

[ACST.2018.1] SUBSISTENCE FISHING AS A RESPONSE TO THE MANAGEMENT OF LIVING MARINE RESOURCES ON PUBLIC SPACES IN DURBAN, SOUTH AFRICA

*Nokuthula P. Cele, University of KwaZulu-Natal, Howard College, Durban, South Africa.

**Joram Ndlovu, university of KwaZulu-Natal, Howard College, Durban, South Africa.

E-mail: Ndlovuj1@ukzn.ac.za : Telephone: +27312607503

***Preston Chetty, eThekweni Municipality, Durban and Solid Waste, South Africa,

1.1 ABSTRACT

This paper sought to analyze the role of subsistence fishing in effective natural resource management. Subsistence fishers are a group of people who harvest marine resources for food at their homes and also sell some of the harvest to secure food and other basic necessity. The focus was to understand the fishers' needs, perceptions and concerns regarding fishing as a live-hood option. To achieve effective marine resource management, the KZN subsistence fishing forum was established by the South Durban Community Environmental Alliance (SDCEA). The aim was to investigate the extent to which subsistence fishermen use environmental advocacy and environmental education in realising food security. The introduction of SDCEA was motivated by the challenges faced by fishermen particularly when fishing became prohibited in the harbor. As a result, the SDCEA membership has grown from strength to strength. Since then, the forum has registered 12 000 members across the KZN province. Using in-depth key informant interviews, twenty fishermen were interviewed. The results show that since its inception, the SDCEA forum has played a pivotal role in educating its members on sustainable natural resource management by introducing a mentorship course whereby different environmental and social stakeholders hold classes with the fishermen on marine wildlife, environmental procedures in a coastal environment, littering, water safety and law enforcement. As a result, the forum has gained back three popular fishing spots that were initially taken away from them by the harbor authority. However, a number of challenges were noted, such as the failure to understand subsistence fishing as a livelihood option due to protectionist management practices; and the failure to recognize fishermen as stakeholders in marine resource use. The paper concludes that, in order to achieve future marine resources management strategies, there is need to embrace the needs, perceptions and concerns of fishermen in Durban.

Keywords: stakeholders, management, waste, fishing, policy.

1.2 INTRODUCTION

The new political dispensation in South Africa in the 1990s presented new socio-economic opportunities for subsistence fishers who were previously marginalised and excluded from the benefits associated with the harvesting of marine resources. Since the 1990s, a series of Acts/policies were promulgated. The contents of such policy frameworks suggest that subsistence fishers would receive various forms of support from the Department of Agriculture, Forestry and Fisheries (DAFFs), including incorporating them into the broader marine resource management system, value chain and the general economic benefits associated with marine resources. Studies were conducted among subsistence fishers in Durban (KwaZulu-Natal [KZN] in South Africa), who are part of the subsistence fishing forum that was established by the South Durban Community Environmental Alliance (SDCEA). The aim of SDCEA was to investigate the extent to which subsistence fishermen use environmental advocacy and environmental education in realising food security. The introduction of SDCEA was motivated by the challenges faced by fishermen, particularly when fishing became prohibited in the harbour. As a result, the SDCEA membership has grown from strength to strength. Since then, the forum has registered over 12 000 members across the KZN province. Research findings among subsistence fishers in Durban, however, suggest that the vision of the new fishing policies has been hampered by a number of challenges and the failure to respond to the needs and interests of the small-scale/subsistence fishing sector. DAFFs' vision to deliver fishing benefits, in line with the subsistence fishing sector interests, has been hindered by poor stakeholder relations, policy restrictions against the small fishing sector, perceived abuse and corruption, and the absence of community based management systems. These challenges have created by new fishing policies for subsistence fishers as a socio-economic group have created the perception that such policies have exacerbated rather than improved, their economic status as a group that relies on fishing to feed their families. In the final analysis, while the subsistence fishing policy objectives are plausible, their failure to meet the needs of the small-scale fishing sector has rendered these policies a futile exercise, hence a need for policy reconsideration.

1.3 THEORETICAL FRAMEWORK

The study applies the stakeholder concept as a framework to explore the synergy between the government's recognition of subsistence fishers as one of the primary stakeholders in the growth, support and management of marine fisheries sector, as spelt out in the objectives of the 2012 small-scale fishery policy, and the experiences of the subsistence fishing groups in Durban. Stakeholders can affect, or be affected by the policies, purposes, operations or achievements of an institution (Hogue et al, 2016). This study recognises subsistence fishers in Durban as stakeholders who are closely associated with marine resources, and hence affected by the government resolutions to safeguard the marine ecosystems. The South African Constitution in 1996, the Living Marine Resources Act of 1998 and the small-scale fisheries policy of 2012 are among the major policy documents that recognise subsistence fisheries as a well-defined sector alongside other fishing activities. As stakeholders, small-scale fisheries' rights,

concerns, costs and benefits must be recognised within the general fisheries management. Hence, collaboration, shared goals and values between various stakeholders involved in fisheries and other marine resources should be a viable option to achieve mutual understanding, collective decision making and co-management of marine resources (Waligo, Clarke and Hawkins, 2013).

