

NAMIBIA'S FISHERIES:

INTRODUCTION AND OVERVIEW

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Namibia's fisheries have received and continue to receive a lot of attention from fisheries scholars. This is partly because these are some of the few relatively well-managed fisheries in the world. This book seeks to provide analysis and discussions of various aspects of Namibia's fisheries, even though to cover all aspects of the fisheries would be a daunting task beyond the scope of a single book. Therefore, the book does not attempt this, rather it presents specific examples to demonstrate some of the achievements and the challenges that Namibian fisheries have faced and continue to face. Many of these challenges are generic to other fisheries worldwide, and hence it is hoped that others may learn both from the successes and failures illustrated in this book.

Why produce a book about Namibia's fisheries? Namibia's fisheries are in many respects similar to the many large-scale modern fisheries to be found in most regions of the world. As has often been stated in fisheries and scientific circles (and recently in the public domain), many of these fisheries are over-capitalised and the fish stocks fully- or over-exploited (see for example, Pauly *et al.*, 2002, Myers and Worm, 2003). Namibia's fisheries provide a relatively more encouraging story.

BACKGROUND TO NAMIBIAN FISHERIES

Marine fishing in Namibia is a relatively young industry. Colonisation by Europeans occurred rather late by African standards, in the late 19th and early 20th century, largely due to an arid and hostile natural landscape that appeared to have little worth colonising. Prior to this, few indigenous people visited the desolate coastline and although there are fascinating accounts of how these small bands of nomads subsisted on shellfish and shallow water fish, their harvests can be measured in kilograms rather than tonnes. European and North American sailors had plundered Namibia's rich seal and guano resources from several small offshore islands, and whales in the open

waters. But again, these were rather isolated events that, despite the devastating impact on the birds and mammals harvested, had a limited impact on marine ecosystems.

Even after the colonists arrived, fishing largely remained a subsistence activity. The coastline offers little shelter, and the riches that were to be harvested later in the century remained undiscovered. Between the two World Wars a small snoek fishery was attempted, apparently with some spectacular results. Not least of these were some large catches of sardine; a portent of the riches hidden below the waves. The 2nd World War put an end to these activities, but on the resumption of peace a new type of fisher arrived along the coast of south western Africa employing all the technological advances of the day. Large mechanised vessels, hydraulic winches hauling synthetic nets and acoustic fish-finding equipment all entered the fishery in the 1950s and 1960s to enable fishers to harvest ever greater catches. By the early 1950s sardine catches had risen to around a quarter of a million tonnes, and by the late 1960s this fishery became one of the largest the world had ever seen, or is likely to. Officially reported landings peaking at 1.4 million tonnes, but with discards and illegal landings included, catches probably exceeded 2 million tonnes. This led to one of the most spectacular crashes witnessed within fisheries as catches declined to just 300 000 tonnes three years later and despite a recovery in the mid-1970s, to a catch of just 12 000 tonnes in 1980.

Throughout the 1960s, as the fish stocks in their own waters were becoming depleted, a number of deepwater fleets from European and the Eastern Bloc countries sailed to Namibian waters, targeting first the abundant horse mackerel stock and then hake. It is estimated that by independence in 1990, 20 million tonnes of these valuable fish had been caught in Namibian waters by foreign fleets, with hardly any benefit accruing to Namibians and the Namibian nation (Bonfil *et al.*, 1998; Sumaila and Vasconcellos, 2000).

Independence was a watershed for fisheries in Namibia, as indeed it was for all facets of life in Namibia. Finally, the control of this once valuable resource was vested in Namibians, and a vigorous policy to enable the recovery of the resources, and in particular the prosperity of the industry, to previous levels was implemented. The current Namibian fisheries management objective is similar to that of most industrial fishing nations: to utilise the living marine resources on a sustainable basis for the benefit of the nation, and to manage these fisheries based on scientific information and principles. However, unlike many nations, Namibia has a fisheries management system that incorporates many of the accepted best-practices as outlined in the major international fisheries conventions. Aspects of this are described in many of the Chapters that follow (for example, Nichols, Holtzhausen and Kirchner).

