

**THE STATUS OF BILLFISH POPULATIONS IN SOMALIA
CHALLENGES AND OPPORTUNITIES FOR CONSERVATION AND MANAGEMENT**



Mr. Said Abdullahi Nor

Ministry of Fisheries & Marine Resources

OVERVIEW OF THE BILLFISH FISHERIES IN SOMALIA OCEAN

Billfish are large predatory fish that include species such as marlin, sailfish, and swordfish. They are important for both commercial and recreational fisheries and play a crucial role in maintaining the balance of marine ecosystems.

In Somalia, billfish populations have not been targeted species with regards to the local fisheries. However, globally, billfish populations have recently declined by an estimated 20% in the past 20 years due to overfishing, habitat loss, and climate change. Despite these challenges, there is potential to sustainably increase employment, food security, nutrition, and revenues from billfish fisheries in Somalia. With its productive ecosystems and major upwelling created by the Southwest monsoon, Somalia has the potential to develop sustainable billfish fisheries.

However, there is currently no active fisheries management in Somalia, which hinders efforts to protect billfish populations. Addressing this challenge through more research and the implementation of active fisheries management measures could help to protect billfish populations and ensure their sustainable use. This would not only benefit the billfish populations but also the people of Somalia by providing employment, food security, nutrition, and revenues from its fisheries.

ABSTRACT

the status of billfish populations in Somalia. The study found that billfish are not a target species in Somali waters, but that their populations have declined globally by an estimated 20% in the past 20 years due to overfishing, habitat loss, and climate change. Somalia has the longest coastline in Africa and an Exclusive Economic Zone of 1,165,500 km², with the potential to sustainably increase employment, food security, nutrition, and revenues from its fisheries. However, Somalia's fisheries management is currently precarious.

The study identified several challenges that need to be addressed to effectively manage and conserve billfish populations in Somalia. These challenges include unrealistic perceptions about billfish, a scarcity of professionals with the necessary skills and knowledge, sectarianism in state-based divided territories, isolation of organizational structures, and fragmentation of international donors.

the Ministry of Fisheries & Blue Economy and the Save the Ocean Foundation should collaborate to develop a comprehensive plan for the management and conservation of billfish populations in Somalia. This plan should address the challenges identified in the study and ensure that billfish populations are sustainably managed for the benefit of the people of Somalia and the world.

CURRENT CHALLENGES: One of the main challenges facing billfish conservation in Somalia is the lack of data on their populations and distribution. This makes it difficult to effectively manage and conserve these species. Additionally, there is currently no active fisheries management in Somalia, which further hinders efforts to protect billfish populations.

POTENTIAL SOLUTIONS: To address these challenges, there is a need for more research on billfish populations in Somali waters. This could include surveys of fishers, interviews with experts, and the analysis of fishery data. Additionally, implementing active fisheries management measures could help to protect billfish populations and ensure their sustainable use.

MATERIAL & METHODES

MATERIALS:

Surveys of fishers: Surveys could be conducted to gather information from fishers about their experiences and observations of billfish populations in Somali waters.

Interviews with experts: Interviews could be conducted with experts in the field of marine biology, fisheries management, and conservation to gather their insights and opinions on the status of billfish populations in Somalia.

Fishery data: Data from fisheries operating in Somali waters could be analyzed to gather information about the catch and distribution of billfish species.

METHODS:

Data collection: Data could be collected through surveys, interviews, and the analysis of fishery data. This data could then be compiled and analyzed to provide a comprehensive picture of the status of billfish populations in Somali waters.

Data analysis: Statistical methods could be used to analyze the data collected to identify trends and patterns in billfish populations. This could include the use of regression analysis, time series analysis, and other statistical techniques.

Reporting: The results of the study could be reported in a research paper or report that presents the findings and conclusions of the research. This report could include detailed information about the materials and methods used, as well as the results of the data analysis.

According to a review of *billfish fisheries in the Western Indian Ocean*, billfish have been documented in Somalia's inshore waters on the north and east coasts by both industrial boats (mainly fishing illegally) and artisanal fishers using handlines and gill nets¹. Landings of swordfish and sailfish have been verified by photographs, and blue and black marlin have been reported anecdotally.

PROMISING SOLUTIONS

The African Billfish Foundation's approach to addressing the challenges and threats affecting billfish resources in the Western Indian Ocean could be applied to the fishing sector in Somalia.

This would involve training, enhanced research, education and awareness, and regional cooperation.

Training on tagging could be provided to fishers in Somalia to obtain data and results that can guide management decisions for reducing billfish by-catch. This would also enhance the development of fishing technologies, practices, and gears that will minimize by-catch and mitigate post-release mortality in both recreational and commercial fisheries.

