

Marine Protected Area Management in South Africa: New Policies, Old Paradigms

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Abstract A historical perspective on MPA identification and governance in South Africa reflects the continued influence of a top-down and natural science-based paradigm, that has hardly changed over the past half century, despite the wealth of literature, and a growing consensus, that advocates the need to adopt a more integrated and human-centered approach. Based on extensive research in two coastal fishing communities, the paper highlights impacts and conflicts arising from this conventional approach to MPA identification, planning and management. It argues that failure to understand the particular fishery system in all its complexity, in particular the human dimensions, and involve resource users in planning and decision-making processes, undermines efforts to achieve conservation and fisheries management objectives. The customary rights of local resource users, and their food and livelihood needs in relation to marine resources, need to be acknowledged, prioritized and integrated into planning and decision-making processes. Convincing ecologists, fisheries scientists and managers, that MPA success depends on addressing the root causes of resource decline and

incorporating social factors into MPA identification, planning and management, remains a huge challenge in South Africa.

Keywords Marine protected areas · South Africa · Human dimensions · Customary rights · Social factors

Introduction

South Africa has recently completed the National Spatial Biodiversity Assessment which recommends strategies to increase the number of protected areas in the country (Driver and others 2005). Particular attention is given to expanding the network of Marine Protected Areas (MPAs) that currently incorporates 21.5% of South Africa's coastal zone. In keeping with international trends in marine resource management (Hilborn and others 2004; Laffoley 2008; UNEP-WCMC 2008), South Africa is employing MPAs as a key tool to protect important coastal and marine habitats and restore overexploited stocks and degraded areas. However, existence of protected areas in coastal and marine environments is not a new management measure. In fact MPAs, in one form or another, have been in existence in South Africa for over a century. Historically, these coastal and marine reserves were instrumental in protecting local vested interests in alliance with the state (van Sittert 2003a) as well as meeting the needs of the apartheid state's segregated conservation and land development policies (Carruthers 1989). More recently, MPAs have been promoted, not only as a tool to achieve ecological and fisheries management objectives, but also as a mechanism for minimizing user conflicts as articulated in the Marine Living Resources Act of 1998. However, the process of dispossessing people of their rights to access and utilize

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marine areas and resources remains as much a concern now as it was in the early 1900s when the first marine reserves, or sanctuaries, were established. This is particularly disconcerting given South Africa's progressive Constitution and its national environmental legislation, which supports principles such as the right to equitable access to resources and civil society participation in decision-making and management. This paper questions the current paradigm guiding MPA identification, design and management. It draws on insights gained from extensive research in two case studies, and questions the rationale for identifying and declaring these MPAs as well as the approach to their planning and management. A key focus of the paper is to highlight the current paradigm governing MPA planning and management which fails to give adequate attention to the human dimensions, in particular the cultural and historic considerations of these small-scale fishery systems. However, as fishers become more aware of their rights, and empowered to express their needs and concerns, government is being forced to reconsider its approach.

The Past in the Present: A Brief History of MPAs in South Africa

The Colonial Idea

South African marine scientists consider the first MPA in the country to be the Tsitsikamma marine reserve established in 1964 (Lemm and Attwood 2003). In fact coastal and marine protected areas have been in existence in South Africa for more than a century. In their original form they were maritime manifestations of the more familiar terrestrial reserves created by colonial administrations throughout Africa. The threat to indigenous nature under colonialism was always imagined as imminent extinction of species through misuse by indigenous peoples, mandating urgent state intervention to protect, and scientifically manage the threatened species through the creation of nature reserves (see for example Grove 1989; van Sittert 2003b; Beinart 2003).

The Cape Colony and Province c.1890–1940

The terrestrial reserve model was applied to marine areas in 1890 with the passing of the Fish Protection Act. However, because fisheries were a low priority for the colonial state and its provincial successor through to 1940, both favored the creation of reserves as a cheap mechanism for regulating riverine and maritime commons by displacing responsibility for monitoring and compliance onto reserves' local champions (van Sittert 2003a). The result was the rapid proliferation of marine reserves during the

half century after 1890; all formed in response to a myriad of local resource conflicts.

The four broad conflicts that emerged at that time, which resulted in the declaration of an array of protected areas, related to guano islands, estuaries and bays, trout and rock lobster. For example, the colonial state took over management of the offshore islands from private lessees in the 1890s in order to provide a fertilizer subsidy to wheat and wine farmers in the south western Cape. Thus, the islands were converted into seal and seabird reserves to protect the annual guano crop and the ancillary seal skin and penguin egg harvests paid for the cost of the guano production. Netting restrictions and bans were commonly applied in order to protect areas in estuaries and bays. A further protected area strategy banned netting in defense of a single species, for both recreational (trout) and commercial (rock lobster) purposes. Rock lobster was the primary raw material for nascent industrialization in the inshore fisheries, initially canned, and later frozen, for export to markets on the north Atlantic rim. The most heavily fished grounds, those adjacent to the concentration of canneries on the west coast, were permanently closed to fishing in 1934 (van Sittert 1993b).