1.4 PURPOSE AND OBJECTIVES OF THE STUDY

The small-scale fisheries policy focussed on subsistence fishing as a response to food insecurity, poverty and unemployment in poor communities that live on varied sources of income to meet their basic needs (DAFFs, 2012). The policy emphasized the need to support subsistence fishers to become part of value chain through the Draft Agriculture, Forestry and Fisheries Integrated Growth and Development Plan (IGDP), and to align the sector with others, including the Department of Trade and Industry's mandate (Sector Integrated Growth and Development Plan, 2011-2031). The main purpose of the study was to discuss how equity in terms of economic growth and competitiveness, with government support, could be achieved, and how this would enable the small-scale fishing sector not only to improve their incomes, but also to use natural resources sustainably. The objective was to assess the extent to which the Integrated Fisheries Development Plan (IFDP) could boost local economic development initiatives through skills transfer and job creation. Furthermore, the study sought to analyse the roles of different players, including tourism and the small-scale fisheries, in reaping maximum benefits and financial advantage from the national marine resources. Finally, the study would examine the level of support provided to small-scale fishers, their participation in the value chain and the available livelihood opportunities such as job creation. The study sought to comprehend the impact of the provision of enabling environment by the government, as a facilitator, to make the small -scale fisheries sector viable within a larger transformed fisheries management regime in the country (DAFFs, 2012).

1.5 RESEARCH METHODOLOGY

The study applied qualitative methods of data collection in which in-depth interviews were conducted with the members of the subsistence fishing community in Durban. A purposive and participant observation techniques were used to derive a detailed understanding of the experiences of the fishing folk community as stakeholders who depend on harvesting fish from the sea for a living. The focus group comprised of 20 participants from Durban surrounding townships such as Chatsworth, Phoenix, Inanda and Wentworth. These participants were all subsistence fishers who were directly affected by all the fishing policies in South Africa before and after 1994. Through snowballing sampling, in-depth interviews were conducted in Austerville and Wentworth, where these fishermen meet regularly for their weekly meetings. Conclusions in this article are drawn from an analysis of the interviews with them. This article does not reflect a complete picture of the experiences of all subsistence fishers in South Africa, but an analysis of research findings from the Durban subsistence fishing community.

1.6 STATEMENT OF THE PROBLEM

The fishing industry in South Africa forms the major component of marine life and accrues Billions of Rands per year, which contributes to the country's Gross Domestic Product (GDP). Fisheries and related sectors also provide employment opportunities to the impoverished coastal rural communities, hence the need to ensure sustainable use crucial to the survival of marine species and ecosystems (DEAT 1994-2009; Cicin-Sain and Belfiore, 2005). Fisheries in South Africa comprise different segments, of interest to this study is subsistence fishing. Archaeological evidence shows that, over one hundred thousand years ago, human populations harvested marine fish resources as part of hunter-gatherer economy, using basic fishing technology within the intertidal and inshore zones (Sittert, 2017). Studies by World Bank and United Nations Food and Agricultural Organization (FOA) confirm that local communities in developing regions, more so in coastal regions of Africa, are more dependent on fish as part of their diet (Huggins, 2011; Darkey and Turatsinze, 2014). Hence, in the 1980s, FAO embarked on a program of action aimed at promoting fisheries against hunger in poor and developing regions. In 1996, about 30 million people worldwide derived their income from fisheries and, in 2006, that number had increased to 43.5 million people (Charles and Wilson, 2009). Subsistence fishing has been prevalent on the South African coast for thousands of years, providing sustenance for coastal communities (Clark et al, 2002). Hence, in the 1980s there were over 300 subsistence fishers' license holders in the north of Richards Bay (northeast of KZN) and over 200 collectors in Kosi Bay.¹ The latter harvested fish inside the Maputaland Marine Reserve (within IsiMangaliso Westland Park, northeast of KZN), which was then managed by the KwaZulu Department of Nature Conservation (KDNC). In the former Transkei (now Eastern Cape Province) estuaries, most subsistence fishers practiced line fishing (Tomalin et al, 1998). Therefore, although fish eating habits in Africa differ, the Water Research Commission (WRC) observed in 2015 that subsistence fishing improves livelihoods for many communities (Sunde and Isaacs, 2008; Creamer Media Reporter, 2 June 2015). Before the 1990s in South Africa, the subsistence fishing sector did not have a legal definition or rights to harvest marine resources, and were being regarded as recreational fishers who harvested controlled amounts of resources for personal use (Branch et al, 2002). The challenge is to develop sustainable marine resources management strategies that embrace the needs, perceptions and concerns of fishermen in Durban, hence the relevance of this study.

1.7 LITERATURE OVERVIEW

Political changes in South Africa in 1994 raised hopes of widened access to fisheries. The Fisheries Policy Development Committee guided the formulation of a policy, resulting in the Marine Living Resources Act (MLRA) of 1998. As studies by Sittert (2017) show, the pre-1994 government recognised and supported large-scale export oriented commercial fisheries. The 1998 MLRA recognised subsistence fishers' needs to 'harvest adequate amounts, set aside areas for their exclusive use if this was deemed necessary, and protect the long term sustainability of the resources' (Branch et al, 2002).

¹ Kosi Bay is an estuary near the Mozambique border in the north coast of KwaZulu-Natal.

Subsistence fishers officially became a clear category of fishing whose interests and widened access to marine resources would be protected and promoted within sustainable limits (Cockcroft et al, 2002).

Within the same year, 1998, the Subsistence Fisheries Task Team Group (SFTG) was appointed by the then Chief Directorate: Marine and Coastal Management (MCM), within the Department of Environmental Affairs and Tourism (DEAT), to research on subsistence fishing.² The SFTG defined subsistence fisheries as those practised by poor people who gather marine resources as a source of food, or to sell them to meet their essential needs such as food (Harris et al, 2002). Subsistence/artisanal/traditional fishers are all part of the small-scale fisheries. These fish harvesters live within a distance of 20 kilometres or less from the resources. They apply low technology fishing devices such as gill, seine, trawl, cast, drag, scoop and mosquito nets, and gather resources of low cash value (Harris et al, 2002). They employ simple fishing methods such as trapping, hook and line fishing (hand, long and troll lines), and use traditional fishing vessels such as dhows, canoes and dinghies shoved mostly with paddles to reach fishing grounds (Darkey and Turatsinze, 2014). Most of them, as the case of the Durban fisher folk suggests, cannot afford descent fishing vessels, and fish along intertidal zones where they collect such species as sea cucumber, shells and octopus by hand or with sticks or spears (Jiddawi and Ohman, 2002). Fishing labour is done mostly by the fisher and/or family members only (Teh and Sumaila, 2013). This definition gives preference to coastal communities who practise fishing as a ‘long-standing cultural or traditional role (transmitted through at least three generations or 50 years), who did not have other employments yielding sufficient income necessary to meet their basic food needs’ (Harris et al, 2002). In essence, subsistence fishers are at a lower level of economic pursuit, using non-mechanised low technology and low capital investment. Most of the fishers among whom the study was conducted in Durban occupy a low socio-economic status, a mixture of government grant recipients, casual workers with low pays, and the unemployed. They live in such low income communities as Phoenix, Chatsworth and Inanda. They can barely afford to pay for transport to the fishing areas (Focus Group, May 2018).

