

Using a Change Management Framework to Examine the Effect of a Marine Resource Policy on the Stakeholders in the Fisheries Sector, South Africa

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ABSTRACT The Marine Living Resources Act (Act No. 18 of 1998) came into effect to provide for the protection of marine living resources. This policy was essentially a form of change management, which would most impact the stakeholders involved in the fisheries system. Changes in such systems tend to be exceptionally complex due to agent heterogeneity and concomitant plurality of worldviews and schemata of stakeholders. The aim of this paper is to examine the effect of a marine resource policy on the stakeholders in the fisheries of South Africa, using a change management lens. The theoretical framework is based on change in multiple-stakeholder settings, grounded in systems thinking and complexity theory. A qualitative research approach with purposive sampling was employed. Fifteen semi-structured, in-depth interviews were conducted with individuals from the different stakeholder groups. This was supplemented by non-participant observations and analysis of archival data. The main finding points to the importance of balancing stakeholder needs when implementing new policy, as well as the need for increased collaboration between the various stakeholders.

INTRODUCTION

The Marine and Coastal Management (MCM) branch of the former Department of Environmental Affairs and Tourism (DEAT) has to ensure that marine living resources are conserved, managed and used sustainably. South African fisheries have a history of discriminatory practices originating from colonial times. The more recent apartheid era significantly shaped the industry, through the formation of a few powerful commercial fishing companies who received fishing rights. Post-apartheid government intervention through policies such as the Reconstruction and Development Programme (RDP) and Growth, Employment and Redistribution Programme (GEAR) has also influenced the industry.

The Marine Living Resources Act (MLRA) (No. 18, 1998) was introduced in 1998, with MCM placed in charge of the conservation, management and sustainable use of marine living re-

sources (DEAT 2008). The MLRA (1998: 3) aims “to provide for the conservation of the marine ecosystem, the long-term sustainable utilisation of marine living resources and the orderly access to exploitation, utilisation and protection of certain marine living resources; and for these purposes to provide for the exercise of control over marine living resources in a fair and equitable manner to the benefit of all the citizens of South Africa; and to provide for matters connected therewith”. It is evident that this definition incorporates two critical aspects: sustainability of marine resources, as well as the fair distribution of these resources to the stakeholders involved.

In relation to the stakeholders involved, the MLRA (1998) defined three distinct categories of users: commercial, recreational and subsistence. Commercial fishing involves the catching of marine resources for profit. Recreational fishing “means, any fishing done for leisure or sport and not for sale, barter, earnings or gain” (MLRA 1998: 12). A subsistence fisher according to the MLRA was defined as “a natural person who regularly catches fish for personal consumption or for the consumption of his or her dependants, including one who engages from time to time in the local sale or barter of excess catch, but does

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not include a person who engages on a substantial scale in the sale of fish on a commercial basis" (MLRA 2008: 13).

The MLRA was not welcomed by all and was instead viewed, mainly by the small-scale sector, to be perpetuating the cycle of discrimination that had characterised the fisheries in the past. The subsistence category in particular was considered problematic, as it was maintained by the small-scale sector that pure subsistence fishing, which entailed only the consumption of fish, was uncommon. Coastal fishing villages, such as those on the West Coast of the Western Cape of South Africa which are of interest in this study, often depend entirely on marine resources for their livelihoods.

The reality was that there was a continuum of fishers left out that did not fit into the subsistence category (DEAT 2008). Such fishers not only consumed their catches but also sold to earn an income; some also referred to themselves as artisanal or traditional fishers. The overlapping and alternating nature of these fishers presented a problem.

There are hence many debates about the difficulties surrounding terminology. There has been a tendency however, to use the term small-scale, as it is considered comprehensive enough to accommodate the fishers that harvest mainly for consumption, and to those that engage in small-scale commercial activities (Sunde and Pedersen 2007). Reference is however also made to artisanal or traditional fishers in this paper.

The exclusion of artisanal and small-scale fishers in the MLRA was the beginning of a lengthy battle among the many stakeholders in the fisheries. The battle for recognition was however complicated in that most of the marine resources were assigned to the commercial fisheries already (DEAT 2008). This had ensued during the medium-term and long-term rights allocation processes.

The medium-term fishing rights policy involved assigning rights for the period 2002-2005, with the idea that the long-term rights allocation policy would occur thereafter. The individual quota system was primarily used for the medium-term rights allocation (Sunde and Isaacs 2008). MCM then released the long-term fishing rights policy in 2005, which had allocations for 15-19 years. This was how the commercial sector obtained their rights, and it is largely this which resulted in great conflict between the stakeholders.

