
Managing Namibia's marine fisheries

A decade of rebuilding

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Principle: Promoting national participation in offshore fisheries can be compatible with sustainable management of resources.

Experience: Creating Namibian fisheries management expertise following national independence after heavy foreign exploitation.

Most important lesson learned: Natural instability in marine systems demands conservative management measures and a shift to ecosystem based management.

Best practice: National fisheries Acts promote "Namibianization" of fisheries within a framework of conservative management.

The marine environment of Namibia falls within the Benguela Current system. The Benguela Current is one of the world's major eastern boundary current systems and is rich in pelagic and demersal fish populations, supported by plankton production driven by intense coastal upwelling. Such systems support a relatively low diversity of species, but are, at the same time, among the most productive habitats in the world

The Namibian coast is approximately 1500km long and is hyper-arid desert along its entire length. The coastal zone is sparsely populated and the desert is not suitable for agriculture. The marine environment is thus free from the levels of pollution commonly associated with large urban communities, and is considered relatively pristine except for the deposition of sediment in the water column from diamond mining along the southern coast. On a local level these mining activities are highly destructive to biodiversity in the inter-tidal habitat.

Fishing is the third-largest sector of the Namibian economy, behind agriculture and mining. It is the second fastest growing industry in the Namibian economy, behind tourism, with the value of exports now being approximately six times greater than at independence. The demersal fishery is the most valuable fishery in Namibia, and almost the entire catch is exported. About 90% of the catch is hake, with monkfish making up most of the remainder. The mid-water fishery for horse mackerel is second in importance. Finally, there is a smaller pelagic fishery with canned sardine as the most valuable product.

History of fishing in Namibia

A large number of Distant Water Fishing Nations (DWFNs) used to fish off Namibia when the country was under South African rule and the 200-mile EEZ had not been declared. More than 300 mid-water and bottom trawl vessels operated off the coast. As soon as the independent government announced the EEZ regime in 1990, there was a more than 90 per cent drop in the number of unlicensed foreign vessels fishing in the area.

Most commercially exploited species are currently nowhere near as abundant as they have been in the past. Unfavourable environmental conditions have usually accompanied these reductions in numbers, and there is evidence of cyclical booms and crashes in pilchard and anchovy populations, which predate the commercial fisheries. However, exploitation of already declining populations has doubtless exacerbated the situation.

Present management

At independence, few Namibians had any experience in fisheries research. Through assistance from donor countries and exposure to the international research community Namibia has, a decade later, a core group of fisheries scientists able to conduct monitoring and assessment work at a level comparable to that found in many countries with a much longer history of fisheries research. At present, harvest levels are set to enable stocks to return to levels that will provide maximum sustainable yields. While adherence to constant proportion harvesting rates has worked well for several stocks during the past decade, more sophisticated procedures will be needed in the future. The formal incorporation of such concepts as reference points (either biological or economic) and the precautionary approach needs to be considered and long-term management strategies adopted. Currently, single species assessment is used to assess commercial species except for hake and seals. An improved, updated and dynamic ecosystem model of the trophic flows through the Northern Benguela is now being built to facilitate multi-species management for the marine resources of Namibia and possibly for the entire Benguela region.

After several decades of over-exploitation, several of Namibia's marine resources are showing signs of a recovery. The monkfish catches have increased since independence and this fishery is now an important component of the trawl industry. Similarly the hake fishery has grown since independence, although catches are still considerably below those of earlier years.

It has become clear to fisheries managers in Namibia that there is no universal recipe for good fisheries management. After independence, support for measures to rebuild the stocks made it easy to implement drastic conservation measures. The acute need to rebuild many of them was put into practice by introducing total allowable catches (TACs) for all major species. Namibia endeavored to adapt the modern trend in fisheries management to its own needs and develop a system based on the allocation of rights, quotas and vessel licenses. The system takes into account collective international wisdom on fisheries management, but it steers clear of blindly following other models.

The Fisheries Act of 1992 spells out a clear and transparent process through which the Minister responsible for fisheries allocates harvest rights based on criteria that ensure Namibians get a fair chance to enter the industry, and facilitates the empowerment of previously disadvantaged groups. The transferability of quotas as practiced in New Zealand and elsewhere is not regarded as the ideal system in Namibia. The Namibian fishing industry operates without subsidies. The industry pays a resource rent (quota levy) as well as a portion of the costs of research and the fisheries observers that monitor catches.

Various area restrictions are in effect to restrict fishing effort. A vessel observation system is being implemented for better control over area restrictions. Depth and gear restrictions, as well as experiments with selective fishing gear, are also parts of management.

Managing Namibian fish resources has required managers to deal with uncertainties brought about by the highly variable Benguela ecosystem. The only way that risk levels in managing resources can be reduced is to be conservative in harvesting. Of the three main resources - hake, sardine, and horse mackerel - only sardine has not performed well since independence. Some of the smaller, longer-lived species, e.g. rock lobster, red crab, and Cape fur seal, show either a steady recovery or stabilization. For most resources, a major environmental aberration in the northern Benguela in 1994/1995 caused biomass estimates to decrease, and a return to normal environmental conditions has underpinned the recoveries during 1997/1998. On the basis of these trends it is evident that, despite the adverse conditions of 1994/1995, the well-disciplined and conservative approach to setting TACs, allied to ensuring that landings do not exceed the set limits, is being rewarded by recovery of stocks.

International initiatives

BENEFIT (Benguela Environmental Fisheries Interaction & Training) is a regional marine science and training program involving Angola, Namibia and South Africa. Its goal is to promote optimal and sustainable utilization of the Benguela ecosystem's living resources.

The Benguela Current Large Marine Ecosystem Project (BCLME), another regional initiative between Angola, Namibia and South Africa, is aimed at sustainable integrated management of the Benguela Current ecosystem.

Namibia, together with approximately 50 other African, Caribbean and Pacific countries, is also part of the project "Strengthening Fisheries & Biodiversity Management in ACP Countries" that provides training to researchers and fishery managers. The objectives are to build up the aquatic resource management and scientific capacity of ACP institutions, to promote an enabling environment for research, and to improve the quality, completeness and usefulness of FishBase and other management tools.