Enhanced research could be conducted in collaboration with local and regional stakeholders to obtain adequate data that will be vital in understanding the status of the fisheries as well as their biology and ecology. This could include the collection of more information on the movements of billfishes, not only through conventional tagging studies but also via archival tags to allow the collection of information on vertical movements.

Education and awareness could be raised at both local and regional levels for both artisanal and large-scale fisheries. This could involve outreach programs to educate fishers about the importance of billfish conservation and how they can contribute to protecting these species.

Regional cooperation could be fostered to address the challenges facing billfish conservation in Somalia. This could involve collaboration with neighboring countries and regional organizations to share data, expertise, and resources to protect billfish populations.

In conclusion, applying these promising solutions to the fishing sector in Somalia could help to protect billfish populations and ensure their sustainable use. This would not only benefit the billfish populations but also the people of Somalia by providing employment, food security, nutrition, and revenues from its fisheries.

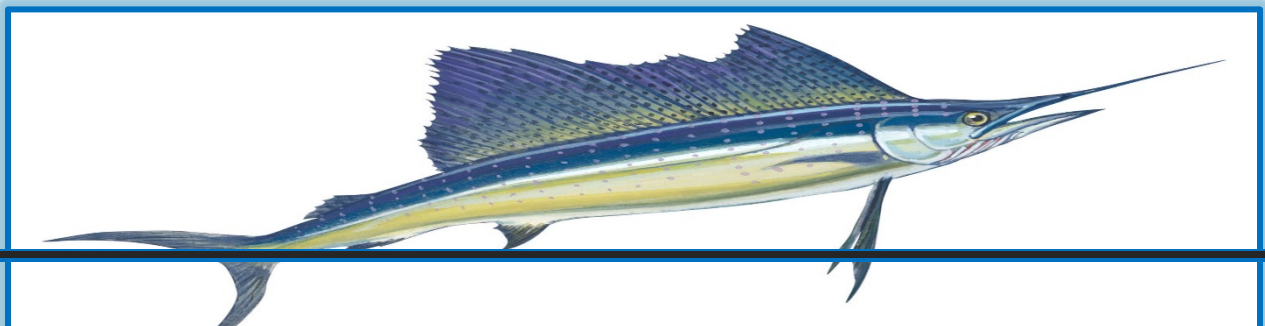
RECOMMENDATION

Recommendations for protecting billfish populations in Somalia:

1. Conduct more research on billfish populations in Somali waters: This could include surveys of fishers, interviews with experts, and the analysis of fishery data. This would provide valuable information about the status of billfish populations and help to guide conservation and management efforts.
2. Implement active fisheries management measures: This could involve the development and implementation of measures to protect billfish populations, such as catch limits, size limits, and closed areas. These measures could help to ensure the sustainable use of billfish resources.
3. Raise awareness about the importance of billfish conservation: This could involve outreach programs to educate fishers and the general public about the importance of billfish conservation and how they can contribute to protecting these species.
4. Foster regional cooperation: This could involve collaboration with neighboring countries and regional organizations to share data, expertise, and resources to protect billfish populations.
5. Provide training on tagging: Training on tagging could be provided to fishers in Somalia to obtain data and results that can guide management decisions for reducing billfish by-catch. This would also enhance the development of fishing technologies, practices, and gears that will minimize by-catch and mitigate post-release mortality in both recreational and commercial fisheries.

These recommendations could help to protect billfish populations in Somalia and ensure their sustainable use.

This would not only benefit the billfish populations but also the people of Somalia by providing employment, food security, nutrition, and revenues from its fisheries



CONCLUSION:

Billfish are important economic and cultural resources for the world, but their populations have declined in recent years due to overfishing, habitat loss, and climate change. In Somalia, there is potential to sustainably increase employment, food security, nutrition, and revenues from its fisheries. However, there is currently no active fisheries management.

Addressing this challenge through more research and the implementation of active fisheries management measures could help to protect billfish populations and ensure their sustainable use.

According to a study published in the journal *Reviews in Fish Biology and Fisheries*, data on billfish species suffer from a host of challenges: poor reporting, incomplete coverage, aggregation of billfish species into one group, and misidentification of fish. This limit understanding of stock dynamics from a historical and contemporary perspective.

Another study published in *Frontiers in Marine Science* found that foreign illegal, unreported, and unregulated fishing in Somali waters is fueling public anger and perpetuating conflict in five ways: by directly competing with the domestic fishery; through links to piracy; through nearshore illegal and destructive bottom trawling; by contributing to regional political conflict over vessel licensing; and by reducing long-term livelihood security.

In conclusion, more research is needed to better understand the challenges facing billfish conservation in Somalia.

The implementation of active fisheries management measures could help to protect billfish populations and ensure their sustainable use.

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**BILLFISH
IDENTIFIER**