The export-driven individual transferable quota policy was however viewed by some as having been beneficial for commercial companies, yet crippling for fishing communities (Sunde 2003). A case was lodged with the Equality Court in 2007, maintaining that the constitutional and human rights of the fishers had been violated as a direct result of not having been accommodated in the MLRA.

A significant turnabout came when an Equality Court agreement was eventually reached in 2007, which stated that a new fishing subsistence policy would have to be formulated. This ruling was a major victory to some but a cause of concern for others. The biggest problem was that the MLRA had to be revised to accommodate the small-scale fishers because the definition of the subsistence category was inadequate (DEAT 2008).

MCM faced tremendous pressure over the years from the various stakeholders regarding the introduction of the policy. This situation is the focal point of this paper. This study context is especially relevant as the introduction of the MLRA was essentially a form of change management.

Charles (2001) as cited by Dankel et al. (2008: 201) highlighted that the fishery system is a complex field comprised of "the natural systems (the exploited stocks and their ecosystem), the human system (economics, fishermen and culture) and the fishery management system (research, policy and planning)". Allegretti et al. (2012: 30) called for research to "understand the social complexity and stratification of different stakeholder groups" in order to identify ways to maintain the support of stakeholders for fisheries management. As argued by Lorange et al. (2012), it is critical to focus on the complex biological, technical and management interactions that occur in the fisheries. Fisheries are impacted by the complex mix of the natural and human system (Dankel et al. 2008). Miller et al. (2010) emphasise the challenge that fisheries managers have to deal with when considering the impact of multiple stakeholders on management decisions. Dankel et al. (2008) highlighted how fisheries management is challenged by diverse and conflicting objectives, and that the participation of affected stakeholders in the fisheries is critical. The effective management of fisheries is therefore dependent on the successful participation of stakeholders to accomplish given ob-

jectives (Dedual et al. 2013). The management of fisheries is thus of paramount importance, as the “ecosystems of the earth as well as national and private economies” are impacted (Dankel et al. 2008: 230).

Goals of the Study

The study sought to: 1) determine the impact of a marine resource policy on stakeholders in the fisheries of South Africa, using a change management lens, and 2) provide recommendations in terms of policy formulation and implementation pertaining to the management of stakeholders in the fisheries in South Africa.

Theory

Change as brought about by the introduction of a policy within a multi-stakeholder setting such as the fisheries tends to be complex due to the human component. The application of a systems thinking and complexity theory lens to such complex change is illuminating. Systems thinking focuses on the interrelationships between the various parts of a system, and acknowledges a plurality of legitimate perspectives on a problem (Chapman 2005). Unintended consequences can arise when changes to one part affect other parts, often in unpredictable ways. This can arise from policy being implemented in one area, without considering how other aspects of the system will be impacted.

The complexity perspective essentially perceives change as created from the interaction of various interconnected causes and effects (Styhre 2002). Change is non-linear, and the actions and interactions of the various stakeholders are significant. It is thus interesting to note how change emerges from stakeholder interactions in natural resource management settings. Furthermore, small perturbations can produce significantly divergent outcomes which cannot entirely be controlled or planned (Beeson and Davis 2000). Conventional planning is inappropriate for dealing with change in complex systems.

Engaging in and developing the stakeholders’ ability to ‘manage’ and live with the change is important and it becomes critical that those affected, as well as those who effect change, jointly navigate through their divergent percep-

tions and understandings. The following section briefly elaborates on dimensions of change management that are important in light of policy formulation and implementation.

Resistance to Change

Resistance to change can occur at the personal level, deriving from anxiety about the unknown, whether individual skills and contributions will matter, and if the individual will function effectively and gain under the new circumstances (Cummings and Worley 2001).

It is also necessary to consider cynicism and scepticism in resistance to organisational change (Stanley et al. 2005). Cynicism is the disbelief in the motives of others, such as management or those connected to change efforts. Scepticism related to change involves hesitancy about the likelihood of the change achieving what it set out to do. The viability of a change effort can be influenced by cynicism concerning management’s motives, hence relating to the development of resistance to the change.

Resistance to change can be addressed by those in charge earnestly listening to those who are affected and showing that they care about their feelings, and through participation of members to give them a chance to come up with ideas, which can also assist in identifying potential problems in implementation (Cummings and Worley 2001).