The National Development State c.1940–1970

The role of marine reserves changed with the transfer of control over marine fisheries from the Cape Province to the national state in 1940 (van Sittert 2002). The national state pursued an ambitious policy of fisheries industrialization during the quarter century after the end of the Second World War (van Sittert 1993a), which saw protected areas fall into gradual obsolescence as fishing efforts shifted offshore.

However, the fall in commercial lobster catches in the early 1950s led to the revival of the rock lobster reserves (Melville-Smith and van Sittert 2005). Unlike their earlier purpose of retiring heavily fished grounds, the location of rock lobster reserves after 1956 targeted small-scale and recreational fisheries supplying the local market, which was also a means used to establish an export industry monopoly over the resource (van Sittert 2001).

The National Scientific State c.1970 to Present

State-led fisheries industrialization post-1945 culminated in a crisis of falling catches and rampant corruption in the 1970s (Cram 1981; Moorsom 1984; Republic of South Africa 1972, 1975; Schoeman 1980). In an effort to depoliticize, the fisheries state management was recast in the discourse of science, rather than development, and the state and capital claimed to be the stewards of marine resources.

MPAs first took on their present purpose during this era of resource crisis and so-called ‘scientific’ management. The state responded to the former by endeavoring to eradicate the last vestiges of informal and recreational fisheries and so convert MPAs into marine biodiversity reserves, this was with the exception of industry access to commercially important species like rock lobster. The now depleted historical stock of MPAs inherited from the colonial and provincial states was supplemented by new MPAs, sited according to scientific criteria (Emanuel and others 1992; Attwood and others 1997b; Hockey and Branch 1997).

Policy and Legal Frameworks Governing MPAs in South Africa

The past four decades has seen conservation objectives at the forefront of efforts to protect and rebuild dwindling marine resources in South Africa. This follows a plethora of international commitments that have called for action to accelerate the pace of marine protection (Laffoley 2008). As a result, there has been an unprecedented international trend to designate MPAs, which some claim has reached ‘pandemic proportions’ (Kolding 2006). There is now an overwhelming commitment by the international marine ecology and conservation community to conserve 20–30% of global marine ecosystems in order to address overexploitation of marine resources (UNEP-WCMC 2008).

In South Africa, MPAs are considered by marine scientists to be ‘the backbone of South Africa’s marine conservation strategy’ (Lemm and Attwood 2003, p. 3) although this view is not shared by all fisheries scientists (Edwards and others 2008). The expansion of South Africa’s MPA networks is supported by commitments to several international conventions and agreements (such as RAMSAR and the Convention on Biological Diversity of 1992), as well as South Africa’s Constitution (Constitution of the Republic of South Africa of 1996) and various policies and laws governing natural resource management. Of particular relevance is the Marine Living Resources Act (MLRA of 1998), which provides the legal mandate for establishing and managing MPAs in South Africa. By 2009, South Africa had declared 20 MPAs; covering 21.5% of its 3000 km coast (Fig. 1). Of these MPAs, 9.1% are classified as no-take zones (Bewana 2009).

Despite the focus on the ecological and fisheries benefits of MPAs in South Africa, there are a number of progressive legal provisions in other environmental statutes that highlight the need for communities to share in the benefits of protected areas (National Environmental Management (NEM): Protected Areas Act of 2003), gain equitable access to resources (NEM: Integrated Coastal Management

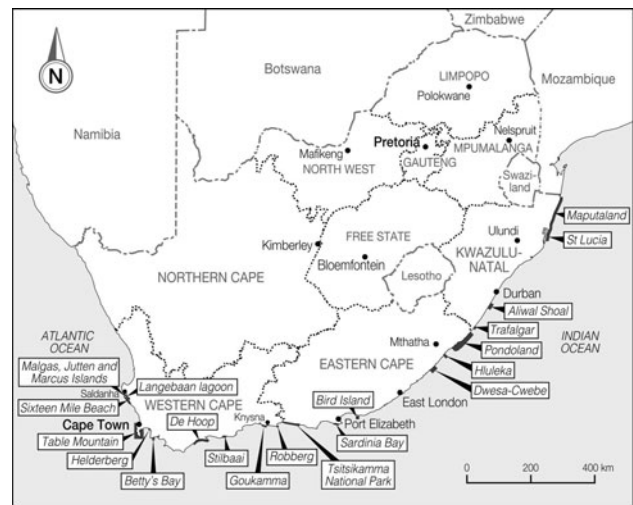


Fig. 1 Map of MPAs in South Africa (based on Map released by DEAT 2008) (Courtesy of Department of Environmental Affairs and Tourism, Directorate: Marine and Coastal Management, Communications Section)

Act 2008, Marine Living Resources Act 1998) and participate in the management of and decision-making relevant to coastal and marine resources (National Environmental Management Act (NEMA) 1998, NEM: Biodiversity Act 2004, NEM: Protected Areas Act 2003).