The Namibian fishing sector operates under circumstances that are somewhat unusual and, in combination, increase the likelihood of successful

sustainable utilisation. Namibian fisheries management started with an almost clean slate in 1990 at the country's independence. The authorities were able to implement a completely new fisheries management system, with few of the historical, cultural, social and political encumbrances that new policies so often hold. The Namibian constitution provides for sustainable utilisation of natural resources, and that these resources should be managed according to the best-available scientific advice for the benefits of both current and future generations. As the fisheries sector is one of the most important economic sectors in Namibia, politicians placed great importance on 'getting it right'. The leaders of the country were politically very strong and therefore able to take unpopular but necessary decisions, and plan beyond the time-frame of the next elections. In addition, the industry is relatively simple to manage with few large companies and no artisanal fishers.

The Benguela upwelling system supports some of the highest productivity in the world, and this tends to lead to a relatively simple ecosystem with each species having relatively simple interactions with other components of the system (Boyer and Hampton, 2001). Hence, the biological complexities that often seem to defy management in many marine systems are somewhat simplified and allow for enhanced understanding.

Environmental conditions of Namibia's two maritime borders (the Lüderitz Upwelling Cell in the south and Angola-Benguela Front in the north) form natural barriers limiting the migration of many fish stocks, especially pelagic species. Thus, many of Namibia's fish stocks are either not shared or only shared to a limited extent. Once again, so many of the political complications introduced through stocks being managed by several nations are, to a large extent, avoided in Namibia. Similarly, most fish stocks occur within 100 nautical miles or so of the coast, hence being far from the limits of the EEZ and thus are not straddling stocks.

Namibia only has two harbours and therefore landings are relatively easy to monitor. Compare this with the nations of the North Sea, where not only does each of the eight bordering nations have numerous landing places, but vessels are able to offload in other countries, far away from the watchful eyes of the controlling authorities.

In addition, Namibia's geographic neighbours, Angola and South Africa, have been supportive and co-operative, providing assistance in the apprehension of illegal fishers, sharing data, etc. This is further evidenced by the various international and regional agreements that have been reached between these and other countries (SADC Fisheries Protocol, SEAFO, the BENEFIT Research Programme and BCLME Programme).

As a result of the above factors, many of the confounding factors that cloud the successes and failures of management regimes are clarified, and while in many other nations, failure to successfully manage a fishery can be

blamed on many different players, often each blaming the other without accepting responsibility, in Namibia this is less easy to do.

Due to good management practices and fortunate circumstances, Namibia has developed a fisheries management system that, according to our perceptions of fisheries management, includes many of the recognised 'best practices' (Sainsbury and Sumaila, 2003). Namibia's fisheries are largely found in the northern Benguela ecosystem; a system that has many characteristics that are conducive to successful management and control of fisheries (see Part 1 of book). This, added to some fortuitous economic, social and political circumstances have enabled a management system to be implemented that has resulted in fisheries becoming one of the economic success stories of this developing country. But Namibia's fisheries management has not been entirely successful. For example, the sardine stocks are as depleted as ever, despite an extremely conservative management policy, while the newly developed orange roughy fishery blossomed and collapsed in just four short years, also in the face of apparently responsible and conservative management. The control of the fishery is to a large extent now vested in Namibian hands, but distribution of fisheries benefits is still problematic, even though the Namibianization programme of the government is helping to deal with the problem.

BOOK CONTENT

The book does not attempt to provide a comprehensive account of all aspects of Namibian fisheries. In fact, this book is meant to be complimentary to an earlier volume, namely, 'A Decade of Namibian Fisheries Science', Volume 23 (2001) of the *South African Journal of Marine Science*. This Volume covered in more detail the physical and biological processes that underlie the productivity of the Namibian marine ecosystem. The contribution of the current book lies in its attempt to bring together the economic, social and biological aspects of the fisheries of Namibia in one volume.

The book opens with a Foreword written by the Honourable Minister of Fisheries and Marine Resources of Namibia. While many such books are usually prefaced by the leading politician in the field in a country, Namibia is, once again, unique here. Minister Iyambo has not only led the development of fisheries policy and implemented many of the management policies described within this book, he is also a fisheries scientist and academic by training who cares and supports academic work even when some of the findings of the research are critical of his Ministry. This attitude of the Minister is truly a gift to Namibia, as it allows new ideas that benefit the country to flourish.

The main body of the book is organized into three Parts. Part 1 describes some of the critical ecological aspects; from the physical functioning of the system through to the biodiversity, and includes two chapters dealing with more traditional fisheries biology and the application of this science to fisheries management.