For such poor fishing groups, the publication of the White Paper on Marine Fisheries Policy in 1997, and the passing of the Marine Living Resources Act in 1998, provided a fundamental transformation in the policy and regulatory framework for fisheries management in South Africa. The transformative nature of this policy recognised utilization of marine living resources as part of local strategy to achieve economic growth, human resource development and capacity-building within a sound ecological balance. This was consistent with the development objectives of the post-1994 national government (Harris et al, 2002). In 2007, the National Summit on Small Scale Fisheries formed a National Task Team (NTT), with representatives from fishing communities in four provinces, to oversee the

² The study would assist the government to determine the nature of resources suitable for subsistence use, its sustainability and management mechanisms.

development of a new policy to further address inequalities within the fisheries sector. The small-scale/traditional/subsistence fishing sector, previously excluded from long term economic benefits under the 2005 General Policy on long term allocation fishing rights (Allocation of Long Term Fishing Rights), came to be recognised alongside other fisheries within the fisheries management system.

The state's obligation to democratise and restructure fisheries to address historical imbalances and achieve equity within all branches of the fishing industry was realised in subsequent policies. These include a revised Draft Policy for the Allocation and Management of Medium-term Subsistence Fishing Rights that was gazetted in December 2008 (DAFFs, 2012). In 2010, the Department of Agriculture, Forestry and Fisheries (DAFFs) reported that South Africa had around 147 fishing communities, 28338 fisher households and over 29000 subsistence fishing rights holders in 22 fishing areas (DAFF Sector GDP Draft, 2010; WWF Report, 2011). DAFFs reiterated the government's vision to provide equitable access to fishing grounds for previously disadvantaged communities. To minimize pressure from intense foreign activities, DAFFs issued rights to 'South Africanise' fisheries. The localization of long-term (7-10 years) fishing rights aimed to encourage local community involvement in fishing and foster a local sense of management, ownership and stewardship, together with other stakeholders such as tourism and commercial fisheries (DAFF Sector GDP Draft, 2010). This multi-sectorial and integrated approach incorporates the Government 2010-2014 Medium Term Strategic Framework priorities to transform economic growth, create vibrant sustainable rural communities that are food secure, protect and sustain environmental assets and natural resources, and ensure government support to channel these benefits to the small-scale fisheries sector. This was a response to Equality Court Orders to finalize a policy framework that accommodates traditional/subsistence fishers/small-scale fisheries sectors in the allocation of fishing rights (DAFFs, 2012).

The 2012 policy also highlights the government's awareness that, because of their low economic status, like farm and domestic workers, subsistence fishers become more vulnerable in times of unemployment, illness or death of breadwinners in their households. Some of them become victims of exploitation by unscrupulous boat owners, marketers and commercial fishing rights holders who violate their rights to basic minimum labour standards and fair conditions of employment (DAFFs, 2012). Such basic standards should be enforced, the policy emphasized, to, for example, ensure their safety at sea, in line with the national labour law and SAMSA (South African Maritime Safety Authority) standards as specified in the SAMSA Act of 1998 (See Marine Notice 26 of 2018, 27 July 2018). The small-scale fisheries also contribute to the Road Accident Fund (RAF), yet they are not covered for accidents that might occur at sea. An integrated and cooperative approach is thus needed to involve other stakeholders such as the Department of Transport on such matters to determine appropriate minimum safety standards (DAFFs, 2012). The common thread among all these policy initiatives is the recognition of the rights of the previously disadvantaged small-scale/subsistence fishing communities who, because of colonialism

and apartheid racially exclusionary policies and regulations, were marginalised and dispossessed of their lands adjacent to the coast. With the growing commercial fisheries sector dominating the fishing industry before 1994, the small-scale/subsistence fishing sector lost their customary and traditional rights to harvest marine resources. The new policy frameworks promoted the constitutional promises of equality as underscored in Article 1 of the African Charter on Human and Peoples' rights (Section 7(2), South African Constitution, 1996).

In 2017, the DAFFs Minister, Mr Senzeni Zokwana, and his deputy Mr Bheki Cele, organised the Imbizo (Forum) Focus Week and visited some traditional authorities and rural communities in the Eastern Cape and KwaZulu-Natal provinces. The objective was to engage with these communities with regard to challenges which subsistence fisheries face as a sector, 'speaking to the people about issues that concern them' (DAFFs News, January 2017). Zokwana and Cele reiterated the policy stand, as stated in 2012, that the government was committed to building capacity for subsistence fishers. Skills development training to enhance their opportunities in terms of job creation, food security, value chain and ultimate inclusive economic participation were part of that capacity building process. These officials emphasized the need for partnership between the government and traditional authorities, and their communities, to boost support for local fishing communities, universal access to quality service delivery, inclusive economic participation and co-management of marine resources. During forum discussions in the Eastern Cape, some of the challenges that were highlighted by community residents involved in subsistence fishing include access to markets, big players who operate as middlemen and take away resources from them, and higher prices at the markets (DAFFs News, January 2017).