Stakeholder Involvement

An important step towards ensuring success is to identify and ensure the assistance of the stakeholders involved (Hayes 2002) and guarantee their involvement from the pre-implementation stage (Van Tonder 2004). It may thus be futile if contact with stakeholders is only made once critical decisions have been made.

Kirkpatrick (2001) argues that participation is one of the key reasons affecting whether people will embrace or resist a change. A programme that encourages the participation of individuals produces interest and ownership which is then bound to affect levels of motivation and understanding (Harvey and Brown 2001).

There are however differences in how meaningful participation efforts can be. Senge (1994) distinguishes between participative openness where people are encouraged to get involved in

decision-making and express themselves, and a more meaningful reflective openness. This allows for thinking to be challenged and incorporates aspects of reflection and inquiry, to question the thoughts behind the speech. Senge (1994) argues for a situation to embody both by having a safe environment to speak freely, while having the platform to challenge the thoughts of the individual and others.

Wedge (2006) makes reference to the importance of exploration whereby various persons not only become involved in the change idea, but can also express their feelings. Participation therefore goes beyond inviting people to listen to the ideas that were drawn up by others.

Communication

The assumption behind most communication efforts about a change is that people will accept proposed changes, once they are fully aware of what it will entail.

Harvey and Brown (2001) state that an effective communication programme may assist in lessening the accompanying anxiety and uncertainty coupled with change but nevertheless that criticism is inevitable, despite the effectiveness of the communication (Callan et al. 2004).

Carnall (2003) however argues that simply having effective communication efforts is insufficient, unless people can have a chance to pursue solutions to problems. The importance of communication, involvement and empowerment is understood, but the only way to succeed is by engaging with the cognitive challenges. Occasions for communication about problems and immediate feedback opportunities need to be set up (Tucker et al. 2002).

Emotions

An important element often neglected in the change process is that of change initiatives that often overlook the critical 'human element' (Hamlin et al. 2001). Van Tonder (2004) also supports this view in his argument that the emotions of people should be taken into account.

The danger of over-emphasising communication efforts is also highlighted. People often get authoritarian management during periods of change, rather than empathy, information, ideas, milestones and feedback (Carnall 2003). Overlooking the emotional content and relying on

the diffusion of information can cause change efforts to fail (Van Tonder 2004). Changes do not only affect performance in that new systems, processes and structures have to be learnt but also influence the self-esteem levels of those involved (Carnall 2003).

Changing Mind-sets

Change efforts are undertaken many times, without acknowledging the powerful role of the thoughts and assumptions of all stakeholders. This could however be a challenging task, which may not materialise due to practical considerations around access to stakeholders, their willingness to be involved, and the time required to engage in such an endeavour. Change will only occur provided there is a transformation in the joint assumptions and beliefs held concerning how things occur and the ways in which people respond (Balogun 2006). The emphasis must thus not only be on changing processes of that which is tangible.

Wedge (2006) contends that existing assumptions and obstacles can be challenged by contributions from various people. The work of Oshry (1995) is useful in understanding how individuals are often oblivious to the experiences, issues, and dilemmas of others in a system, and that we often consider our own beliefs, myths and prejudices to be the truth. Mention is made of spatial and temporal blindness, respectively referring to viewing the part without the whole, and viewing the present without seeing the past.

Shared Vision

The concept of shared vision is only possible utilising a systems perspective, by enabling people to learn how policies and actions affect their present reality and in doing so are they able to believe they can alter their future (Senge 1994). There is thus the notion of holism and an understanding of how actions in one area, can affect others.

Furthermore, change is about working towards a shared understanding of the intricacy of the various issues and consideration of the alternatives, and not about outlined plans and forecasts (Bamford and Forrester 2003). People may through their sense-making processes alter management plans, despite structures or systems designed to ensure conformity (Balogun

2006). Opportunities for dialogue with the purpose of collectively analysing different interpretations and working towards a shared vision of goals and ways of achieving these should be created.

METHODOLOGY

An exploratory research design, within a qualitative research approach was employed. Qualitative research focuses on understanding numerous, complex, socially constructed realities, especially through comprehending how different individuals in a particular social setting construct their world (Denzin and Lincoln 1998; Glesne and Peshkin 1992).

Ethnographic methods, including interviewing and observational techniques were used, which ensured triangulation. Key informants were selected using purposive sampling. A semi-structured interview guide was considered appropriate. Interviewees were asked to provide: 1) an overview of the problems in the fisheries system in the Western Cape, 2) what caused the problems, 3) who were the stakeholders or those affected, 4) what were the clashes about or the main issues that arose, 5) what interventions were used to try to resolve the issues, and where was the process currently, 5) what was learnt from the process or if things could be done differently, how would this occur, 6) what could be done to move the process forward.