In particular, the National Environmental Management Act (NEMA) of 1998, which provides the over-arching legislative framework for environmental governance in South Africa, requires ‘participation of all interested and affected parties in environmental governance, with appropriate capacity building that ensures equitable participation’ (section 2). This principle is binding on all organs of state. Administrative decisions that fail to comply with NEMA’s principles are increasingly being challenged (Hauck and Sowman 2005). Furthermore, the inclusion of civil society in environmental decision-making is embodied in the provision dealing with Environmental Management Co-operation agreements which promotes partnership agreements and the sharing of responsibilities and decision-making relevant to natural resource management (see section 35 of NEMA).

Thus, the legislative framework governing protected area management in South Africa promotes the principles of co-operative environmental governance and establishes the foundation for participatory decision-making and benefit sharing (Hauck and Sowman 2005). Although there is the understanding that the socio-economic needs of adjacent communities should to be recognized, and incorporated into MPA planning and governance frameworks in South Africa (Beaumont 1997; Hockey and Branch 1997; Lemm and Attwood 2003), there is limited evidence of this happening on the ground (Sunde and Isaacs 2008).

The Realities on the Ground: Two Case Studies

This section provides an overview of two case studies, both located on the west coast of South Africa, one of which has been impacted by the designation of a historical MPA (Hangberg), and the other (Ebenhaeser) that is protesting against a current proposal to declare their traditional fishing grounds a no-take MPA. Despite the years that have separated these two processes, and the new perspectives on small-scale fisheries management that dominate the literature, both cases highlight the current total disregard for customary rights and practices and the neglect of integrating human dimensions into MPA planning and decision-making processes.

Hangberg Case Study: A Historical MPA

The community of Hangberg is situated above Hout Bay harbor, in the Cape Town municipal area, adjacent to the Table Mountain National Park MPA (Fig. 2). In 1950, Hout Bay was zoned as a white residential suburb under the Group Areas Act (41 of 1950), while the harbor was reserved for so-called ‘colored’ occupation (Isaacs 2006). This marginalized harbor community became known as Hangberg, and is where many of the traditional fishers continue to live today. Harvesting of west coast rock lobster (*Jasus lalandii*) has continued for centuries in this area, with strong customary use rights evolving from the 19th

Century (van Sittert 1993b, 1994). The fishery was embedded in the social, cultural and political context of the community but was significantly affected by the export-oriented focus of the commercial industry. With increased government restrictions on access to the lobster resource from the early to mid-1900s, customary fishing practices became severely limited. Nevertheless, traditional fishing continued, often illegally, as a means to supply food and basic income (van Sittert 1994). The Hangberg community, therefore, has been identified by the authorities and the commercial industry as a problem area due to perceived high levels of illegal fishing (Branch and others 2007). This is particularly evident in the Karbonkelberg Sanctuary, which is a no-take zone adjacent to the fishing community (see Fig. 2).

Research conducted amongst the Hangberg fishers, however, paints a different picture, one that highlights the injustices of being excluded from their traditional fishing grounds (Hauck 2009). Although Table Mountain National Park MPA was only promulgated in 2004, the designation of the Karbonkelberg Sanctuary simply reinforced an existing Hout Bay lobster sanctuary, which was declared as a no-take zone in 1934 (van Sittert 1994). Following the proclamation of the Table Mountain National Park MPA, the government’s notice of intent to declare the MPA stated: ‘the purpose of Sanctuary Zones is to allow marine species and ecosystems in those zones to exist in a natural state to further fulfill South Africa’s commitments to the conservation of biodiversity and to enhance eco-tourism opportunities’ (DEAT 2004, p. 5). In addition, it stated that ‘all forms of fishing shall be prohibited within the Sanctuary Zones’ (DEAT 2004, p. 5). There was no consultation with the traditional Hangberg fishers regarding these decisions.

The declaration of this MPA in 2004 entrenched the original lobster sanctuary and completely ignored the historical rights of the Hangberg fishers to access marine resources to secure a livelihood. Given that these fishers use rudimentary rowing boats, most without an engine, it is extremely difficult for them to access fishing grounds outside the sanctuary.

