

Community Involvement in New Zealand Marine Reserve Management: Examining Practice

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Abstract—The objective of this paper is to examine the management of marine reserve committees in New Zealand according to participatory theory. This analysis provides the basis for developing more effective and appropriate mechanisms to involve New Zealand's indigenous people (the Maori) and local communities in the management of marine reserves.

Case studies of New Zealand marine reserves are used to analyze the successes and failures of community involvement in marine reserve management. Preliminary findings indicate a lack of national direction on how marine reserve committees should function. In addition, a lack of funds available to committees limits the successes they can achieve. Despite weaknesses in format, marine reserve committees serve as a valuable link between government and community. Any attempt to create more meaningful participation requires committee restructuring from advisory bodies to those with more power and responsibility. However, this is not possible under current legislation and policy.

Introduction

This study examines the effectiveness of New Zealand marine reserve committees as a means for public participation. Marine reserve committees are advisory and advocacy bodies that incorporate local stakeholder representation. Case studies are used to examine marine reserve committees. The possible committee types are outlined prior to the presentation of preliminary findings and the subsequent discussion. Three themes exist: (1) little national direction, (2) inadequate funding, and (3) strengthening community relations. Before marine reserve committees are examined in detail, an overview of marine protected areas and participation provides a background for the discussion.

Objective and Methodology

The objective of this study is to examine public participation in the management of marine reserves in New Zealand. The main question to be answered is: *Are marine reserve committees an effective means to achieve participatory input in marine reserve management?* There are four case study

marine reserve committees. The case studies are examined in three manners: interviews with Department of Conservation (DoC) staff, a mail survey to marine reserve committee members with followup interviews, and document analysis. Currently, the DoC interview phase of the project is complete, with questionnaires still being returned; as such, only preliminary results can be presented.

Marine Protected Areas

Marine protected areas (MPAs) are conservation measures with worldwide distribution. MPAs differ by nation, and even within nations in terms of the reason for establishment, degree of protection, and method of management. Agardy (1997, 1999) states that the term MPA is generic enough to encompass all forms of marine protection, from international biosphere reserves to small no-take reserves. In this research, MPA is defined as:

Any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment (Kelleher and Kenchington 1992: 7).

Kelleher and others (1995) state that the region containing the most MPAs, 19.9 percent of those in the world, is Australia and New Zealand. This fact is misleading for New Zealand because only 4 percent of New Zealand's territorial waters are protected under the marine reserve system. The New Zealand Government is not satisfied with the current status and is working on creating a national representative system (Parliamentary Commissioner 1999).

Legislation in New Zealand

Currently, there is little integration between marine protection initiatives across government agencies and levels. Thirteen central government agencies, 16 regional councils or unitary authorities, and 18 marine management laws have a role in marine protection (DoC 2000). The Department of Conservation is the key agency responsible for protected areas and species (DoC and Ministry for the Environment 2000).

The main mechanism for creating marine protected areas in New Zealand is the Marine Reserves Act 1971. Marine reserves are specified as areas of the territorial sea, seabed, and foreshore managed for scientific study and to preserve the marine habitat in its natural state. The Marine Reserves Act 1971 is fairly restrictive, as reserve status is for areas of demonstrable scientific value, with only secondary regard

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for natural, scenic, recreation, and cultural values (DoC 2000).

The majority of New Zealand's reserves are "no-take" reserves. Walls and Dingwall (1995) state that due to the fact that marine reserves are designed as no-take reserves, they are subsequently small in area. International recognition and praise are accorded to New Zealand marine reserves, as the majority of reserves are no-take, banning even recreational fishing (Boersma and Parrish 1999; Cole-King 1995; Shackell and Willison 1995). Currently, only one reserve, Kapiti, allows for limited recreational fishing (DoC 2000).

The Marine Reserves Act 1971 is under review to address several deficiencies, one of which is public involvement (DoC 2000). The Department of Conservation has requested feedback on how to strengthen the role of communities, Maori, and other stakeholders in the management of reserves. Currently, stakeholders can have some degree of management input through conservation boards (independent statutory bodies) or marine reserve advisory committees. Ultimately, however, the Department of Conservation is responsible for management of marine reserves.

Participation

The meaning of the term "participation," and the degree to which it is used, have little consensus among managers and planners. Using a term with many meanings can cause significant problems, as expectations and realities differ between groups. Dugdale and West (1991: 2) define public participation as:

A two-way process of communication between planners and the community that promotes the exchange of information and ideas and seeks joint problem solving and the resolution of conflict in order to produce plans and policies that are acceptable to the community and which can be effectively implemented.

