



Differences in perception of a newly created Marine Park in south-west Western Australia by boat-based recreational fishers and the broader community

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ABSTRACT

Community acceptance of Marine Parks is widely acknowledged as being critical for success. Where community stewardship and voluntary compliance have been achieved, there are fewer issues with non-compliance of zoning regulations. Probability-based surveys that are representative of the wider community can improve understanding of community perceptions prior to and following establishment of Marine Parks. Understanding attitudes towards newly created Marine Parks among user groups provides valuable information for the design of education and engagement programs, while also creating a benchmark to compare changes over time. A survey of community perceptions and awareness regarding the recently created Ngari Capes Marine Park in south-west Western Australia was measured via a randomised telephone survey of local and non-local boat-based recreational fishers; and local residents (including non-fishers and shore/boat fishers). This survey also evaluated other recreational uses of the park and how these activities were valued, knowledge of Marine Park zones, and how information about Marine Parks was being accessed. Participation in recreational fishing within Ngari Capes was above average and a supportive attitude towards the park was apparent. Boat-based recreational fishers displayed a higher degree of concern about fishing restrictions compared to local residents, but overall were supportive of the Marine Park. Across all user groups there was low awareness of the Ngari Capes Marine Park and poor understanding of Marine Parks. A lack of clarity regarding the likely benefits of the Ngari Capes Marine Park was apparent, implying a need to improve public communication and community engagement.

1. Introduction

The global network of Marine Protected Areas, including Marine Parks and no take sanctuaries has been expanding to address declines in marine biodiversity, and targets to increase this expansion have been advocated by the World Summit on Sustainable Development [1]. Despite recognition of their role in protecting marine habitats [2,3], Marine Protected Areas have been the subject of considerable contention, particularly with regard to perceived or actual loss of access to resources such as fishing grounds [4–8]. Community acceptance, leading to voluntary compliance and reduced illegal fishing, is now clearly recognised as a major factor influencing the success of Marine Parks [7,9–12], yet community attitudes toward Marine Parks are infrequently assessed among user groups [13]. Where this has been done, it has often occurred many years, even decades, after the park was created (e.g. [14]). Such delays and omissions equate to lost opportunities, whereby perceptions of user groups could have been

used to deliver a tailored community outreach program to assist marine users during the difficult adjustment period of initial management implementation.

Community education within Marine Parks has been found to be more cost effective and have a broader influence on community behaviour than enforcement [13]. However, where limited resources are available for management, and particularly education, it is important to be strategic about how such programs are delivered. Obtaining a clear understanding of community attitudes toward Marine Parks is an important first step in developing effective communicative strategies [15,16]. Where Marine Parks are located in regional areas or remote from major population centres, there may be minimal information available about user attitudes, posing challenges both for management and setting priorities for education. In locations where tourist visitation is strong, it is also important to know whether usage patterns, attitudes and concerns of visitors differ from local residents. Community education messages may need to be

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targeted specifically for local residents and/or visitors, and it is possible that local residents may maintain a stronger buy-in for either support or resistance to Marine Parks due to stronger attachment to ‘place’ [17,18].

In Australia, a national representative system of Marine Parks is being progressively established in State and Commonwealth waters. Some of these Marine Parks have strong community support [19,20], while others have been associated with resistance or have achieved a low rate of awareness [6]. In New South Wales and Victoria, concerns from fishers (both recreational and commercial) have resulted in temporary moratoriums on the creation of new Marine Parks and changes to sanctuary zones that allow access by recreational fishers [21]. Such changes have occurred despite the wider community being generally supportive of Marine Parks, which highlights the importance of understanding the attitudes of specific user groups that may be impacted by the creation of Marine Parks.

The highly varied reactions to Marine Parks are likely to be a factor of their design and the consultation processes used to develop them [22], but may also be influenced by regional or user demographics [23–25], the degree of loss experienced by users [10] and the quality of community engagement achieved with these users [16]. Such variability highlights the value of using surveys to obtain a clear measure of community perception and attitude towards these parks. Developing a clear and unbiased understanding of community perceptions of Marine Parks, during planning, implementation and ongoing management, is therefore of vital importance for managers [16].

The establishment of the Ngari Capes Marine Park in south-west Western Australia has provided an opportunity to assess and record changes in community awareness and attitudes to a new Marine Park prior to and following the gazettal of the park zoning scheme. The coastal waters associated with the Ngari Capes Marine Park support diverse and increasing recreational activities [26,27], which have the potential to be both an asset and a challenge to effective community stewardship of the park. Success or failure may depend on how the design of the park influences accessibility and wider community acceptance [19,28]. The location of no-take areas that restrict all fishing activity within the Ngari Capes Marine Park are, in the majority, offshore and not easily accessible. Among recreational users, the boat-based fishers were likely to be most impacted by this Marine Park design.