The fishers’ sense of injustice is further exacerbated by the fact that commercial vessels are permitted to harvest lobster in the Karbonkelberg Sanctuary during March of every year (Hauck 2009). The commercial fishery is allocated a research quota of 30t per annum, which is seen as a critical source of scientific data for monitoring lobster growth rates (van Zyl 2001). While scientists argue that this experimental fishery is not suited to small-scale fishers’ gear due to the location of tagged lobster in waters deeper than 30 m, the Hangberg fishers have never been consulted about this fishery. Further, the fishers express anger and frustration that they are entirely excluded from

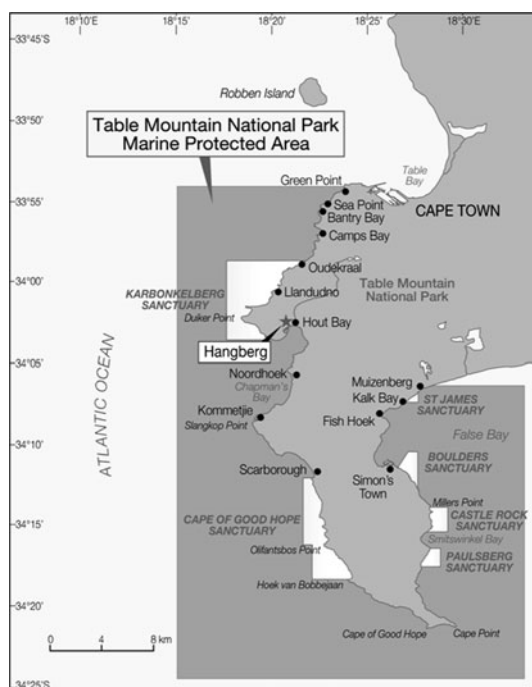


Fig. 2 Map highlighting location of Hangberg and the adjacent Table Mountain National Park Marine Protected Area (adapted from DEAT 2004)

any form of access to the sea adjacent to them, while they witness the extraction of lobster by commercial rights holders. One traditional fisher explained: ‘large quota holders already have so much of the Total Allowable Catch and now they come and take out tons in our backyard and we have to stay out...it needs to be looked at...at the moment we don’t care about the rules and the laws of government because it is all so unfair’ (Hauck 2009, p. 170). The response of the fishery authority, however, was to enhance law enforcement effort and to address poaching by administering fines and confiscating boats, gear, bait and catches. However, limited enforcement capacity means that this informal lobster fishery continues to operate, with fines and confiscations occurring from time to time.

Over the past year, the rhetoric from Jacob Zuma’s new administration, as well as the institutional restructuring taking place within the Fisheries Directorate suggests that there is greater commitment on the part of government to address the historic rights and current needs of traditional fishers. However, this rhetoric has been slow to filter into policies, resource allocation decisions and management action relevant to the Hangberg fishers. The process of developing a new small-scale fisheries policy which addresses the rights of traditional fishers is fraught with difficulties, in particular the different perceptions of government scientists and managers on the one hand, and fishers and their advisors on the other.

The Olifants River Estuary: A Current MPA Process

The Olifants River estuary comprises a unique and productive ecosystem located on the western seaboard of South Africa; approximately 350 km north of Cape Town (Fig. 3). The estuary has a history of human-ecological interactions dating back to pre-historic times. Archaeological evidence points to the presence of pre-historic

peoples along the coast near the mouth of the estuary and to their consumption of a range of marine and estuarine resources (Parkington 1997). The dependence of the descendants of the indigenous peoples of the area, on fishing for their basic source of food is well documented in early archival records (Parkington 1997; Probart 1915; Reitz 1929). In 1925 this so-called ‘colored’ community was forced off their land and resettled on inferior land closer to the mouth of the river in order to make way for a whites-only irrigation settlement. This move increased the community’s dependence on fisheries (Sowman and others 1997); both in the estuary and on the growing lobster and line fishery in the nearby coastal town of Doring Bay (Fig. 3). Fishing for harders (*Liza richarsonii*) in the estuary, using rowing boats and gillnets, has continued to the present time and the local fishing communities at Papendorp, Olifantsdrif, Ebenhaeser, Rooierwe and Nuwepos (known collectively as Ebenhaeser) have woven a unique cultural, ecological and social web of life along the contours of this estuarine ecosystem (Fig. 3).

As early as 1934, a restricted area of approximately 1 km² was designated at the mouth of the river to address conflicts between treknet and gillnet fishers (Province of the Cape of Good Hope 1934). Over the decades, this restricted fishing area has been retained largely for conservation purposes. The fishers of Ebenhaeser, in general, respected this no-take zone, although fishing in this area occurred from time to time. From 1993 the fishers, with support from researchers at the Environmental Evaluation Unit (EEU), a research group at the University of Cape Town, and the Peninsula Technikon, established a co-management committee with the local Nature Conservation Authorities, who were responsible for managing estuaries at the time, to jointly manage the fisheries. In 1998, the Marine Living Resources Act (MLRA) established the national Department of Environmental Affairs and Tourism as the managing authority for estuaries. In the absence of a clear protocol to manage small-scale net fishers, the Ebenhaeser fishers were granted exemptions to continue fishing in terms of section 81 of the MLRA, with strict permit conditions.