Participatory resource management and planning, therefore, is the inclusion of the public, either general and/or special interest groups, to help create socially acceptable resource management decisions via a communicative process.

There is a continuum of participation that ranges from extracting information to empowerment (Arnstein 1969; Chambers 1994; Michener 1998; Slocum and others 1995). In recognition of this continuum, Arnstein (1969) created a "ladder of citizen participation" that begins with nonparticipation methods, rises to degrees of tokenism, and ends with degrees of citizen power (fig. 1).

Arnstein (1969) cautions about the use of empty participation versus true power sharing. Various authors (Arnstein 1969; Duffy and Hutchinson 1997; Forester 1989) warn of the damaging effects of nonmeaningful participation:

- Frustration
- Mistrust
- Disillusionment
- Withdrawal of participation and/or consent

To create meaningful participation, Innes (1998) calls for the establishment of a stakeholder group that works in parallel to government, allowing community voices to be heard.

Donaldson (1994) identifies three types of groups that can be used in participatory resource management: (1) elite, (2) existing, and (3) new (table 1). Establishing a new group is the ideal, as such a group can be representative of the community; moreover, an established group may not be able to adapt to participatory techniques.

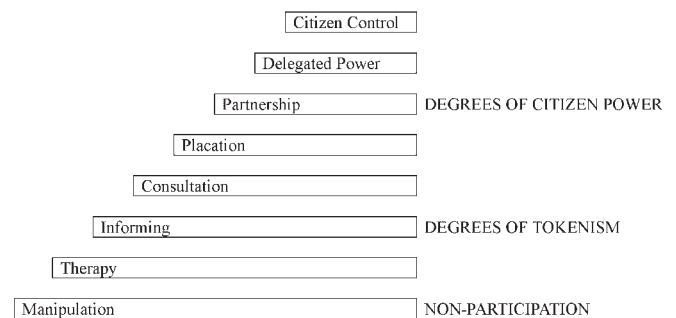


Figure 1—Arnstein's Ladder of Community Participation (source: Arnstein 1969).

Table 1—Types of committees^a.

Type of stakeholder committee	Elite	Existing	New
Stakeholders	Special interest groups (for example, industry, government, academia)	Existing group used	Anyone—inclusionary
Membership	Members invited	Group selected	Open
Weaknesses	Exclusionary; no community ownership or representatives	Problems with new mandates or structure	Group needs to develop cohesiveness
Strengths	Easy to identify stakeholders	Time saving	Group grows together—can include general public

^a Source: Donaldson 1994.

There is not a homogeneous group that can speak to the needs of the community, as people no longer have the connection to each other and places that once existed (Beauregard 1996; Cowan 1997; Gikey Dyck 1998). Duffy and Hutchinson (1997) identify several ways for community to be represented: issue/common cause groups, target groups, geographical, spiritual, and nets of social relations. Resource managers and planners need to be aware of their definition of community when selecting partners for collaborative planning practices. In New Zealand, marine reserve committees represent a geographical and interest group definition of community.

Duffy and Hutchinson (1997) found that when groups are only given power at the operational level, not the strategic level, frustration arises, as members want to be involved in all levels of the process. Sharing of power and responsibility are key as:

...the community can feel it "owns" the result, with most members of the community believing that they have had a chance to be involved, have a stake in the success of the result, and in which some do not feel personally disadvantaged while others have escaped disadvantage or have gained (Radford 1994: 395).

Participation at the earliest possible point, even before plan conception, allows participants to truly belong to the planning process, rather than being treated in a tokenistic manner (Healey 1997; Innes and Booher 1999).

Community Participation in Marine Protected Areas

The focus of marine reserve research has changed in the past decade. For example, Kennedy (1990) suggested improvements to the management of Mida Creek marine reserve; no mention was made of public involvement, save for educating locals and tourists. While experts and researchers are now recognizing the need for public participation, there are still several gaps in the studies that have been conducted. Much of the research on MPA effectiveness focuses on the implementation of policy, management practices, and monitoring (for example, Nicholls 1998), not on the effectiveness of public participation in influencing the management process.

Preliminary Findings

Until the new Marine Reserves Act becomes law, four types of marine reserve advisory committees can be created in New Zealand (table 2). Not all reserves are required to have an advisory committee. Despite descriptions of different possible committees that can be formed under legislation, there are no national guidelines for operating a marine advisory committee. In the mid-1990s, a discussion paper was circulated with the aim to create national principles for committees and the selection of members. Unfortunately, there has been no action on this paper.