The second Part deals with economic aspects of Namibia's fisheries, but, unlike traditional economic treatises, these chapters emphasise the need to consider economics holistically, in terms of the biological, social and political context. The economic value of Namibian fish stocks to the nation is described, together with a detailed economic study of the Namibian linefishery. The benefits and costs of the government's policy to enable Namibians to fully participate in the fishery are also studied. The study of the economic benefits of Namibia and South Africa cooperating in managing the shared hake stocks of the Benguela marine ecosystem was the subject of one of the chapters.

The final section of the book addresses some social and institutional aspects of Namibian fisheries. Some chapters describe Namibia's attempts at involving the industry in management decisions, while other chapters describe some of the innovative management, control and surveillance structures and policies that have been implemented to enable Namibia to claim back and maintain control of its fisheries.

THE FUTURE

Fisheries, globally, have in recent years gained a reputation for mismanagement. The environmental, economic and social disasters that have accompanied this mismanagement have been highlighted in the academic literature, and all too graphically in the world's media. In contrast, Namibian fisheries have often been lauded as the almost unique success story amongst all the doom and gloom. Commentators often point out that if Namibia, a developing African country, can manage their fish stocks rationally and sustainably, and with increasing benefits to their own people, why can't more developed countries do the same.

It is tempting to suggest that Namibian managers should continue with their current policies. However, as described within this book, and elsewhere, while many aspects of Namibian fisheries have been hugely successful, others have not. Clearly some policies need to be reviewed to address remaining shortcomings.

External factors are also changing. Climate change may affect the biological functioning of the Benguela marine ecosystem, and declining fish stocks elsewhere will encourage foreign vessels to attempt to enter Namibian fish-

eries, both legally and illegally. An increasing population within Namibia, together with debilitating rates of AIDS/HIV infection, will pose further challenges that will have to be met by the managers of Namibia's economic sectors, including the fisheries sector. Also, it appears that there is still some scope for increasing the potential of Namibia's fisheries by undertaking some restoration efforts. All of these potential challenges and opportunities need close attention from policy makers and managers. It will require continued innovation in the design and implementation of fisheries polices that will ensure that fisheries benefits continue to flow to both current and future generations of Namibians.

To this end, this book provides insights that would be useful to fisheries managers in their effort to continue developing innovative approaches for the effective and efficient management of Namibia's fisheries.

The need for ecosystem-based management of Namibia's marine fisheries was expressed variously in the ecological section of the book (Axelsen *et al.*, Heymans, Skogen, Willemse and Pauly). The importance of marine biodiversity in maintaining ecosystem structure and functioning is not yet understood, and simple diversity indicators that may be useful for fisheries management are not yet available. While theoretical work progresses, it is recommended that basic data of fish diversity are collected as part of standard monitoring resources surveys (Bianchi *et al.*; Palomares and Pauly).

The need for more economic studies of Namibian fisheries to support management was discussed in the chapter by Sumaila and Steinshamn. Lange stressed the need to develop fisheries accounts that estimate the economic value of stocks, the economic loss incurred through over-exploitation and depletion of stocks, and the share of resource rent recovered by quota fees. The need for transboundary management of the resources of the Benguela marine ecosystems was highlighted in Armstrong and Sumaila. While the economic importance of the recreational angling fishery was the subject of the chapter by Barnes *et al.* The authors argue that there is a consumer surplus in the fishery that can be captured. According to the findings in Steinshamn *et al.* drastic measures, which are beginning to be implemented, are needed to help bring back large quantities of the sardine stock. Finally, the Namibianization policy implemented after independence seems to have opened up the fisheries sector to previously disadvantaged Namibians, and therefore has justified its costs. To make sure that this policy continues to meet its objectives, it needs to be assessed and revised from time to time (Armstrong *et al.*).

Finally but not the least, the social and institutional section of the book contains a number of useful insights for fisheries management. From the chapter by Olsen, for instance, we learn that the institutional arrangements for consultation between the fishing industry and the Ministry of Fisheries

and Marine Resources need to be improved. And, according to the work in Bergh and Davies, annual compliance targets need to be set, monitored and analysed, and tools to promote voluntary compliance among fishers need to be adopted to improve monitoring, control and surveillance of Namibian fisheries. Boyer and Oelofsen make the point that incorporating co-management into management process can be beneficial, but such a development needs to be implemented with caution.

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