

The Disparities Arising in the Policing of Consumptive and Non-Consumptive Marine Activities

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Introduction

The South African coastline extends for approximately 3000 km (Smale et al, 2004), linking the east and west coasts of Africa. These shores are rich in biodiversity, from the coral reefs of northern KwaZulu Natal to the cool water kelp forests of the Northern Cape (DEAT, 2004). The marine environment is currently being utilised for both consumptive and non-consumptive marine activities. Consumptive activities, such as fishing, involve the removal and killing of marine species for the purpose of producing commercially viable products. Non-consumptive activities, such as shark diving and boat-based whale watching do not involve the deliberate killing or harming of marine species (Barstow, 1986).

Marine ecotourism means different things to different people but it is generally considered to be a form of tourism based on the ecology of natural environments (Cater, 1992), involves education and interpretation of these environments and is managed to be ecologically sustainable (CDT, 1992). Shark diving and boat-based whale watching are non-consumptive activities that allow tourists to a such an experience. Both activities directly and indirectly make significant contributions to the economy. The Western Cape and the Overberg are particularly excellent sites for whale watching with about 200 visitors per day (DEAT, 2003) and two BBWW operators in Gansbaai alone reported earnings of R3.5m. Worldwide, whale-watching is worth more than US\$1 billion per annum (Hoyt, 2001). An estimated 40 000 scuba divers visit Aliwal Shoal every year (Lemme, 2004) and these visitors make significant contributions to the local economy in the region of the MPA as well as to the rest of South Africa (Dicken and Hosking, 2009). Between January and December 2007 the total expenditure within the MPA region by visitors related to tiger shark-diving alone was R12 405 274 (Dicken and Hosking, 2009).

Although the coastline is rich in marine wildlife and highly beneficial for the economic development of the country, there is certainly a need for policies and regulations to be in place so as to ensure the sustainable use of the resource. The Marine Living Resources Act (1998) is one such piece of legislation that was instituted by the South African government for this very reason. The Act explains that no consumptive commercial fishing or non-consumptive marine activity (such as BBWW or shark diving) is to take place in South African waters unless a right has been granted by the Minister (DEAT, 1998). These rights are regulated by a rights allocation system and are allocated by the Minister of Environmental Affairs and Tourism, or a senior official within the department that has been delegated by the Minister (DEAT, 2004). The Act also outlines procedures regarding the application for these permits, including the cost and the frequency with which the permits should be renewed. It is the responsibility of the Department to ensure that the rules and regulations set out by the Act are enforced.

With these regulations in place, the question of whether or not these policies are being adequately implemented comes to the fore. It is now increasingly evident that these policies are falling short with cases of illegal, unregulated, and unreported fishing (IUU fishing) now one of the most fundamental and immediate threats to the sustainability of fisheries along our coastline (Moolla, 2005). Although non-consumptive activities (under the premise of ecotourism) are encouraged it is proving difficult for operators to acquire permits that allow them to operate legally. As a result, many individuals are operating illegally and incurring the threat of huge fines. One boat based whale watching operator in the Eastern Cape (Raggy Charters) has been struggling to acquire a permit for several years. Most correspondence with Marine and Coastal Management has gone unanswered and as a result the operator has resigned to operating illegally (Carte Blanche, 2009). Applying for a permit costs in the region of R8000 and the permit itself may cost a maximum of R30 000 per annum. According to Marine and Coastal Management this is to ensure that the wellbeing of the animals comes first. According to the Marine Living Resources Act (1998) any person(s) operating without a permit will incur a fine of up to R800 000 or no more than two years in prison. Raggy Charters is currently under investigation by Marine and Coastal Management and could face criminal charges (Carte Blanche, 2009).

IUU fishing is one of the most fundamental and immediate threats to the sustainability of fisheries along our coastline and thrives where governance is weak and countries fail to implement domestic laws and policies (Moolla, 2005). This is evident in South Africa where

IUU fishing penalties include small fines and little or no jail time. This is in contrast to ecotourism activities that are non-consumptive but are pedantically policed and monitored resulting in excessive fines and or guaranteed jail time.

If the problems associated with the implementation of the policies can be identified and addressed, this could have major implications for the sustainability of the marine resources that are currently over-exploited in our waters.

Methods

Study Area

The study area selected covered the entire coastline of South Africa (Fig 1) in order to get a more accurate understanding of the current situation, concerning consumptive and non-consumptive activities.