Field work was conducted from July-August 2009 in the Western Cape province of South Africa. Fifteen, face-to-face interviews were conducted. The interviewees comprised four females and eleven males. Details regarding the interviews are presented in Table 1.

Table 1: Details of interviews

<i>Stakeholder group / role / position</i>	<i>Interview location</i>	<i>Number of persons interviewed</i>
Fishing community leaders	Lamberts Bay	5
NGO	Cape Town	2
MCM	Cape Town	6
Recreational sector	Cape Town	1
Commercial sector	Cape Town	1

The interviews were digitally recorded and transcribed. Data analysis was based on thematic clustering (Attride-Stirling 2001). Notes

from the observations were also utilised in validating the themes.

RESULTS

One-Size-Fits-All Policy

The quota system resulting from the MLRA was regarded by some to be the root cause of the problems between the various stakeholders. There were perceptions that it was merely a continuation of the former system. It was believed that it was structured for the commercial sector that were being favoured and that it did not actually bring about true transformation. The main critique was that it was a one-size-fits-all solution. There was an understanding that government had good intentions but had struggled to put these intentions into practice. The small-scale sector argued that the quota system may not have been such a bad thing but that it was more applicable to the commercial sector. Certain comments reveal that government should not only have been more sensitive to the values of the communities when introducing the policy, but should also have prepared people for what was coming. The small-scale, recreational and commercial sectors felt that the real problem was that there was not enough communication and participation with stakeholders concerning the policy.

Questioning the Value of the Recreational Sector

There was some frustration that recreational fishers had easy access, despite the fact that they were not dependant on the resources, particularly as they could obtain permits from post offices throughout the year. It was felt that government was siding with them. Anxiety over people who obtained recreational permits and then used them illegally came to the fore. Recreational fishers voiced concern for the manner in which they were being treated. A contentious point was the suggestion that recreational fishers could engage in other activities, because they were not reliant on fishing. This caused distress as it was argued that fishing was a way of life for recreational fishers, just as it was for small-scale fishers. It was highlighted that the recreational sector did not present a threat as it was general-

ly low effort. There was debate by the small-scale sector around whether recreational fishing made a valuable contribution to the coastal fishing towns, and doubt was expressed as to who precisely benefited from tourism.

Demanding ‘Social Responsibility’ from the Commercial Sector

There were accusations that the commercial sector was contributing to the decline of the marine resources, given the fact that their catches were not limited. By-catches and destructive fishing methods by the commercial sector were perceived as problematic. Others countered that there was little evidence that the commercial sector was engaging in destructive fishing practices.

The commercial sector also came under fire for having been originally assigned rights on the basis that they were providing jobs to communities. The contention was that the sector maintained their rights, despite a loss of jobs by fishers. Particularly concerning was the fact that factories had shut down and businesses moved from the West Coast for financial reasons to more central areas in Cape Town. It was argued that the commercial companies should have taken more responsibility, and that government should have intervened in creating jobs in the fishing communities, rather than relying on the commercial companies. The small-scale sector and NGOs noted the temporary nature of the fishing business, resulting in workers receiving no benefits or being easily retrenched. Furthermore, fishers had nothing to do once the fishing season was closed.

Achieving a Balance Between Stakeholder Demands

There was an understanding that fisheries had to be managed sustainably for the future; hence, necessitating the policy. It was however argued that government had failed to balance environmental rights with human rights, and that fisheries management was too conservative and only concerned about the resources. As a consequence, there was a tendency for stakeholders to blame one another.

An area of significance was to balance the plurality of needs of the diverse stakeholders and MCM’s response to the various demands, including its need to consider input from government. It was mentioned that MCM was quick

to give in to political pressure and that political matters overshadowed scientific recommendations. There was a concern that an over-emphasis on satisfying stakeholders would lead to the detriment of the marine resources. Many feared a situation where one problem would be solved, but with the result that a multitude of others would be created.

The question was asked whether the policy was about the management of the *what* (marine resources) or the *who* (stakeholders). While it was argued that all South Africans deserved equal access to the resources, some felt that this meant that MCM was taking away resources from some in order to give to others.

Stakeholder perspectives in this study make it possible to identify three critical questions that dictate the perceptions of stakeholders concerning the management of natural resources:

- ♦ How is the stakeholder group that I represent being treated by other stakeholders and the authorising institution?
- ♦ How are other stakeholders being treated by the authorising institution?
- ♦ Do other stakeholders truly need the resource, and how do they use or misuse the resource?