Soon after the promulgation of the MLRA, concerns about the status of line fish stocks led to stringent policy and management measures being introduced. These included restrictions on recreational fishing and a reduction in traditional net fishing rights along the entire coastline, with the result that many treknet fishers lost their livelihoods overnight. Estuarine based net-fishing was also targeted because of the role estuaries play as nursery grounds for many line fish species. As part of this process, the fisheries authority announced in 2005 that the Olifants River estuary gillnet fishery would be phased out within five to ten years. This announcement was made in a national internal policy

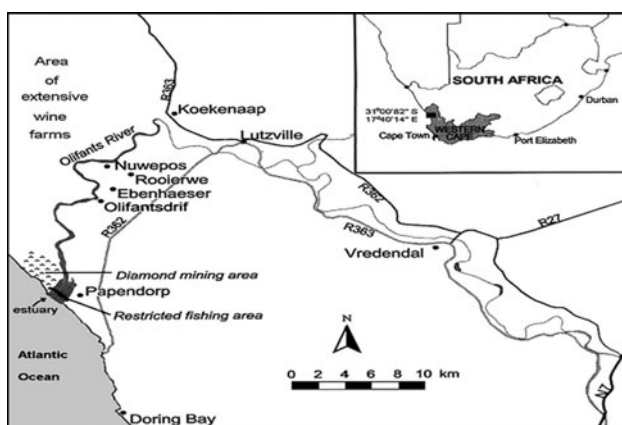


Fig. 3 The location of Olifants River estuary and adjacent fishing communities, Western Cape, South Africa

document, with no prior formal notice given and without consultations with the local fishing community. The fishers, together with support from the EEU and Masifundise (a non-governmental organization), began questioning the validity of such a top-down decision, particularly within the context of the co-management program that was being developed between the fishers and the fisheries authority, Marine and Coastal Management (MCM). The fishers supported the need for some form of protected status for the estuary and were prepared to explore alternative management mechanisms to address concerns about line fish bycatch.

In 2007, as part of a program to enhance the management of estuaries in the Western Cape Province, a consulting group was appointed to develop a Management Plan for the Olifants River estuary which was in part fulfillment of the national environmental Departments' commitment to implementing its National Biodiversity Strategy and Action Plan (Driver and others 2005). The Olifants River estuary had been identified as a biodiversity conservation priority requiring a clear management plan. In their report, it was argued that the area was relatively unaffected by human development and hence offered a 'valuable sanctuary for flora and fauna as well as for visitors' (Anchor Environmental Consulting 2008, p. i). Little reference was made to the traditional fishing activities of the Ebenhaeser fishing communities. This was surprising given the fact that a land restitution process is currently underway, aimed at restoring land and riparian rights to the people of Ebenhaeser.

The outcome of this management plan formulation process was a plan that recommended the declaration of a no-take MPA—extending from the mouth of the river for 14–18 km inland—and the phasing out of gillnetting by 2014. The designation of this MPA would effectively extinguish the fishers' customary rights and impact on their rights to food and to a livelihood.

During this process, the fishers, with support from the EEU and Masifundise, repeatedly requested that their traditional rights to resources be recognized and alternative management options be explored. Failure to address the fishers' concerns prompted them to seek legal assistance to challenge these plans and a letter outlining their grievances was sent to the Minister of Environmental Affairs.

Analysis and Discussion

State Driven Planning and Decision-Making

Both case studies outlined above illustrate examples of state-driven, top-down decision-making processes in relation to the identification and designation of MPAs, and the resultant negative impacts on local fisher groups. The

Hangberg case, which provides a historical perspective on the creation of protected areas in South Africa, illustrates the outcomes of these decisions, including how the initial objectives of the rock lobster sanctuary have been undermined. Created in 1934 under the guise of conservation, but also as a means to secure the lobster resource for industry export (van Sittert 1993b), the sanctuary has resulted in the Hangberg fishing community being dispossessed of their fishing rights for the past seventy years. This has resulted in significant animosity toward the state and a complete disregard for its rules. While the state perceives the sanctuary as a poaching hot spot, local fishers argue that current rules and regulations are unjust, resulting in an absence of moral obligation to comply (Hauck 2009). Thus, fishing activity continues to take place in the protected area, and conflicts between the commercial industry (who are permitted to harvest) and the traditional fishers persist. Furthermore, aggressive incidents between the fishers and law enforcement officials have escalated over the past ten years and there is little respect for, or trust in, the fisheries authorities. These negative attitudes have been exacerbated by the regular drownings that result from fishers harvesting at night, or in rough seas, in order to avoid detection by law enforcement. Finally, there has been no engagement or consultation between the fisheries authority and the Hangberg fishers, and thus potential alternatives to the current management of the protected area have not been explored. The long term implications have been significant, with an impoverished community, a thriving informal (or illegal) fishery and an eroded sense of legitimacy toward the state.