South Africa has a varied marine environment. On the east coast the powerful Agulhas current is the western boundary current of the Indian Ocean, hugging the continental slope as it carries warm but nutrient-poor oceanic waters of tropical origin, into the region (Smale et al, 2004). Its influence shapes the subtropical marine communities of northern KwaZulu-Natal (KZN), including the encrusting tropical corals off the Greater St Lucia Wetland Park, a World Heritage Site. Further south, the water cools and the coastal fauna off most of central and southern KZN is subtropical (Smale et al, 2004). Further south, the continental shelf broadens and the current moves further from shore to more than 200 km offshore southwest of Cape Agulhas (Boyd & Shillington, 1994). The continental shelf here is known as the Agulhas Bank and is extremely important for several varied fisheries, including trawling, long lining and the squid jig fishery (Japp et al, 1994). The influence of the Benguela system is felt all along the west coast of South Africa and Namibia (Smale et al, 2004). Off the warm KwaZulu-Natal coast, coral beds may be found in the north, while on the Cape South, soft corals and other invertebrates create spectacular reef systems. West of Cape Agulhas, inshore kelp beds become increasingly more dominant and create forest-like vistas on the Cape west coast (Smale et al., 2004).

The diverse marine environment provides for good fishing opportunities but also unparalleled opportunities for tourism. The varied and dynamic oceanic environment results in a remarkable

diversity of chondrichthyans (sharks, skates, rays, and chimaeras) and other fish (Turpie et al., 2000). This makes it an ideal environment for Ecotourism and other non-consumptive marine activities to thrive. There are 210 chondrichthyan species that occur along the 6400 km southern African coast and 54 of those are endemic to this region (Compagno, 1999). Most of these species are small, occur in deep water, are cryptic and thus occur in waters less frequented by divers. As a result, the number of sharks likely to be seen by most people using coastal and inshore waters, including divers, is significantly less than the number found here (Smale et al., 2004).

Survey Implementation and Design

The project took the form of a desktop study, as much of the data that was analysed was already available. Case studies were selected from the entire South African coastline due to the diversity of its marine environment. Much of the data was collected from journals, new paper articles as well as any government documents that were available to the general public. Other information was gathered from specific individuals (key informant interviews) that were identified during the initial stages of the project.

Key informant interviews were conducted through email and telephone correspondence. This was because some individuals were located in areas that were not readily accessible. For those individuals who were accessible, face-to-face informal interviews were conducted. Informal questionnaires were used during correspondence with key informants.

Key informants were chosen using convenience sampling from the different activities identified in the following list. These informants were selected for their different areas of expertise.

- 15 boat-based whale watching operators
- 10 white shark cage diving operators
- 20 sardine run experts
- 10 legal experts

From these groups only a few individuals were selected for the interviews. This selection was based on the availability of the individuals. As a result, informants were selected using convenience sampling. A maximum of two individuals were chosen from each of the groups. Informal questionnaires were used during correspondence with the individuals. The legal experts that were selected represent the prosecution and defence, respectively in order to get a

balanced perspective as to how the law is carried out on a daily basis. Questionnaires were kept informal in order to reduce the risk of running into ethical issues.

Results

Consumptive

Abalone Poaching

Since 1997 The Eastern Cape has become one of the largest sources of supply for the illegal abalone industry. Illegal divers have located a significantly large abalone resource and there is a large illegal and highly organised network that has developed in the region of Port Elizabeth (the third largest city along the coast of South Africa; Fig 2). This network has methodically targeted the species across the entire Eastern Cape, transporting it inland and to the Far East. The high Asian demand for abalone makes it an exceptionally lucrative commodity in this region (Raemaekers and Britz, 2009).