Frustration at Government Bureaucracy

Issues of authority and decision-making came to the fore with respondents arguing that everything began and ended with government. Complaints were directed at junior staff who lacked authority and who could only convey information without taking decisions. The opposite situation prevailed when someone made a decision without the consultation of others. A concern was expressed that MCM was not fully utilising local offices in the coastal towns effectively. Government protocol and delays were also noted as obstacles. Examples include turnover of government staff, or making progress with one government official, who suddenly leaves office and having to start over with another official.

Disputes About the Value of Indigenous Knowledge

Strong views were expressed about the value of indigenous knowledge. It was noted that scientists undertook research and made recommendations to formulate the policy without consideration of the indigenous knowledge of

communities. Scientists however countered this by arguing that not everyone understood numbers and mathematical modelling, and that communities often had a simplistic way of understanding the status of resources. It was however suggested that the articulated need for recognition of indigenous knowledge may have risen due to the desire to be included in decision-making. There was a sense though that progress was being made on this issue.

The Emergence of Socio-economic Issues in Fishing Communities

Lack of access to the sea as a result of the dispute concerning the definitions in the MLRA was a sore point for small-scale fishers who argued that they were unable to earn income as they were locked out of the sea; hence, resulting in feelings of non-recognition and powerlessness.

Lack of Abilities to Adapt to New Demands Arising From the Policy

One of the most pressing challenges, which practically all respondents mentioned, was the lack of abilities amongst the fishers and fishing communities. This was mainly due to the fact that most fishers left school at an early age to fish. The real issue according to many came in when the new policy required them to possess a new skills set, particularly relating to conducting business in order to obtain fishing rights. This was a major transformation for many, who for years were simply used to going to sea and returning home after a long day.

Difficulties arose for many who could not complete the required forms to obtain fishing rights. Other challenges related to application for credit to purchase necessary equipment, as a result of not possessing the required abilities. The transformation required fishers to be businesspeople and not only fishers, and many for this reason thus argued that there was complete disregard for the fact that small-scale fishers did not operate like the commercial sector.

Mention was made of the pattern of dependency that fishers had on others. A contentious issue surrounded the requirements imposed on fishers, which some claim resulted in their exploitation by various unscrupulous people. It was argued that government should have done

more to assist the fishers in being prepared for the implications of the policy, especially since they lacked previous experience. As a result of not having the necessary skills, many fishers believed whatever they were told and entered into dubious contracts with marketers and other middlemen. Some boat owners also took advantage of the situation.

Broken Families and Communities

The small-scale sector respondents spoke about how fishers were unable to put food on the table, and their frustration at not being able to care of their families, as a result of the policy. They argued that it was about human dignity. The lack of income led to many parents taking their children out of schools as they could not afford the school fees. Communities were also overcome by drug and alcohol abuse, HIV/AIDS and prostitution. Others were however in disagreement about the origin of the social problems, and also wondered whether access to the sea was a solution to these problems. Some respondents expressed concern about how money received by small-scale fishers from selling fish was being spent and argued that more should have been done to assist communities in this regard.

Lost Traditions and a Forgotten Culture

The small-scale sector respondents expressed sadness about how their traditions and culture were affected by the policy. Many male respondents spoke about their experiences of growing up in a fishing community and being taught to fish, whereas female respondents shared how they contributed to the household by assisting their fathers, who were fishers. A strong sense of nostalgia came through and the desire for the good old days to come back. There was however doubt whether the past could ever be restored.

Loss to all Stakeholders due to Poaching of Scarce Marine Resources

Practically all respondents highlighted poaching as a serious threat to marine resources, but there were different views as to its origins. It was argued that fishers who did not receive rights as a result of the policy turned to poaching as a means of accessing the sea, de-

spite the risks involved. Others expressed doubts about this claim that people poached to get money for food, and instead proposed that greed was a contributing factor. The continuous illegal use of recreational permits to catch and sell fish was highlighted. A link between poaching and other problems such as drug and alcohol abuse, and gangsterism was also emphasised. Regardless of the origin, all respondents seemed to be in agreement about the increasing sophistication of poaching and consequent threats to the marine resources.