Bheki Cele's visit to KwaMbaza small-scale fishing spot in Mthwalume, south coast of KZN, was also part of the department's effort to reach out to the small-scale fishers and listen to their concerns. In 2015, Cele had visited Mpembeni, in Richards Bay (KZN), to address challenges of illegal fishing. In Mthwalume, local subsistence fishers highlighted shortage fishing vessels, lack of training, fishing limits and scarce employment opportunities in the sector as some of the challenges. Cele admitted that there were indeed only five fishing vessels in the country. The transformation of the fishing industry, he said, would include working with other stakeholders such as the Department of Trade and Industry to address fishing vessel shortages, fishing rights allocation, and provision of advice (by the government) on how to succeed in the fishing sector. The government would revisit the issue of fishing permits, work with the Department of Environmental Affairs to organise the cleaning of the sea, and ensure that local people are employed when employment opportunities arise (DAFFs News, January 2017). The small-scale fishing policy had been implemented in April 2016, and the small-scale fishing rights were to be allocated by July 2016. The ministers reassured the subsistence fishing communities that the government was committed to ensuring that established policies, rules and regulations are effective and make a

meaningful contribution to the socioeconomic developments of such communities. The department committed themselves to revisiting the issue of Fishing Rights Application Process (FRAP).

1.8 INTERPRETATION AND DISCUSSION OF FINDINGS

The current policy approaches have reinforced the need for transformation within the fishing sector. The results show that ecological sustainability of marine resources should be in line with the wellbeing of the fishing community in terms of food security, poverty alleviation, and vibrant local economies based on social justice, and participatory democracy. Therefore, the contents of the new fishing policies in South Africa since the 1990s reflect the government's insight to transform the fishing industry with a view to provide equal access to marine resources to affected stakeholders, especially the small-scale/subsistence fishing sector who were previously marginalised. Research that was conducted in April/May 2018 among subsistence fishers in Durban, however, reveals experiences that are contrary to what the government intended to achieve through its policies.

1.8.1 Poverty and weak subsistence/government relations

The primary focus of the study was on the South Durban Community Environmental Alliance (SDCEA)³. It (the study) sought to examine the experiences of, and the challenges faced by, subsistence fishermen in Durban. Another study that looked at the similar theme was conducted by Vanessa Burger, who focussed on the perceptions of fishers on environmental and socio-economic factors that affect sustainable fishing practices. In her study, Vanessa Burger raised a number issues regarding subsistence fishing. One of the factors that she pointed out was the issue of partnership between various sectors and how to increase the involvement of subsistence fishing communities in the management of marine resources, and decision -making processes therein. Other interviews that were conducted with fishers from eight sites in Durban, including Isipingo Beach in the South, and the Ohlanga Lagoon in the North revealed that pollution, and its associated health risks, had impacted negatively on most severely utilised fishing spots in Durban. The study included the assessment of fishing facilities, observation of fishing practices and analysis of anecdotal records. The study showed that fish resources were severely over-exploited such that fish species such as mackerel and Garrick 'appear to have become locally extinct' (*Berea Mail, June 19 2015*). Burger reported that poverty and unemployment, and their associated hardships, have created socio-economic conditions that leave a poor fisherman with little choice. One fisher man said,

You see the problem is that a few years ago we could fish in so many different places and some people go and fish in those places for years and supported their families fishing in those areas. And the thing is when the men with money, the power come in they take away all that and they not allowed to fish there anymore and people suffer because we need to go

³ South Durban Community Environmental Alliance (SDCEA) is an NGO, an environmental justice organization based in South Durban, South Africa.

to those spots, those are the spots where we getting the fish now we restricted to certain areas and we can't get anything there you know, so we got to adapt now and we struggling.

Some families with up to four members currently live on an average income of R2500 per month, nearly three-quarters of which is derived from fishing. Besides poverty and unemployment, other factors such as 'poor policy and legislation, historical marginalization, misperceptions and class conflict between fishing sectors, marine researchers and law enforcement, have discouraged sustainable fishing practices' (Berea Mail, June 19 2017). There is essentially a lack of common interests among various stakeholders. In 2015, the Durban fisher folk learned that DAFFs, without consulting them, was developing a new small-scale fishing policy that would regulate their (fishers) access to fishing areas such as North Pier at Durban Beachfront. For instance, one of the respondents said,

As Subsistence fishers, [we, for] most of us it's our living. We feel we subsistence fishermen have been deprived of our livelihood [by] from government itself and municipal[ity]. Durban municipal[ity] has stopped many fishermen from fishing where they [have] been fishing for many, many years, [they] say no now it's a no go zone. [If] I recall [well] the beach front piers is[it's] all closed.

Such restrictions caused panic among more than 12 000 Durban fishers and their households who, because of rising unemployment and poverty, rely on fishing at the sea for sustenance. At one of the meetings, Essop Mohammed, the chairman of the KwaZulu-Natal Subsistence Fishermen Forum (KZNSFF), stated that 'Most fisher folk are pensioners, unemployed or poor and should be allowed unhindered access to fishing areas to feed their families' (Berea Mail, February 25 2015). These narratives show that there is a general lack of communication between the government and the fishing communities.