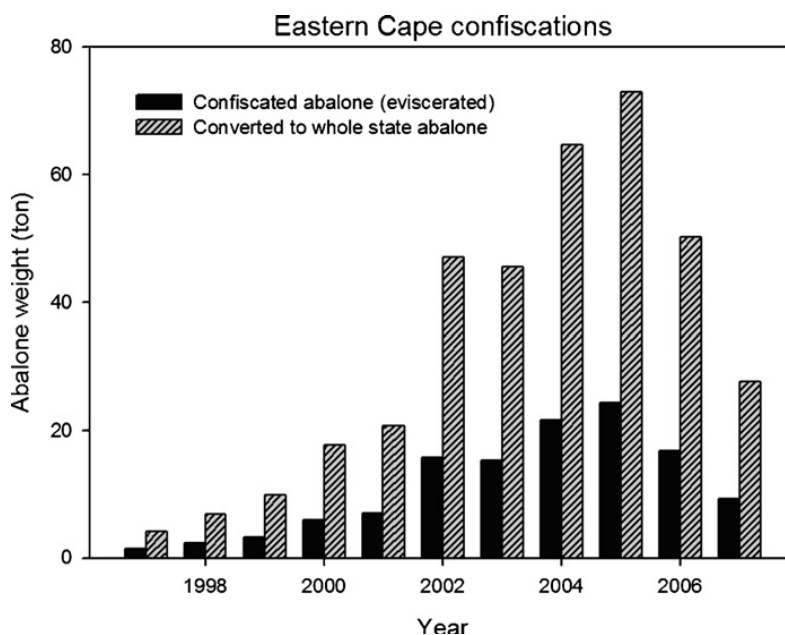


Fig 1: Amount of abalone confiscated in the Eastern Cape between 1997 and 2007. Source: MCM

Illegal, unregulated and unreported (IUU) fishing

In South Africa, IUU fishing has been attributed to the collapse of the traditional line fishery, abalone, Patagonian toothfish, and more recently, hake and pilchards. There are also an increasing number of reports of an “IUU creep” in the Lobster and Shark industries (Moolla, 2009). The traditional line fishery is South Africa’s oldest fishery with the traditional line fish

species being fished commercially and recreationally. About 3 000 commercial fishermen take to the seas every commercial season to harvest yellowtail, snoek, stumpnose and others (Moolla, 2009). By 2000 the minister of Environmental Affairs and Tourism realised that decades of overfishing, poor policing and enforcement, and simple poaching had left the fishery in an ecological crisis. About 19 of the commercially harvested species stocks were classified as “collapsed” and 50 more were classified as being overexploited. The fishery was not closed down, but it became a criminal offence to fish any of the collapsed species (Moolla, 2009).

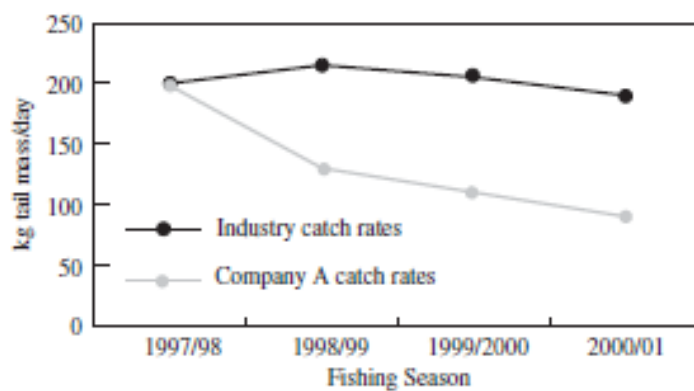


Fig. 2: Catch rates estimated for Hout Bay Fishing compared to the rest of the fishery. Source: Groeneveld, 2003.

Non-consumptive

The Sardine run

The first tourism industry based sardine run experience was started by a single operator in 1990. By 2000 the sardine run had begun to attract a great deal of interest from both the scientific and filming communities. The commercial potential of the sardine run experience was realised in 2001, which saw an accelerated increase in the number of dive operators as well as the number of boats offering trips (Dicken, 2010). The study conducted by Dicken (2010) showed that all of the tourists that came to experience the run in South Africa were overseas visitors from 15 nationalities. The majority of these visitors originated from North America and Britain. Even though the Sardine run was the main reason for their trip, the visitors would also take part in other activities such as tiger-shark and white shark diving as well as safaris.

Tiger Shark diving

This non-consumptive activity has the potential to increase the attraction to Aliwal Shoal for both foreign and local tourists. This potential is greatly increased due to the fact that tiger shark diving is currently confined to the Aliwal Shoal MPA; the sharks are most accessible there and are known to gather there (Dicken and Hosking, 2009). There is an almost 100% success rate for encountering tiger sharks after baiting and this offers a unique experience with tiger sharks in South Africa (Dicken and Hosking, 2009).