The marine reserve committees examined as case studies are: Kapiti, Long Island-Kokomohua, Te Tapuwae o Rongokako, and Te Whanganui A Hei. An overview of each committee is presented in table 3. Marine reserve committees are a combination of Donaldson's (1994) *elite* and *new* groups. The majority of positions, which are not allocated to iwi (tribes), are for interest groups such as commercial and recreational fishers, environmental groups, and dive clubs. There is little or no representation of members of the general public. Three main themes have become apparent from interviews with DoC staff and the preliminary survey results: lack of a national approach, inadequate funding, and invaluable community relations.

National Direction

The first and foremost theme is that respondents perceive there is no nationally coordinated approach to participation in marine reserve management. This theme can be split into two subsections: (1) lack of national direction and (2) the need to be flexible to the community.

The functions of the case study committees vary, from a concentration on compliance and enforcement work, to raising public awareness, to approving applications for scientific research. The resources available to committees also vary, for example, some committees can claim travel expenses while others cannot, some committees have access to funds while others do not. These variations create an ad hoc system.

Committee membership, Department of Conservation staff, and external influences all play roles in determining the focus of the advisory committees. The differences appear

Table 2—Types of possible marine advisory committees.

Type	Advisory	Board subcommittee	Combined	Ad hoc
Powers	Advisory body to the Minister	Powers may be delegated by Conservation Board	Advisory body and delegated powers	No statutory power
Weaknesses	Does not allow for management planning or policy advice	Must act within mandate of Conservation Board	Operates under two different sections of legislation	No statutory power
Strengths	Relationship with Minister (via Regional Conservator)	Policy advice and planning role	Advantages of both advisory and subcommittee	Easiest committee to setup

Table 3—Marine Reserve Committee overview.

	Long Island Kokomohua	Te Whanganui A Hei	Kapiti	Te Tapuwae O Rongokako
Reserve established	1993	1992	1992	1999
Committee established	1993	1993	1993	2000
Type	Subcommittee	Subcommittee	Subcommittee	Combined
Members	8	8	8	9
Stakeholders	Conservation Board (2); iwi (4) ^a ; dive club (2); Fisherman's Association (1);	Conservation Board (1); iwi (4); interest groups (3) ^c	Conservation Board (1); iwi (4); interest groups (3) ^c	Conservation Board (1); iwi (5); interest groups/public (3)
Iwi representation	Te Atiawa, Tangata whenua ^b	Ngati Hei	Ati Awa, Ngati Toa, Ngati Ruakawa	Ngati Konohi
Focus	Science research applications	Interpretation/ Public awareness	Compliance and law enforcement	Operational plan
Weaknesses	Lack of quorum and/or meetings in recent years	No long-term vision for the reserve	Compliance focus	Committee still learning the "ropes"
Successes	—	Interpretation kiosk created, snorkel trail	Hired advocacy officer 2001	—

^aOne of the Conservation Board representatives is also an iwi representative—meaning that the total number of places on the committee is only eight.

^b"Tangata whenua" means "first people of the land."

^cIncludes a National Institute of Water and Atmospheric Research scientist.

to be random, with the personalities involved shaping the process. It appears that the individual interests and enthusiasm of the members are major factors in determining the actual tasks undertaken by a particular committee.

Each marine reserve and marine reserve committee is forging its own way, making mistakes and creating successes. The lack of communication between reserves is something mentioned by DoC staff in all interviews. Some staff members have attempted to create information exchanges, such as the request for an exchange of minutes between Long Island—Kokomohua and the Te Whanganui A Hei. These information exchanges are few and far between, and more often due to friendships with staff in other conservancies than to seeking out information from all reserves.

Regional differences do need to occur, as each committee is representative of the community and interest groups concerned with the reserve in question. Moreover, the rights of the Maori, New Zealand's indigenous people, must be respected. In addition to needing community support, marine reserves need the support of the local iwi, who give up their traditional fishing rights to the area. Due to the importance of iwi support, they often have at least 50 percent representation on the committees. Sometimes, as in the case of Te Whanganui A Hei and Te Tapuwae o Rongokako marine reserves, only one iwi is involved; however, other reserves require representation from several iwi.