Despite the lessons that could be learned from the Hangberg case, similar processes are taking place elsewhere, as outlined in the case of the Olifants River estuary. The blatant disregard for these fishers' customary rights and practices as well as their socio-economic needs in the recent MPA planning process will ultimately undermine the stated objectives of the proposed MPA, as evidenced in Hangberg. Failure to consult the fishers has angered them and strengthened their resolve to challenge the state. With a long tradition of fishing in the Olifants River estuary and few alternative economic opportunities, it is highly likely that fishing in the proposed MPA will continue. Government will seek to regulate this fishing activity through enhanced law enforcement which will, in all likelihood, lead to increased conflict, and even violence. Not only will fishers legitimize this so-called 'illegal' activity as a means to protect their customary rights and livelihoods, but they will be reluctant to engage with the fisheries authority at all. Thus, it is naïve of the state to assume that the declaration of an MPA will be respected by small-scale fishers whom they have dispossessed, arguing that MPAs may benefit them in the long term. On the contrary, fishers will

sabotage the state's ecological objectives by continuing to fish, thereby undermining the MPA objectives and any other attempt to explore management options.

Ironically, the wider post-apartheid privatization of the marine commons and the delegation of state fisheries administration functions to private capital (in accordance with the dictates of neo-liberal economics) has recreated the kind of laissez faire conditions not seen in the fisheries for seventy years (van Sittert 2003a). The current creation of MPAs under such circumstances will most likely proceed, as it did before the Second World War, primarily through alliances between the state and local vested interests and not through popular participation. In terms of such arrangements the state lends the legitimacy of its legal sanction to the activities of local vested interests who, in turn, shoulder the burden of enforcement in return for the economic rewards that flow from state protection. Whereas historically these rewards were reaped in the returns from commercial fishing and land rents, today they are almost exclusively realized or imagined in terms of tourism revenues.

Science-Based Paradigm Dominates MPA Expansion Process

Irrespective of the negative social outcomes that have resulted from this narrow perspective of MPAs, the natural science paradigm continues to dominate MPA identification, planning and decision-making processes in South Africa. Since the 1970s, the focus has been on ecological and fisheries management goals to justify the proclamation and expansion of protected areas in the marine region. Although the potential fisheries and ecological benefits of MPAs are widely recognized, it is increasingly emphasized in the international literature that MPAs comprise but *one* management tool, amongst many, that may be appropriate in a particular context (White and others 2002; Christie and others 2003; Hilborn and others 2004; Ruddle and Hickey 2008; Charles and Wilson 2009). Other management measures (such as closed seasons, gear restrictions, reduction in effort) may be more suitable strategies to achieve ecological and fisheries management objectives if they also incorporate socio-economic and cultural considerations (McClanahan and others 2009a). Further, there is growing consensus that if MPAs *are* deemed an appropriate management strategy, then the human dimensions need to be incorporated into MPA processes (McClanahan and others 2009b; Charles and Wilson 2009; Christie and White 2007; Christie and others 2003). This includes an understanding of socio-economic and poverty characteristics and conditions, customary rights and practices, cultural norms, as well as equity, justice and power issues relevant to the affected communities.

Research in the MPA arena increasingly highlights the importance of social science research, and incorporating local and indigenous knowledge into MPA identification, planning and implementation. A number of scholars highlight that failure to do so will undermine achievement of MPA ecological objectives (White and others 2002; Pollnac and others 2001; Christie and others 2003; Brechin and others 2003; Agardy 1994; Pomeroy and others 2007). According to Charles and Wilson (2009, p. 6), 'recent research and policy discussions on MPAs are increasingly focused on social, economic, cultural and institutional considerations—seeking a balance with the equally crucial knowledge required of biophysical and ecological aspects'. Most significantly, management of MPAs in South Africa has largely failed to explore a range of creative design options that could combine selected sustainable extractive use by traditional fishers with increased protection of other components. In this regard, the approach has been shaped by the broader political interests that determine fisheries policy in South Africa, and access for industrial and recreational fishers has been prioritized over and above that of traditional small-scale and subsistence fishers.