1.8.2 Restrictions against local fisher folks

The general impression among subsistence fishers was that the government policies are there to make them suffer. For instance, respondents indicated that a few years ago, they used to fish in many different places/spots. They are now currently restricted to certain areas. So, Durban (eThekweni) Municipality has established 'no go zones', the beach front pier was closed and reserved for tourism, thereby restricting their fishing activities to one pier. Therefore, their views were that the management of marine resources are working in favour of tourism. For instance one respondent 1 indicated that,

They (fishers) have to pay thirty five Rands for their fishing licences, which is new to them because, as one of them said, 'all along there was no such a thing as licence to fish. We don't have money, we can hardly afford transport and bait'. The quota system, they stated, undermines their right to earn a decent livelihood because they are not allowed to take more than four shells. They also complained that the government does not subsidise them. As one respondent said, 'we need subsidy, everyone gets subsidy. Sometimes you catch a cold, you catch no fish. What we are saying is look at us as fishermen, we are here to fish to live' [Respondent 1].

Respondent 2 reinforced the idea by saying,

Our concern is that the government has to understand us that if you catch a fisherman with extra fish and want to lock him up, think of his family, [he] his [has] got [a] family. He's got children to worry about and because he's got rent to pay. Some of us we on our grants but our grants make us just to barely survive [Respondent 2].

In July 2017, the *Berea Mail* newspaper reported that KZNSFF and the Durban subsistence fishers, represented by SDCEA, made requests to the government to have access to traditional fishing grounds on the coastline of the Indian Ocean. They claimed that the government has given permission to Japanese, Chinese and other international trawlers to harvest fish resources during winter months. According to these reports, the government has also given licences to a company called ExxonMobil to drill for oil and gas off the southern coastline of Durban. All these operations deprive and disadvantage local subsistence fishers and other communities living on the coast (*Berea Mail, July 14 2017*). Furthermore, Joanne Groom, the SDCEA Communications and Media Officer, stated that,

Subsistence fisher folk pay millions of rands, which go into the state treasury, through the purchasing of fishing licences at the post office and yet there is no benefit, no facilities or services in return for their contribution (Berea Mail, June 19 2018).

As stated earlier, in 2017, when Bheki Cele visited the region, local fishers raised their concerns with him. Respondent 1 said,

I told them why it is that we fishermen, local fishermen, can catch ten fish while the Chinese fishermen can take 25 tons of fish. The fishermen are not allowed to catch more than four shells, but look at the tourists. We sincerely try to obey the law as much as we need for our family to survive, but the foreign tourists can come to our shores and do what they feel like. The government is allowing these foreign trawlers to come to our oceans and take our marine resources. The government is not doing enough for [local] fishermen.

Furthermore, respondent 4 indicated that the vision to 'South Africanise' the fishing industry, as per the 2012 policy promise, has thus not yet fully materialised. Only the tourism industry is benefitting because, as respondents said, 'tourists do as they please'. Therefore, subsistence fishers viewed the integrated approach to management as skewed towards tourism interests. Studies show that, in Africa and elsewhere, fewer resources are allocated to preserve poor communities' access to marine species on which they have traditionally relied on for food, medicine, shelter, and other needs (Wolanski, 2004). Yet, another research findings by the World Resources Institute in 2005 confirmed that many families facing poverty, unemployment, droughts and many other economic difficulties are most dependent on marine resources (Kaimowitz and Sheil, 2007). Respondent 7 indicated that,

The whole night the poor guy he fishes and catches nothing in the stormy weather. Next day how does that guy, if he borrowed that two hundred, how does he repay it back. So fishermen just don't go for fun, everybody, it's our living. We are saying to government, we are saying

to, to the municipal (man in background: “municipalities”) hhhmm, we are fishermen and we have our rights as well and you find that there are rich people who fish for sport, we don’t fish for sport.

The development, maintenance and management of marine resources should thus recognise the needs of local people, more so the poor and vulnerable such as the subsistence fishers (Kaimowitz and Sheil, 2007). Following a pro-poor approach to the management of marine resources could open equal opportunities for tourism and local subsistence fishers. Therefore, affected stakeholders should be engaged in the debate on policy design, law enforcement, marine resource usage and fishing. Thus, where there are common interests and mutual benefits in terms of development goals, the development of partnership between subsistence fishers and tourism should be encouraged, to ensure that local fishers have access to marine resources and participate in their management (David and Sheil, 2007).

1.8.3 Abuse and corruption by state organs

There were reports of abuse by sea patrollers. For example, Respondent 2 indicated that, in one of the cases involving patrollers, they (patrollers) caught few fishermen with more than a legal limit of fish harvested, and they charged them (fishermen) forty five thousand Rands. But, ‘they caught a Chinese trawler with about twenty five tons of fish and charged him twenty five thousand rands and gave all his fish back to him. We fishermen get caught, they hit you, they handcuff you, they use force on us’. Therefore, for the Durban subsistence fishers, law enforcement is selective, it works in favour of foreign poachers in the South African waters. Respondents further indicated that these foreign trawlers get into the spawning areas to take small fish, living local fishermen without baits. Hence, marine resources in the South African waters are depleted by foreign fishing poachers. Respondent 3 and 4 were of the opinion that,

[Foreign trawlers] ‘they don’t think about [their] our futures, only themselves, and twenty five tons is a lot of fish, and that’s only one ship that the guy showed us, we were shocked because I’m standing here in Durban waiting for the big shell, waiting all night’. Some of the government officials are corrupt, charging poor local fishermen exorbitant amounts to the tune of, for example, five hundred Rands per shell, and pocket [they] that money. ‘They did not want to let him go if he does not give them five hundred Rands. They actually took him to the ATM, and yet he works in this industry where we cannot get work in our communities’.

Joanne Groom (of SDCEA) corroborated the above opinions when she stated that, ‘whilst the Durban subsistence fishers legitimately possess fishing licences, they are constantly harassed, fined and sometimes even arrested by the police, while these corporations have been given the privilege to do as they please in the South African waters’ (Berea Mail, July 14 2017). As a result of these experiences with the law enforcement agents, these fishermen have lost confidence in the legal system. They have established

their own behavioural patterns and management systems, where they educate one another about fishing rules and principles. For instance, Respondent 4 indicated that,

If we [are] fishing and we see a fisherman doing something wrong we stop him and talk to him. If he still [doesn't] don't listen, we report him to Des [Chairperson of the SDCEA]. So when the time comes and he needs a permit, they don't give him. Because now he is spoiling for everyone. To make sure that the coastal area is sustainable, if you [are] doing wrong [things] we stop you. And if you want to fight we get maybe other fishermen together, and together we go and approach you. It's team work.