In order to gauge changes over time, an appropriately-measured, objective and representative assessment of community attitudes was needed. Long term survey data will provide information to managers about community acceptance of the Ngari Capes Marine Park as well as enabling engagement and adaptive management of the Marine Park design. Here, we report on the outcomes of a survey of the local community, specifically recreational fishers and the broader non-fishing community, regarding their perceptions of the newly-created Ngari Capes Marine Park. The survey aims were to: assess community attitudes and awareness of the Ngari Capes Marine Park; identify how the Marine Park was used and valued by the community; highlight gaps in community understanding about the Marine Park’s management; and measure how information about Marine Parks in Western Australia in general is obtained. The results and conclusions from this study are pertinent to practitioners involved in designing or managing new Marine Parks in areas with high participation in recreational fishing and other water based activities.

2. Methods

2.1. Study area

The Ngari Capes Marine Park extends over 1200 square kilometres of coastal marine waters between Busselton and Flinders Bay (near Augusta) in south-west Western Australia (Fig. 1). The Marine Park encompasses one of the most diverse temperate marine environments

in Australia [29]. Mixing of warm and cool currents combined with complex geomorphology supports a high diversity of finfish [30,31], invertebrates, algae and seagrasses [29]. Seagrasses in Geographe Bay comprise over ten species and are among the largest and most continuous meadows of temperate seagrasses in Australia [32].

These waters are popular among local residents and tourists for a wide range of recreational pursuits, including fishing, boating, snorkelling, diving, surfing, swimming and beach activities (such as walking, enjoying scenery, relaxing and beachcombing) [29]. There is a long history of commercial fishing in the area [27] and this, together with whale watching and scuba diving tours, comprise the main commercial activities within these waters. Recreational fishing as well as general recreational activities of the coastal area has increased in recent years [26] due to strong population growth [33], while commercial fishing in Geographe Bay has contracted due to a range of closures related to resource sharing in specific fisheries [8].

The planning and establishment of the Ngari Capes Marine Park has occurred over a protracted period of time. Despite apparent local community support, significant delays in gazettal resulted from resource limitations, negotiations about compensation processes for commercial fishers and amendments to State legislation to give effect to Special Purpose and Recreation Zones [34]. The period of time between initial announcement of the planning process for the Marine Park and final approval of the management plan [29] lasted 16 years (1997–2013) [34]. Although the outer boundaries of the Marine Park had been established, implementation of the park zoning scheme had not commenced at the time of this survey (mid 2014), therefore results reflect baseline community perceptions prior to the introduction of the various zoning regulations (e.g. prohibitions on fishing in sanctuary zones). This zoning scheme was still pending at the time of the submission of this article for publication (mid 2016). As a result of these delays many active users of the Marine Park are unlikely to have been previously involved in the planning or consultation phases of the Marine Park process, purely because they were residing (or fishing) elsewhere at the time. Accordingly, there is likely to be a segment of the local population with a low awareness of the Marine Park combined with those that are very familiar with its background.

2.2. Survey design

A telephone survey of the local community and boat-based recreational fishers was conducted between May and July 2014 to assess attitudes towards the Ngari Capes Marine Park. The catchment for the local community extended from the southern half of Geographe Bay, Cape Naturaliste and Cape Leeuwin to Flinders Bay, and included the town centres of Busselton, Dunsborough, Margaret River and Augusta. Samples for the local community were obtained from a list of rate payers to a Local Government Authority [LGA] and a general telephone listing in electronic White Pages [WP]. The LGA sample was selected from one of two potential Local Government Authorities due to data access restrictions, while the WP sample was drawn from both Local Government Authorities. These samples included non-fishers and shore/boat fishers; whether local residents participated in recreational fishing, or not, was determined during the interview.

Samples for boat-based recreational fishers were obtained from a database of Recreational Boat Fishing Licence (RBFL) holders, which is required to undertake any general fishing activity from a motorised vessel anywhere in Western Australia (without exemption). These fishers were initially selected for a state-wide survey of recreational fishing [35] and were deemed eligible for this study if they fished in the marine and coastal waters between Busselton and Augusta during the previous 12 months. Residential postcode was used to differentiate between local fishers [LF] (as described above) and non-local fishers [NLF] (all Western Australian residents, excluding those described as local). This was considered important to assess whether attitudes were different for local residents or visitors.

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