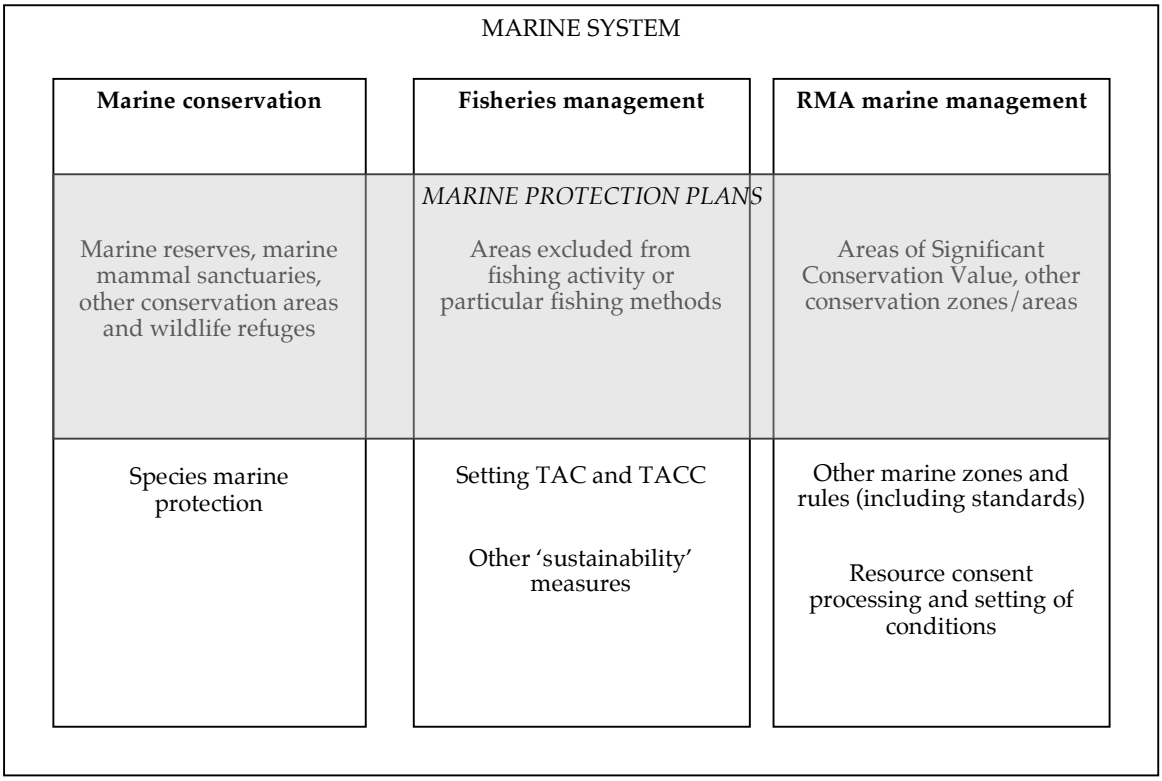


Figure 5: Integrating spatial marine protection

Undertaking joint projects

Where agencies share common or overlapping issues they may undertake joint projects, often in association with other stakeholders, to address the issues of mutual concern. The research identified a myriad of joint projects including joint research projects, joint planning projects and joint implementation projects. Joint research projects have been undertaken in diverse areas such as determining the carrying capacity of the marine area for aquaculture (Firth of Thames), the impacts of sedimentation likely to be generated by urban rezoning on the marine area (Okura and Whitford catchments) and the relative risk factors affecting a marine area (Muddy Feet II - Firth of Thames).

Many joint planning projects have been undertaken as described in the sections above. Numerous implementation projects have also been undertaken jointly. Examples include the Mahurangi Action Plan, a joint initiative between the ARC and Rodney District Council which is aimed at reducing sedimentation from the catchment entering the harbour; and the Peninsula Project, a joint initiative between EW, the Thames Coromandel District Council, DOC and the Hauraki Maori Trust Board which is aimed at reducing erosion and flood risk in the catchments. Undertaking joint projects helps to strengthen the relationship between staff in different agencies and can result in the development of joint information all of which helps build a solid foundation for future collaboration.