Respondents pleaded for proper enforcement and monitoring of marine resources in order to protect the marine resources. It was argued that existing laws and capabilities for punishing poachers were insufficient, as many simply continued because they did not fear the law. The capacity of MCM was questioned, with respondents wondering whether there was enough staff to deal with the poaching problems along the whole 3000km coastline of South Africa. The work-hours of monitors were also seen to be insufficient to deal with the poachers. Enforcement agencies countered that existing efforts were not being appreciated. MCM pointed to the difficulties of enforcement, including the negative feelings that some communities have toward monitors. The immediate need for harsher laws and adherence was an urgent requirement mentioned by all.

Other Issues Related to the Policy

Resource allocations were a major issue, with some respondents complaining that the allocations as emanating from the MRLA policy were insufficient. There was frustration by some scientists that people failed to understand the technical issue of sustainability, and that species were being over-caught. Other stakeholders however indicated that there was indeed a genuine interest in sustainability, but that it was not sufficiently noticed by others. Community expansion and job loss were raised by most respondents as a serious threat to the marine resources. Despite this being acknowledged, many noted that there were hardly any other job opportunities in the coastal towns, thus forcing desperate people to turn to fishing.

The high value of the West Coast Rock Lobster (WCRL) was a unique factor seen to be cre-

ating problems in the Western Cape, as it was in demand by the commercial, recreational and small-scale sector. Another issue was that of the export-oriented market and value chain of the WCRL, particularly the difference between the initial price paid to a fisher and the end-price. The small-scale sector in particular, depended on the WCRL for income.

The impact of environmental factors and climate change on marine resources was raised by some as a concern to the fisheries. There was also anxiety that Marine Protected Areas (MPAs) would become the next hotly contested issue, because of the perception that this measure while claiming to be shielding the marine areas could be used to punish both the commercial and small-scale sectors.

DISCUSSION

The context of this enquiry assumed the possibility of an authorising institution enabled with powers to manage a natural resource by way of the policy, and to decide on the distribution thereof to the many stakeholders in the system. However, attempting to impose control from the top in a complex system was challenging (Ashmos et al. 2000). Dankel et al. (2008) found that stakeholders can be excluded when there is a traditional, top-down authoritarian system in fisheries management. Miller et al. (2010: 431) argued that “until stakeholders are actively involved in crafting the policy options themselves, we believe the success of these efforts will be limited”.

Problem-solving by MCM was less than optimal in the absence of full stakeholder involvement. The policy was consequently viewed by some stakeholders as a quick-fix and one-size-fits-all solution, which was unsustainable as it did not take their unique situations into consideration. Lorance et al. (2012) in their research also found that a one-size-fits-all approach was not satisfactory, and that a single management tool would not suffice. Others felt that the system was only appropriate for the commercial sector. The new policy was perceived to be a mere continuation of the former, thereby implying a lack of transformation. This relates to the scepticism and cynicism in change (Stanley et al. 2005). Some in the fisheries context were sceptical about the likelihood of the change (MLRA) achieving the objectives. A study by Allegretti

et al. (2012) indicated the importance of gaining stakeholder support when formulating fisheries policies. The success or failure of fisheries management is influenced by trust and transparency between stakeholders (Dankel et al. 2008). There was a perception that the MLRA and consequently MCM had failed in transforming the industry. The dissatisfaction of stakeholders with fisheries management may however indicate concern with implementation, rather than the conceptual level as such, as found by Lorange et al. (2012).

The area of balancing stakeholder needs, not only when introducing new policy was found to be critical. Underlying this was the prerequisite of identifying and involving all stakeholders from the pre-implementation stage and taking their emotions into account. Miller et al. (2010) emphasised how stakeholders in advisory panels may feel that their involvement is more superficial or that they only participated after the development phase with options which were devised by the managers. The research of Heck et al. (2012) furthermore found that stakeholder involvement was critical, not only during planning stages, but also evaluation. Furthermore, clearly defined objectives with input from stakeholders at the beginning of the management plan, as found by Dankel et al. (2008) is important.

Fulton et al. (2014) highlighted the importance of involving relevant stakeholders in fisheries, such as those from industry, conservation, community, managers and scientists, to achieve system level management. The process of change was not easy from the beginning, and was, as Hamlin et al. (2001) describe, difficult and costly, physically and emotionally, for all involved. When there is conflict between stakeholders, time will be required to work through the contrasting opinions and divergent backgrounds (Miller et al. 2010).

A variety of events and actions by the different stakeholders over the years in response to the policy, including the use of court proceedings have affected the fisheries system. The notion of a smooth change process was not possible, mainly due to the reality that a static environment did not exist. The results illustrated the need to expect the unexpected in the spirit of continuous learning in complex systems (Callan et al. 2004).