South Africa has followed international developments regarding MPA expansion and has committed itself to expanding its MPA network in order to achieve conservation goals (Attwood and others 1997b; Lemm and Attwood 2003). The primary motivation for MPAs has largely been to protect species or ecosystems. More recently, the emphasis has been on the role of MPAs to enhance fisheries management objectives. As Attwood (1997a, p. 329) explains, 'while the state of coastal biodiversity has steadily become more critical, it is the widespread collapse of fisheries that has prompted the sudden interest in marine protection'. To some, fisheries management objectives reflect the socio-economic rationale required to motivate for MPAs, arguing that fishery stocks will be enhanced for the benefit of various user groups (Hockey and Branch 1997). This is certainly the case in the Olifants River estuary MPA planning process in which the dual goals of biodiversity conservation and fisheries management have motivated MPA design. However, the anticipated benefits of this MPA intervention, in particular the rebuilding of certain line fish stocks, will largely accrue to marine fishers and not the communities living adjacent to the estuary.

Furthermore, it needs to be noted, that the effectiveness of MPAs to contribute to sustainable fisheries has increasingly been questioned, as some argue there is little conclusive evidence of this claim (Agardy 1994; Kaiser 2005; Kolding 2006). As Hilborn and others (2004, p. 198) caution, 'while the potential value of marine reserves for the protection of habitat and biodiversity is clear, their potential for improving fisheries management and

particularly fisheries yields will be limited unless the roots of fisheries management failures are addressed'. In South Africa, however, a further motivating factor to establish MPAs is a lack of enforcement capacity and ongoing poaching activity that threatens biodiversity (Attwood and others 1997b). However, small-scale fisheries compliance research in South Africa highlights the fundamental importance of social justice in enhancing compliance behavior, and understanding the underlying socio-economic, political and institutional issues that influence fishers' decision-making (Hauck 2009). The assumption that MPAs will enhance compliance is false if the MPA is not considered legitimate in the eyes of the resource users themselves (see also Jones 2006, 2009).

The role of resource users in identifying and designing MPAs, and a recognition of the need to address conflicts in relation to the loss of access, has been acknowledged by marine ecologists in South Africa (Attwood and others 1997a, b; Hockey and Branch 1997; Robinson 1992). However, in practice poor, traditional fishing communities have rarely been able to influence decisions regarding their continued sustainable use of resources within MPAs because of the power of the scientific community within governance arrangements in this country. Stakeholder consultation and community needs are only acknowledged as long as they do not compromise the ecological objectives set out by the MPA (Attwood and others 1997b).

In fact, recommendations from the most recent 'State of MPA Management in South Africa' report (Lemm and Attwood 2003) explicitly state that consultation processes should be incorporated into MPA design. Consultation however, is often used as a tool to provide legitimacy to state decision-making around MPAs, which is evident in the Table Mountain MPA (adjacent to Hangberg) and the new MPA proposed for the Olifants River estuary. The MPA documentation for both of these cases state that consultation was undertaken with stakeholder groups and that objectives were agreed upon; however, this is disputed by the fishers. None of the specified objectives refer to the customary rights, livelihoods or food security needs of resource users. Broad stakeholder meetings are a far cry from active engagement with marginalized fishers, to ensure that their needs are being protected. Thus, although there is a broad recognition of the need to consult with resource users and affected communities, fundamental principles of participation, social justice and human rights are not guiding the identification, planning and management of MPAs in South Africa.

The Emerging Voice of Traditional Fishers

The marginalization of the traditional small-scale fisheries sector within fisheries policy and management in South

Africa inevitably has implications for the approach to the management of MPAs that abut small-scale fishing communities (Sunde and Isaacs 2008). Failure to recognize the customary rights and traditional practices, as well as the socio-economic rights of fishers and communities living along the coast, and adjacent to marine protected areas, has resulted in increasing levels of frustration amongst coastal communities in South Africa and anger towards the fisheries authorities. Over the past ten years this frustration and anger has resulted in mass action (Sunde 2004; Isaacs 2006), legal action by a group of traditional fishers against the DEAT Minister (George and others vs. The Minister of Environmental Affairs and Tourism 2004), and increased disregard of formal rules and regulations (Hauck and Kroese 2006; Hauck 2009). A ruling by the Equality Court (a court set up to implement the Equality Clause in the Constitution; whereby "everyone is seen as equals before the law and has the right to equal protection and benefit of the law") in May 2007 required the Minister to provide some form of interim relief to traditional fishers through access to fisheries resources until such time as the government finalized a new subsistence and small-scale fishing policy. While the process to develop a national small-scale fishing policy has begun, it has been beset with enormous challenges, not least of which have been the very different perspectives of government (scientists, managers, legal experts), fishers and other relevant stakeholders.

In the case of Hangberg, fishers continue to ignore the regulations that restrict access to their traditional fishing grounds. Furthermore, they are becoming increasingly organized and vocal in their claims. Through their representatives, they are engaging in broader fisher forums and participating in the current small-scale fisheries policy development process currently underway.