Conclusions

The initiatives that have been developed to achieve better integration highlight the tension between the increased complexity which results from integration and the need to ensure that an initiative is 'doable'. A doable project is likely to be one where the information needs are modest, where the number of stakeholders is manageable and where the time period required to complete the project is short enough to enable political and stakeholder interest to be maintained. As a result, integration is currently happening at a relatively small spatial scale where it is more manageable. This suggests that future integrative efforts are likely to focus on localised hotspots, where interagency collaboration is required to address issues of immediate mutual concern, rather than on a large scale integrated planning front where the outcomes are uncertain and politically more risky.

A major issue for integrated initiatives is the lack of a statutory framework within which to ground them. All the integrated planning initiatives identified are being undertaken as non-statutory planning processes. They all therefore face the major hurdle of a myriad of legislative processes which different management agencies are required to satisfy in order to implement a plan at statutory level. This provides no certainty that the actual outcome will closely mirror the intention in the non-statutory planning documents. It indicates a need for the development of a statutory framework to support integrative initiatives and to provide the outcomes with some legal standing. This could be achieved through amending existing legislation to integrate planning and decision-making under or through the development of a comprehensive piece of legislation, such as an Oceans Act, which would provide a common overarching framework for coastal management and integrated coastal planning.

Acknowledgements

The author would like to acknowledge the people who were interviewed for this project for providing their perspectives on coastal management, and Gary Taylor, Charles Crothers and Keir Volkerling for providing comments on the draft report that formed the basis for this paper. The

author would also like to acknowledge the ARC, EW and Thames-Coromandel District Council for providing financial support for the project.

References

Cicin-Sain, B. and Knecht, R. W. 1998. *Integrated coastal and ocean management: concepts and practices*. Washington, DC: Island Press.

Coastal Resources Centre. 1991. *Future directions in integrated coastal management: the consensus from Block Island*. University of Rhode Island, Rhode Island.

Cowell, R. 2006. *Towards Sustainable Land Management*, London: The National Trust.

Department of Conservation. 2006. *Annual Report for year ended 30 June 2006*. Wellington: DOC.

Department of Conservation and Ministry for the Environment. 2000. *The New Zealand Biodiversity Strategy: Our Chance to Turn the Tide*. Wellington: DOC.

Department of Conservation and Ministry of Fisheries. 2005. *Marine Protected Areas: Policy Statement and Implementation Plan*. Wellington: DOC.

Gorter R. 2006. "A chance to prove that kaitiakitanga is an alternative to marine reserves" at <http://option4.co.nz/Marine_Protection/gbiagorter406.htm> (accessed 16 June 2008).

Hauraki Gulf Forum. 2005. *The Hauraki Gulf State of the Environment Report*. Auckland: ARC.

Jentoft, S. and Buanes, A. 2005. "Challenges and myths in Norwegian coastal zone management." *Coastal Management*, 33, pp. 151-165.

Kay, R., Alder, J., Brown, D. and Houghton, P. 2003. "Management cybernetics: a new institutional framework for coastal management." *Coastal Management*, 31, pp. 213-227.

Ministry of Fisheries, 2005. *Annual report 2004/05*. Wellington: Ministry of Fisheries.

Peart, R. 2007. *Beyond the Tide: Integrating the Management of New Zealand's Coast*. Auckland: Environmental Defence Society.

Taylor, N. and Buckenham, B. 2003. "Social impacts of marine reserves in New Zealand." *Science for Conservation* 217.

Tobey, J. and Volk, R. 2002. "Learning frontiers in the practice of integrated coastal management." *Coastal Management*, 30, pp. 285-298.

Treby, E. J. and Clark, M. J. 2004. "Refining a practical approach to participatory decision making: an example from coastal zone management." *Coastal Management*, 32, pp. 353-372.

Vallega, A. 2001. *Sustainable Ocean Governance; A Geographical Perspective*. London: Routledge.

Westcott, G. 2004. "The theory and practice of coastal area planning: linking strategic planning to local communities." *Coastal Management*, pp. 95-100.