The unintended consequences that arose from the policy are particularly pertinent. One of

the main problems was the lack of abilities and skills among the fishers and fishing communities to adapt to the demands of the policy, which resulted in them being unable to access credit, highlighting the lack of required skills and capabilities to cope with new changes or a new system (Tucker et al. 2002). This was mostly the case with the fishers and fishing communities, but was also found with MCM, in for example, not being able to deal with the many problems, and thus necessitating collaboration between government departments. Dedual et al. (2013) found that a lack of awareness of local communities and their fishing pursuits by scientists presented a challenge to effective communication. There was resistance to change at a personal level mainly due to anxiety of the unknown, as well as beliefs that existing skills and contributions were inadequate, and that there were feelings of insecurity, powerlessness, insufficient knowledge and involvement. The necessity of having officials possess change management skills was also demonstrated.

There was resentment that the policy had required the fishers to be businessmen and that they could thus not access the sea, and that people, such as lawyers or teachers, who had the necessary skills, instead qualified, simply because they were able to complete the application forms. The education and training of fishers is critical, as highlighted in the research of Hauck (2008) and Petersen (2007). Initial assumptions, decisions or seemingly minor inputs in relation to the policy resulted in significant outcomes, which could not be anticipated. This was illustrated in the form of the many socio-economic concerns and poaching problems in the fishing communities. This emphasises the importance of changing mindsets and determining whether people are prepared for the change, and not only putting processes in place.

The fact that the respondents tended to highlight their differences and point out faults, may indicate a lack of understanding that they were all part of the whole. The multiple interests and values of stakeholders can present a challenge, as noted by Dedual et al. (2013). There also appears to be some neglect in taking accountability for their contribution towards the problems. Utilising systems thinking, one can see how inter-related the parts are and how actions and changes in one part of the system, have effects elsewhere. Miller et al. (2010) in their research

used an approach whereby all stakeholders in the fisheries, were able to be meaningfully involved, and in so doing, gain awareness of other stakeholders and their concerns, as well as identify actions which they could take to enable the sustainability of the stock. The fact that fishers lacked the necessary training and skills, and hence were exploited, was something that did not only affect them, but everyone in the system. The phenomenon of poaching in particular, illustrates the interconnectedness of the system. Even though the poaching occurred and still mainly does in the fishing communities, it nonetheless has serious repercussions for the whole system.

Wilson (2006) points to the need for human activity in the world's oceans to be handled differently, in line with the acknowledgement of the ocean fisheries as complex adaptive systems. Fulton et al. (2014) emphasise the multiple objectives in fisheries, such as economic, biological and social objectives, which need to be examined in order to achieve successful ecosystem based management.

The 'Tragedy of the Commons' archetype, as described by Braun (2000) is relevant to understanding the desire by some respondents to have had other stakeholders understand the concept of sustainability, and grasp the finiteness of the marine resources. The commons is any resource that is available to all; in this study context it refers to the marine resources. As various people place increased demands on the commons to achieve their goals, without realising the limits, the commons increasingly comes under pressure, and can eventually become overloaded and depleted. This can eventually lead to a total collapse. Miller et al. (2010) thus highlights that stakeholders will take ownership of the future of the fisheries, if they are given responsibility and become actively involved.

It is interesting to note how difficult it is to undo the consequences of actions taken and changes that are introduced, as noted by the advancement of poaching. Even the introduction of the interim relief policy could not eradicate the poaching problem. The stipulation to change the MLRA policy was thus an example of the outcome of the interplay between all the sectors.

Although there was communication and involvement of some stakeholders about the im-

plementation of the policy, it was primarily a vision of MCM that was communicated to the wider stakeholders. It is a case of communication efforts to inform people about the impending changes (Harrington, 2006) as distinct from reflective openness where people are involved in decision-making but also engage in reflection, inquiry and critical questioning. Miller et al. (2010) indicated the outcomes that could occur if stakeholders in the fisheries were merely presented with options, as opposed to being involved in the development and evaluation thereof. Dedual et al. (2013) found that obstacles to effective communication could stem from language barriers and inadequate scientific knowledge of certain stakeholders.

Issues of communication and participation were found to be undeniably critical in introducing the policy. Various means of communication, including the use of websites, is important in keeping stakeholders involved (Dankel et al. 2008). Continuous consultation with diverse stakeholders is critical in driving and defining fisheries management strategies (Fulton et al., 2014).