The Ebenhaeser fishers have elicited the support of the Legal Resources Centre, a public interest litigation organization, to assist them in articulating their rights-based claims in writing to the relevant Minister. This action has resulted in a delay in finalizing the Olifants Estuary Management Plan and the declaration of a MPA, and provided an opportunity to gather in-depth historical information about the nature of this traditional fishery, and in particular customary practices and rules governing the fishery. This information will assist the legal team to prove that these fishers do indeed have customary rights that would be extinguished if an MPA were to be declared. However, the litigation route is not desirable for government or the fishers, as it totally undermines efforts to establish some form of co-management. In an attempt to avert court action, government has initiated a series of meetings with the fishers and their legal representatives to identify mechanisms for addressing fisher concerns.

Balancing Conflicting MPA Goals

Clearly, the impacts and conflicts arising from this top-down, science-based approach to MPA identification, planning and management in South Africa, are undermining conservation and fisheries management objectives and placing a huge burden on enforcement capacity and resources. Furthermore, rather than fisher communities being considered as partners in management, and custodians of marine resources, they are considered poachers and criminals in the areas where they live and have traditionally fished. A key stumbling block to successfully implementing MPAs as a management tool is identifying, and agreeing on, objectives for the area. In order to do this, it is necessary to understand the context in all its complexity, which includes the historical context as well as the ecological, human and governance dimensions. Identifying all key stakeholders and then jointly exploring the resource opportunities and constraints, and discussing management options to address concerns should be the starting point. Such processes need to be based on the principles of participation, mutual respect, social equity, resource sustainability, and trust. The customary rights of people in the area, and their food and livelihood needs in relation to marine resources, need to be acknowledged, prioritized and integrated into planning and decision-making processes.

Building trusting and respectful relationships between resource users, fisheries authorities and other stakeholder groups will take time as these relationships have been significantly eroded by historical conservation practices in South Africa. Building such relationships between the state and indigenous peoples has been successfully achieved in various countries like Australia (Nursey-Bray and Rist 2009) and elsewhere (Pinkerton and Weinstein 1995; Alcalá 2001; Kearney 2005). Insights gained from these initiatives suggest that acknowledgement of the historical context, including past injustices, is key to moving towards a situation of mutual respect and trust where management scenarios that meet a diversity of needs can be explored and agreed upon. Fishers are more likely to hear the scientists' views when they feel that their needs and interests have been heard and understood. Taking an integrated, participatory and human rights-based approach to MPA identification, planning and management, one which recognizes that human dimensions are as important as ecological and conservation issues, is a radical departure from current approaches to MPA management in South Africa.

Conclusion

A historical perspective on MPA identification, planning and management in South Africa reflects the continued

influence of a top-down, resource-orientated and natural science-based paradigm, that has hardly changed over the past half century, despite the wealth of literature, and a growing consensus, that advocates the need to adopt a more integrated approach to MPA design and governance. In the South African context, the failure to take cognizance of the human dimensions of MPAs is all the more striking as it is contrary to the broader intent of the country's Constitution, and its suite of environmental legislation and policy frameworks, which seek to integrate and balance the ecological, social and economic rights of its citizens.

The first, and biggest, challenge to addressing South Africa's approach to MPA planning and management is to remind fisheries managers and scientists, that recognition of basic human rights and freedoms is not a matter of choice, but a constitutional imperative. The second challenge is to convince ecologists and fisheries scientists involved in MPA planning and management, that 'social factors, not ecological or physical variables, are the primary determinants for MPA success or failure' (Pomeroy and others 2007, p. 149). Failure to understand the context, and integrate human dimensions into MPA identification, planning, and management processes, will result in undermining the conservation and fisheries management objectives. Identifying and engaging with primary resource users and other stakeholders in a potential MPA area is one of the first steps in the process. The other must be to agree on the nature of the problem, and to identify and discuss the possible management interventions to address the problem. Should an MPA be considered an appropriate management tool, a key task would be to agree on the specific objectives for the MPA. According to Agardy (1994), the identification of these objectives is primarily societal, not scientific.

South Africa has a particularly challenging task in this regard, given its oppressive and discriminating past, which effectively denied many coastal fishing communities access to traditional fishing areas and resources. Coupled with this, very high levels of poverty in many coastal areas exacerbate the pressures placed on marine resources to meet basic food security and livelihoods. Nevertheless, attempts at rectifying past injustices have been initiated elsewhere, and with its progressive and enabling policy and legal environment, South Africa is in a position to do the same. As traditional and small-scale fishers begin to organize around their exclusion from access to marine resources and begin to articulate their rights in this regard, it is likely that the state fisheries department will come under increasing pressure to shift its approach to MPAs. Political will is fundamental to a shift in approach. While the rhetoric of the new regime suggests a greater attention to social justice issues and support for marginalized communities such as the fishers of Ebenhaeser and Hangberg,

the outcome is largely dependent on the extent to which the small-scale fishers are able to challenge existing power relations, and the historical alliance between science and the body politic, within the political economy of marine resource management in South Africa.

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