Table 2: Valuation of the tiger shark experience for participants between January and December 2007. Source: Dicken and Hosking (2009)

| Item | Number of respondents (ZAR) | Mean participant expenditure(ZAR) | Mean total expenditure (ZAR) | 95% confidence intervals for total expenditure (ZAR) |
|--|-----------------------------|-----------------------------------|------------------------------|--|
| Accommodation | 85 | 1 400 | 1 487 561 | 1 104 833–1 933 980 |
| Food and drink | 183 | 992 | 1 061 369 | 855 867–1 297 876 |
| travel in South Africa | 131 | 938 | 1 000 639 | 807 742–1 227 483 |
| Tiger Shark diving in MPA | 113 | 1 651 | 1 763 215 | 1 395 343–2 199 710 |
| Other diving in MPA | 116 | 243 | 257 429 | 166 776–358 341 |
| Other recreational activities | 196 | 150 | 158 240 | 84 376–248 514 |
| Gifts and Souvenirs | 197 | 291 | 312 160 | 194 345–457 803 |
| International travel | 82 | 12 022 | 6 364 661 | 5 427 616–7 435 620 |
| <hr/> | | | | |
| Total expenditure within MPA region | | | 12 405 274 | 10 777 324–14 228 541 |
| Value of package costs to local, provincial and national economy | 79 | 31 440 | 13 442 994 | 11 501 611–15 694 595 |

Key Informant Interviews

Table 3: summary of comments from Key informant interviews

| Respondent | Summary of Comments |
|---|---|
| Terry Price (Advocate) | Legislation is solid but implementation of the implementation is poor. |
| Marthinus le Roux (Prosecutor) | Poor investigation of marine crimes. Poaching is linked to racketeering. |
| Lloyd Edwards (BBWW) | Operating permits are hard to get. There is a lot of bribery and corruption going on. Legislation makes operating legally hard and poaching easy. |
| Mark Addisson (Shark Diving) | Operating permits are difficult to obtain and as a result there is little motivation for operations to follow the correct channels in order to obtain a permit. |

Discussion and Conclusion

South Africa's marine environment is incredibly diverse and few countries around the world can boast such diversity. South Africa's environmental legislation is solid; taking into account the terrestrial and aquatic environments. Legislation regarding the marine environment takes into account, both consumptive and non-consumptive activities and aims to ensure that the living resources are conserved and utilised in a sustainable manner. Such valuable diversity and solid legislation should result in an ideal situation where the marine environment and its resources are protected from over-exploitation and unsustainable utilisation. Unfortunately, this is not the situation in South Africa. Although South Africa has a solid legislation, there is a lack of effective implementation and as a result many perpetrators are not prosecuted. There seems to a skewed focus on marine crimes where more emphasis is placed on prosecuting non-consumptive crimes as opposed to consumptive crimes that ultimately have a more adverse effect on the environment.

Corruption contributes to poor implementation of the current legislation. With poaching in the marine environment being so highly organised it seems to become increasingly difficult to eradicate the syndicates. One might argue that there may not be enough information available

to effectively crack down on the syndicates, but the policing authorities have more than enough information at their disposal to do so. Corruption seems to be the only logical explanation. The less significant members of these syndicates are continuously being brought to book and this does little to curb the operation as a whole. It seems obvious that the 'right' people are being compensated enough, or given the right amount of incentive to ensure that the individuals at the top of these syndicates are able to continue untouched.

The combination of poor implementation and corruption creates a situation that seems to favour and encourage the continuation of consumptive crimes instead of curbing them. In contrast individuals involved in non-consumptive activities face continuous challenges and opposition when, in fact, their activities should be encouraged and endorsed. As these individuals face more and more challenges there is less motivation for other operators to follow the regulations; lessening the integrity of the legislation. If the diversity and richness of South Africa's marine environment is to be preserved (and job opportunities created) then these issues need to be addressed. Although South Africa is notorious for its high levels of corruption it is not an issue that is impossible to address and government needs to take the necessary steps to do so.

Although commercial fishing generates significant amounts of money for the country it is becoming more and more unsustainable with time. A shift in focus is needed. Non-consumptive activities need to be encouraged more aggressively. These activities will both generate money and can continue indefinitely. The ecotourism industry has great potential and needs to be developed greater. A failure to do so will see South Africa losing out on a great deal of opportunities that are not only confined to financial gain.

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