These local fishers attend workshops and training programs, where they are taught how to fish sustainably and how to conduct themselves properly as fishermen in public. Through such programs, they have educated and empowered themselves on issues of human rights and social justice. Working together with Ezemvelo KZN Wildlife⁴, they developed a mentoring booklet with information on endangered fish species that should be protected, and on policies which fishermen should adhere to (*Berea Mail*, July 14 2017). Fishers use locally grown systems of community management which have worked in Africa and elsewhere as part of marine resource management, drawing particularly from their local knowledge and experiences.

1.8.4 Community based management systems

Contemporary literature shows that most cultures have their own conservation ethics (Bruton, 2016). As the 2012 subsistence fishing policy acknowledges, incorporating local people into resource management policy planning and development can drive a democratic agenda that builds up local trust, with the government promoting economic development ventures that support and benefit local people (Fuentes, 2008). Such shared policy platforms could prevent conflict and promote shared control over valued resources, while ensuring that coastal communities derive optimal long- term benefits from natural resources (Schwartzman et al, 2000). One of the respondents [10] indicated that,

Since its inception, the SDCEA forum has played a pivotal role in educating its members on sustainable natural resource management by introducing a mentorship course whereby different environmental and social stakeholders hold classes with the fishermen on marine wildlife, environmental procedures in a coastal environment, littering, water safety and law enforcement.

Studies that were done in KZN show that curtailing access to resources required for traditional and subsistence purposes was a source of conflict between authorities and local coastal communities. Subsistence resource users in such communities responded by poaching, which was often difficult to police and exacerbated unsustainable resource use challenge. In Northern KZN, to address illegal and

⁴ A governmental agency that helps to maintain areas of wildlife conservation and biodiversity importance areas in the KZN province. Before 1994, this organization was called Natal Parks Board.

unsustainable subsistence use of intertidal mussels on the coast alongside the Mapelane Nature Reserve, various stakeholders, including representatives from the fishing community, government and scientists, established a Joint Mussel Management Committee (JMMC). The negotiation of marine spaces resulted in the institution of a 2 km stretch of coast line for the exclusive use of the Sokhulu Community under the management of the JMMC. Such joint ventures facilitated communication, resource co-management, joint decision making and shared responsibility in marine resource monitoring and regulation by various stakeholders. Thus, certain agreements were reached, and conditions of fishing were negotiated between stakeholders. Clearly defined harvesting boundaries were set to allow a sense of ownership among local communities (Attwood et al, 1997), thereby creating a balance between conservation and livelihood alternatives within the marine resources management systems (Spiteri and Nepal, 2006). Respondents in Durban indicated that they have met with different government officials since the 1990s to make them (officials) understand that government policies and the set criteria are not working in their (fishermen) favour. In the 1990s, one respondent [5] indicated, that they had a meeting with Mr Amichand Rajbansi, then the Minister of Recreation, and Dr Zweli Mkhize who was the premier of KZN. They have also written letters to many other officials, for instance he said,

Fighting for the policies to be changed, and indicating that the policy they are proposing [wanting to get is] are going to deprive the fishermen more. Now a lot of people here are what I call casual workers, we work for [a] period of time, maybe three weeks. There's a shut-down at Engen, the rest of the years you must go [and] fish to supplement your family [income] or they are going to go hungry.

The general observation, and opinion, among subsistence fishers is that fishing in South Africa is led by politics. For instance, their view is that global political economy has given foreigners easy access to South Africa's marine resources, and a lot of fish is being exported. Since most of the fishers used to work for shoe and clothing factories, the closure of these companies in places such as New Germany, Mobeni and Jacobs in Durban destroyed the manufacturing industry. The fishers were of the opinion that the South African business system supports imports from China, Bangladesh, Pakistan, Korea and huge business interests from other regions all over the world. One fisherman [Respondent 6] said,

The Europeans have destroyed the Atlantic and the Mediterranean. There's hardly any fish because of what they do. The USA same story, remember the gulf of Mexico, that big oil thing that happened there, all the fish were killed and Nigeria. We are guinea pigs, a lot of the fish is being exported. You go to London, [on] the fresh market there, you think they are fresh fish from London. No it's coming from us, they keep it all iced up and then they take it there.

The Berea Mail quoted Joanne Groom, the SDCEA Communications and Media Officer, saying

These same corporations have a track record of spills and harmful operations that have destroyed the oceans, marine life, biodiversity, tourism and sustainable jobs in the Gulf of Mexico, Antarctica, North and South Poles, Atlantic, Pacific and Indian Oceans, the Niger Delta and many other sensitive areas of the Amazon. The most notorious is ExxonMobil, whose most recent boss is now the United States Secretary of State, Rex Tillerson. It was recently revealed that Exxon knew about climate change from the late 1970s and Tillerson was involved in a cover-up with catastrophic consequences. Can we trust this firm to drill for oil just a few kilometres offshore from Durban? (Berea Mail, July 14 2017).