The debates around the recognition of indigenous knowledge illustrate the desire by people to be included in decision-making. Miller et al. (2010) noted how stakeholders often feel that their understanding of the species, distribution or nature gets neglected, and that the assessment science and models is unclear or inflexible. Local knowledge can provide useful insights to scientists (Dedual et al. 2013). Certain stakeholders also fear that scientific input could lead to limited fishing opportunities, as highlighted by Dedual et al. (2013). Scientists should not be viewed as having all the solutions, but should rather engage the local knowledge of stakeholders (Miller et al. 2010). It is however important to realise that scientists may have difficulty in finding time for stakeholder engagements (Miller et al. 2010). It is important for scientists to possess technical and people skills, as noted by Dedual et al. (2013).

It was also interesting to note how the system as a whole shaped events, to a point where all stakeholders are now meeting together to discuss the formulation of policy. Therefore, despite the initial events, the system somehow moved to a point where the option of excluding any one stakeholder group is simply not an option. Most stakeholders furthermore have

seemed to comprehend the futility and consequent negative reactions that could occur, if any particular stakeholder group is ignored. The work of Miller et al. (2010) emphasised how critical it is for stakeholders in the fisheries to understand each other's viewpoints and be involved throughout the process. Miller et al. (2010) in their research ensured that the right stakeholders were identified and involved from the beginning in stakeholder forums, and that participants displayed willingness to listen to the opinions of others. This approach that Miller et al. (2010) refer to, was essentially stakeholder-centered, and incorporated stakeholders, scientists and a facilitation team. Heck et al. (2012) indicated the importance of avoiding future conflict by ensuring engagement between stakeholders and management to reach consensus on a vision for a MPA.

CONCLUSION

This paper, using a change management framework, examined the effect of a marine resource policy on the stakeholders involved. This research has illustrated the powerful role that multiple stakeholders play in fisheries policy, particularly when change processes are involved. It becomes increasingly important to handle change effectively, particularly considering the many demands on South Africa's vulnerable marine resources. Furthermore, a systemic understanding is critical into how the various components of each stakeholder group affect the system. This study has demonstrated that with policy formulation, power does not necessarily belong to the hand that holds the pen, but that it could rather rest with the multiple readers who browse the pages; each with their associated paradigms, perceptions, and interpretations.

RECOMMENDATIONS

The following recommendations are made:

- ♦ This study highlights that there needs to be more effective collaboration between the various stakeholders in the fisheries system when formulating policy. This will not be an easy task, due to past experiences, but people must be afforded an opportunity to express their opinions constructively.

The acknowledgement of the underlying thinking and perceptions of all is critical.

- ♦ Even though MCM has final decision-making power by way of the policy, it is recommended that different stakeholder views are taken into account. Even complicated decisions regarding sustainability and how research assessments are determined, may require more interaction between the stakeholders, in order to be fully comprehended and accepted. It should not take a crisis to bring the stakeholders together. When plans are put into place, for example, if a policy for the subsistence fishery is resolved, then people should not become complacent.
- ♦ The fishing industry as a whole should become more adaptable and realise how actions that are taken in a certain sector, affect other parts. This is illustrated in the poaching crisis, which is of consequence in other parts of the country too. The only way to overcome this problem, and others, is to have better co-operation between the various stakeholders, as well as other government departments.
- ♦ The inclusion of practically all government departments including, Education, Social Development, Trade and Industry, SA Police Service, Justice and Constitutional Development and Public Works, is critical for the well-being of the fisheries system. This is an area that needs to be highlighted in policies.
- ♦ MCM and government undertakings in general, will need to be carefully considered in policy documents, as these factors clearly have an influence on the fisheries systems. Critical areas such as leadership, staff changes, protocol, accessibility, and fair treatment of all, appear to play an important role in policy implementation.
- ♦ The effect of the policy on fishing communities has demonstrated the need for them to be equipped with basic skills to improve their business knowledge and abilities. Such investments will assist them in their business undertakings, making them more alert to implications of deals which they become involved in, and will certainly benefit the system as a whole. More investment is required in the coastal fishing towns, in terms of education from a young

age, investment in the youth, and job creation as a whole. This will not only place less pressure on the vulnerable marine resources, but will also be beneficial for the coastal communities.

- ♦ The small-scale, recreational and commercial sectors will in particular need to become more involved on a continuous basis to find solutions to problems which necessitate revisiting policy. All stakeholders will need to become more accountable and aware of how their actions impact the entire system. There must be an understanding into how the various factors, many of which primarily derive from the small-scale, recreational and commercial sectors, negatively affect the marine resources. Natural resource management as a whole will need to thus increasingly consider the complex interplay of political and socio-economic factors.

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