Funding

Funding allocated specifically for marine reserves only came about in 2001. Prior to this, the budget for the reserves

came from the conservancy budget. The lack of funds directly accessible to marine reserve committees is most likely the biggest cause of frustration to the committee members, as they cannot conduct all the activities that they would like. This inability reinforces their role as merely an advisory body to DoC, when they would like more of a hand in the management of the reserves. One respondent stated that the committee "would feel more useful if we could raise and hold funds for campaigns," because without funds members have little they can actually do. Some committees would like to seek sponsorship from outside DoC; but there is no consensus among conservancy staff if external sponsorship is permissible.

Community Liaison

Marine reserve advisory committees are a key link between DoC and members of the community. The link is strongest between iwi and specific interest groups, such as commercial fishers; however, in some reserves, the link is also established with members of the general public. DoC staff considers the committees to be "watchdogs" who keep pressure on DoC to uphold promises and ensure adequate management. In addition to advising DoC, the committees serve to provide a "reality check" and extra "eyes and ears" for management. The importance of iwi connections was emphasized by all DoC staff interviewed.

Discussion

In New Zealand, it appears that marine reserve committees, since they are only advisory bodies—equivalent to

Arnstein's (1969) rung of consultation, a form of tokenistic participation—have the potential to create feelings of disillusionment. For example, the Long Island-Kokomohua committee did not even meet in 2000. The lack of a budget for the committee and the fact that the reserve is not a high use reserve are two factors that may have contributed to nonparticipation. It is impossible to tell without further research if there are any other contributing factors to nonparticipation, in this reserve and others.

Committees can have feelings of frustration at their inability to act in more than an advisory manner. The focus on funding by both DoC and committee members suggests that this is an area where the participatory process needs to be improved. The marine reserve committees would acquire new capacity if they were to have an operating budget for activities that they desire to implement.

Not being able to create tangible benefits from their participation, some committees get a negative feeling about their ability to make an impact. For example, the Kapiti Marine Reserve Committee has focused on compliance and law enforcement for almost a decade, an area where the committee does not have any power to make a direct difference; as such, little successes are nonexistent. The committee, however, has made a significant contribution, adding extra “eyes and ears” to the reserve, in addition to pressuring DoC staff and head office to ensure that compliance work is being done and legal followthrough occurs. Tangible benefits from such activities are small, if at all apparent. Innovation is occurring in the Kapiti Marine Reserve, with extra funding requested, and received, for a temporary advocacy officer. The role of the officer is to liaise with the marine reserve committee and aid in the creation of promotional material, as well as liaising with interest groups and members of the public.

Though there are faults in the current system, marine reserve advisory committees play an important role. They liaise with members of the community, provide a network of people to assist in compliance activities, and are able to act as an independent body and advocate for the marine reserve through political channels. Without marine advisory committees, it is likely that there would be less community understanding of the actions of the Department of Conservation.

Summary and Conclusions

In New Zealand, national guidance is lacking in terms of how to incorporate communities in marine reserve management. There is no operational consistency between marine reserve committees, with differences in structure and contributions to management. Recognizing the fact that the needs of each community are different, it is not necessarily negative that each committee functions in a different manner. However, there should be better communication between the committees and reserve managers so mistakes are not repeated throughout the whole system and successes can be recreated.

Reserve advisory committees want to have funds available to them so they can implement promotional and advocacy programs without having to rely on the Department of Conservation. Becoming financially self-sufficient would allow the committees to become more effective in their roles.

Financial self-sufficiency also means that they would have greater capacity, something that would require restructuring of current government philosophies in regard to public participation. Research into transferring the current paradigm of participation into one that creates more meaningful opportunities would be useful. Do marine reserve committees and Department of Conservation staff have divergent views on the current level of participation? Are committee members satisfied with the current process? If not, what improvements can be made to ensure continued community participation in marine reserve management? The need to see tangible benefits from participation is key, and independent funding is one way to create visible successes. As such, this is one area that requires future research.

This study contributes to more than marine reserve research, as the need to incorporate communities is a widespread phenomenon, be it in conservation or urban planning. The needs of each country, region, and community differ. However, the rights of people to participate in planning, and the need to incorporate the visions of the community are key if planning is to succeed.