The *Times Live* newspaper (June 19 2017) reported frustrations among Durban's subsistence fishermen, caused by seismic drilling in the sea areas that is adversely affecting them (fishers). They launched a campaign against gas and oil exploration along the coastline, stating that these operations would destroy livelihoods of about 12,000 subsistence fishermen. In his speech, the coordinator of SDCEA, Desmond D'Sa, said,

You have destroyed other parts of the world, don't destroy us, our fishing reserves, our food, our benefits to our homes and families. We are today launching the project called Fish not oil. We can't eat oil and we can't eat money, but we can eat fish and sell fish to feed our families. Our fish are destroyed by gas and oil exploration. By government allowing oil companies who have destroyed the Gulf of Mexico to come and destroy our coast is not on. Government should have done a survey among fishermen (Times Live, June 17 2017)

Therefore, as D'Sa said, 'Our campaign is about the resistance against oil and gas from destroying the livelihood, communities and families of fishermen and women. Fishing communities are unique, there are thousands of fishermen in Durban who live off fishing' (*Times Live, June 17 2017; Business Day, June 20 2017*). Media reports show that campaigns against oil and gas exploration were spreading, with support from other parts of the world, including Nigeria, to protect fish species and the coastline against foreign exploitation. Desmond D'Sa indicated that 'we have wonderful beaches, and a wonderful coastline. Even in winter people can fish and swim in warm waters in Durban, and we don't want our coastline to be devastated like what happened in the Gulf of Mexico, in Nigeria, currently the oil has devastated the coastline' (*July 7 2017; The Herald [South Africa], June 20 2017*).

In response to these campaigns, the Petroleum Agency South Africa (PASA) said that, according to their environmental impact assessments, the possible impact of the surveys would be relatively low'. They claimed that they had not yet received any objections from the fishing community, but would conduct the investigation. Through lobbying and educating its members, the forum has gained some of the lost fishing spots. For instance Respondent [15] indicated that,

The forum has gained back three popular fishing spots that were initially taken away from them by the harbor authority. However, a number of challenges still exist, such as the failure to understand subsistence fishing as a livelihood option due to protectionist management practices; and the failure to recognize fishermen as stakeholders in marine resource use.

Nevertheless, the Chief Executive at PASA, Lindiwe Mekwe, has listened to the issues being raised by SDCEA and promised to attend to them. She indicated that PASA would also take into consideration the concerns and the objections which they have received from the fishermen, consolidate those reports and then write 'recommendation[s] for the minister to consider' (eNCA, Channel 403, undated). Overall, fishers were of the opinion that capitalistic interests in the South African waters have taken away the power, and rights, of local fishers to manage their fish resources on which they depend for their socio-economic wellbeing.

1.9 CONCLUSION AND RECOMMENDATIONS

Policy approaches should not focus only on environmental protection and tourism, but also consider social processes of other stakeholders whose interest in, and access to, marine resources, are affected by such policy decisions. This paper has shown that policy formulation should draw their content from the public input in order to address human concerns and socio-economic goals such as poverty reduction, and balance tourism development interests with other local aspirations, such as those of the fishing communities. Policies should also draw on sound knowledge and understanding of local needs, preferences and values in order to define the scope and goal of intervention. It therefore becomes important for policy makers to research on the feasibility of their policies, especially among the affected communities. Since subsistence fishers rely on fishing for daily sustenance and occupy a low economic status in the society due to poverty, unemployment and lack of economic opportunities in their communities, a pro-poor approach to fishing should be developed, implemented, and periodically reviewed to assess the needs and aspirations of the people. Thus, a pro-poor approach to subsistence fishing should be accompanied by an assessment of what small-scale/subsistence fishers' value, and what they consider to be a threat to their livelihoods, and what management approaches should be implemented. Researchers, conservationists, tourism development professionals, subsistence fishing communities and other stakeholders should form partnerships to build capacity, shape common interests and shared decisions and risks. This article has shown that, some of these policies have failed to positively contribute to the fishers' livelihoods, hence a need for a new policy approach to accommodate subsistence fishing in South Africa. In conclusion, in order to achieve effective future marine resources

management in public spaces in Durban, there is need to embrace the needs, perceptions and concerns of fishermen. A triple bottom up model of simultaneously achieving social, cultural, environmental and economic objectives should be adopted, so that development visions can be shared between the government, tourism and other stakeholders.

1.10 REFERENCES

- ✚ Attwood CG, Mann BQ, Beaumont J and Harris JM (1997), 'Review of the State of Marine Protected Areas in South Africa'. *South African Journal of Marine Science*, 18, 341-367.
- ✚ Bennett EL and Robinson JG (2000), 'Hunting of wildlife in tropical forests, implications for biodiversity and forest peoples', *Environment Department Papers*, 76, World Bank.
- ✚ Berea Mail, 'Fisherfolk shocked at new Fishing Policy', 25 February 2015.
- ✚ Berea Mail, 'Durban fisherman want access to all traditional fishing grounds', July 14 2017.
- ✚ Berea Mail, 'Durban fisherman want access to all traditional fishing grounds', July 14 2017.
- ✚ Branch GM, Hauck N, Siqwana-Ndulo N and Dye AH (2002), 'Defining Fisheries in the South African Context: Subsistence, artisanal and small-scale Fisheries'. *African Journal of Marine Science*, 24(1), 475-487.
- ✚ Bruton, M (2016). *Traditional Fishing Methods of Africa*. Cambridge University Press: Cape Town.
- ✚ Business Day, 'Fishing community says no to KwaZulu-Natal seismic tests', 20 June 2017.
- ✚ Charles A and Wilson L (2009), 'Human Dimensions of Marine Protected Areas', *ICES Journal of Marine Science*, 66, 6-15.
- ✚ Cicin-Sain B and Belfiore S (2005), 'Linking Marine Protected Areas to Integrated Coastal and Ocean Management: A Review of Theory and Practice', *Ocean and Coastal Management*, 48.
- ✚ Clark BM, Hauck M, Harris JM, Salo K and Russell E (2002), 'Identification of Subsistence Fishers, Fishing Areas, Resource Use and Activities along the South African Coast', *South African Journal of Marine Science*, 24(1), 425-437.
- ✚ Cockcroft AC, Sauer WHH, Branch GM, Clark BM, Dye AH and Russell E (2002), 'Assessment of Resource Availability and Sustainability for Subsistence Fishers in South Africa, with a Review of Resource Management Procedures'. *South African Journal of Marine Science*, 24(1), 489-501.
- ✚ Creamer Media Reporter, 'Recreational, subsistence fishing to drive inland fisheries industry, but conflict expected', 2 June 2015, 1-6.
- ✚ DAFF (2010a), 'Agriculture, Forestry and Fisheries Integrated Growth and Development Plan (GDP), Department of Agriculture, Forestry and Fisheries (DAFF)'. DAFF Sector GDP Draft.
- ✚ DAFF News: Official Letter of the Department of Agriculture, 'Forestry and Fisheries, Minister Introduces Small-Scale Fisheries Policy to the Tribal Authorities', January 2017.

- ✚ Darkey D and Turatsinze R (2014), 'Artisanal Fishing in Beira, Central Mozambique'. *Journal of Human Ecology*, 43(3), 317-328.
- ✚ Department of Agriculture, Forestry and Fisheries (DAFFs) (June 18 2012) 'Policy for the Small Scale Fisheries Sector in South Africa', Number 474.
- ✚ eNCA KZN oil exploration threat to livelihood and coastline: Fisherfolk, Channel 403 (DSTV), undated.
- ✚ Fish, T. E. and Walton, A. H. (2012). 'Sustainable Tourism Capacity Building for Marine Protected Areas'. *Parks*, 18 (2).
- ✚ Fuentes M (2008), 'Biological Conservation and Global Poverty'. *BioTropica*, 40 (2), 139-140.
- ✚ Harris JM, Branch GM, Clark BM, Cockroft AC, Coetzee C, Dye AH, Hauck M, Johnson A, Kati-Kati L, Maseko Z, Salo K, Sauer WHH, Siqwana-Ndulo N and Sowman M (2002), 'Recommendations for the Management of Subsistence Fisheries in South Africa'. *South African Journal of Marine Science*, 24(1), 503-523.
- ✚ Hogue A., Clark A. and Huang L (2016), 'Lack of stakeholder influence on pollution and prevention: A developing country perspective'. *Organization and Environment*, 29(3), 367-385.
- ✚ Huggins, LE (2011), 'Fencing Fisheries in Namibia and Beyond: Lessons from the Developing World'. PERC Policy Series, 49.
- ✚ Jiddawi NS and Ohman MC (2002), 'Marine Fisheries in Tanzania'. *AMBIO: A Journal of the Human Environment*, 31(7), 518-527.
- ✚ Johannes, R. E. (2002). 'The renaissance of community-based resource management in Oceania'. *Annual Review of Ecology, Evolution and Systematics*, 33, 317-340.
- ✚ Kaimowitz D and Sheil D, (2007), 'Conservation What and For Whom? Why conservation Should Help meet Basic Human Basic Needs in the Tropics'. *BIOTROPICA*, 39 (5), 567-574.
- ✚ Kent, G (1997), 'Fisheries, Food Security, and the poor'. *Food Policy*, 22(5), 393-404.
- ✚ Marine and Coastal Management, 'DEAT: Fifteen Years, A Review of the Department of Environmental Affairs and Tourism: 1994-2009'. Department of Environmental Affairs and Tourism, South Africa.
- ✚ Neto, F. (2003). 'A new approach to Sustainable Tourism Development: Moving Beyond Environmental Protection'. A discussion paper of the United Nations Department of Economic and Social Affairs, DESA Discussion paper Number 29.
- ✚ Schwartzman S, Nepstad D and Moreira A (2000), 'Arguing Tropical Forest Conservation: People versus Parks'. *Conservation Biology*, 14(5), 1370-1374.
- ✚ Spireti A and Nepal SK (2006), 'Incentive-based conservation programs in developing countries: A review of some key issues and suggestions for improvement'. *Environmental Management*, 37, 1-14.
- ✚ Sunde J and Isaacs M (2008), 'Marine Conservation and Coastal Communities: Who Carries the Costs? : A Study of Marine Protected Areas and their impact on traditional small-scale fishing

communities in South Africa'. International Collective in Support of Fish-workers, Chennai, India.

- ✚ Teh LCL and Sumaila UR (2013), 'Contribution of Marine Fisheries to Worldwide Employment'. *Fish and Fisheries*, 14, 77-88).
- ✚ The Herald, 'Fishermen Protest Over Oil Searches', 20 June 2017.
- ✚ Times Live, Durban Fishermen Say No to Oil, 19 June 2017.
- ✚ Times Live, 'What the Frack? Outrage over Shale Gas Project Near National Park', 19 June 2017'.
- ✚ Tomalin J and Kyle R (1998), 'Subsistence and Recreational Mussel (*Perna Perna*) Collecting in KwaZulu-Natal, South Africa: Fishing Mortality and Precautionary Management'. *South African Journal of Zoology*, 33(1), 12-22.
- ✚ Van Sittert, L, in Oxford Research Encyclopedia of African History (February 2017), 'The Marine Fisheries of South Africa'.
- ✚ Waligo VM, Clark M. and Hawkins R, (2013), 'Implementing sustainable tourism: A multi-stakeholder involvement management framework'. *Tourism Management*, 66, 342-355.
- ✚ Wolanski E, Boorman LA, Chícharo L, Langlois-Saliou L, Lara R, Plater AJ, Uncles RJ and Zalewski M (2004), 'Ecohydrology as a new tool for sustainable management of estuaries and coastal water'. *Wetlands Ecology and Management*, 12(4), 235-276.
- ✚ WWF Report (2011), 'Fisheries: Facts and Trends, South Africa'.