References

- Agardy, T. 1999. Creating havens for marine life. *Issues in Science and Technology*. 16(1): 37.
- Agardy, T. S. 1997. *Marine protected areas and ocean conservation*. Austin, TX: R.G. Landes Company, Academic Press. 244 p.
- Arnstein, S. R. 1969. A ladder of citizen participation. *American Institute of Planning Journal*. 35(4): 216–224.
- Beauregard, R. A. 1996. Voices of decline. In: Fainstein, S.; Campbell, S., eds. *Readings in urban theory*. Oxford: Blackwell: 363–391.
- Boersma, P. D.; Parrish, J. K. 1999. Limiting abuse: marine protected areas, a limited solution. *Ecological Economics*. 31(2): 287–304.
- Chambers, R. 1994. Participatory rural appraisal (PRA): analysis of experience. *World Development*. 22(9): 1253–1268.
- Cole-King, A. 1995. Marine protected areas in Britain: a conceptual problem? *Ocean & Coastal Management*. 27(1–2): 109–127.
- Cowan, R. 1997. *The connected city*. Leicester, UK: Urban Initiatives. 27 p.
- Department of Conservation. 2000. *Tapui Taimoana: reviewing the Marine Reserves Act 1971*. Wellington: Department of Conservation. 64 p.
- Department of Conservation; Ministry for the Environment. 2000. *The New Zealand biodiversity strategy: our chance to turn the tide*. [Online]. Available: [http://www.doc.govt.nz/Conservation/The-New-Zealand-Biodiversity-Strategy/pdfs/000~New-Zealand-Biodiversity-Strategy-\(Whole-Document\).pdf](http://www.doc.govt.nz/Conservation/The-New-Zealand-Biodiversity-Strategy/pdfs/000~New-Zealand-Biodiversity-Strategy-(Whole-Document).pdf). 146 p.
- Donaldson, C. 1994. Working in multi-stakeholder processes. *Ottawa: Environment Canada*. 84 p.
- Duffy, K.; Hutchinson, J. 1997. Urban policy and the turn to community. *Town Planning Review*. 68: 347–362.
- Dugdale, M.; West, S. 1991. Principles for public participation. In: *The Institution of Engineers, Australia, eds. The international hydrology and water resources symposium: proceedings; 1991 October 2–4; Perth, Australia*: 454–459.
- Forester, J. 1989. *Planning in the face of power*. Berkeley: University of California Press. 264 p.
- Gikey Dyck, R. 1998. Integrating planning and sustainability theory for local benefit. *Local Environment*. 3: 27–41.
- Healey, P. 1997. *Collaborative planning*. London: MacMillan Press. 446 p.
- Innes, J. E. 1998. Information in communicative planning. *Journal of the American Planning Association*. 64(1): 53–63.
- Innes, J. E.; Booher, D. E. 1999. Consensus building and complex adaptive systems: a framework for evaluating collaborative planning. *Journal of the American Planning Association*. 65(4): 412–423.

- Kelleher, G.; Bleakley, C.; Wells, S. 1995. A global representative system of marine protected areas: volume IV. Washington, DC: The International Bank for Reconstruction and Development/The World Bank. 212 p.
- Kelleher, G.; Kenchington, R. 1992. Guidelines for establishing marine protected areas. Gland, Switzerland: ICUN. 79 p.
- Kennedy, A. D. 1990. Marine reserve management in developing nations: Mida Creek—a case study from East Africa. *Ocean & Shoreline Management*. 14: 105–132.
- Michener, V. 1998. The participatory approach: contradiction and co-option in Burkina Faso. *World Development*. 26(12): 2105–2118.
- Nicholls, H. B. 1998. Canadian east coast marine-protected areas: a review. *Ocean & Coastal Management*. 39(1–2): 87–96.
- Parliamentary Commissioner for the Environment. 1999. Setting the course for a sustainable future: the management of New Zealand's marine environment. Wellington: Parliamentary Commissioner for the Environment. 111 p.
- Radford, A. D. 1994. Local architectural language and contextualisation. In: Scheer, B. C.; Preiser, W. F. E., eds. *Design review*. Chapman and Hall: 165–174.
- Shackell, N. L.; Willison, J. H. M. 1995. Preface. In: Shackell, N. L.; Willison, J. H. M., eds. *Marine protected areas and sustainable fisheries*. Wolfville, Nova Scotia: Science and Management of Protected Areas Association: 5–10.
- Slocum, R.; Wichhart, L.; Rocheleau, D.; Thomas-Slayter, B., eds. 1995. *Power, process and participation: tools for change*. London: Intermediate Technology Publications. 251 p.
- Walls, K.; Dingwall, P. 1995. Part B: New Zealand. In: Kelleher, G.; Bleakley, C.; Wells, S., eds. *A global representative system of marine protected areas: volume IV*. Washington, DC: The International Bank for Reconstruction and Development/The World Bank: 171–200.