

# **Project Badweyn: Mapping Somali Coastal Resources For A Sustainable And Peaceful Future**

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## **Submission:**

### **Background**

Project Badweyn is an online, interactive mapping tool presenting publicly available data about the Somali coastal region. It was originally created in 2018 to depict Somali coastal resources, their various uses by coastal communities and foreign interests, and the conflicts that may arise when those uses overlap. When it was first developed by Secure Fisheries, little public data were available about the Somali coastal environment, coastal communities, fisheries production, and other uses of the marine space. This left government decision makers, the private sector, and coastal communities without enough information to create sustainable and profitable resource use plans. Project Badweyn sought to close this information gap.

In the years since Project Badweyn's launch, attention toward opportunities in the Somali fisheries sector for investment, profit, and sustainable uses has increased. There has been incredible progress made in fisheries data collection in the region with domestic catch data now collected in multiple locations. Improvements in remote sensing has led to the creation of global scale public maps of coastal environments with precision heretofore unavailable for the Somali region, where on-the-ground research is logistically difficult and technical capacity is lacking. Amassing this new information about the Somali coast prompted an update of Project Badweyn and new analysis of both the opportunities available for sustainable development and the potential for resource-based conflicts.

### **Method**

Using ArcGIS Pro and ArcGIS Online, data were collated from multiple sources to show human activities; coastal habitats and biodiversity areas; ranges of commercially important highly migratory fishes, coastal fishes, and invertebrates; and administrative boundaries. New, high resolution coastal habitat data from the Allen Coral Atlas and European Space Agencies' WorldCover 2020 were processed from rasters to shapefiles to decrease bandwidth usage in an online format. Fisheries conflict data from Secure Fisheries' Fisheries Conflict Database were added and made interactive so users can view the details of the mapped conflicts. Project Badweyn is freely available and the data layers can be turned on and off to see how different categories of ocean uses may interact with each other.

### **Results**

To demonstrate Project Badweyn's utility as a planning tool, I explore a community case study in Zeila, Somaliland to show how the new information can be effectively used to find opportunities for sustainable fisheries management, environmental

conservation, and conflict mitigation. Examination of the area around Zeila shows rich mangrove, coral reef, and seagrass habitats that are important fishing grounds for the community and support high marine biodiversity. However, these habitats are likely threatened by pollution from the nearby active shipping lane approaching the Bab al-Mandab Strait and the large port in Djibouti. Foreign fishing inshore is a constant source of frustration for the community, and that conflict sometimes escalates into violence. As a result, the community's fisheries cooperative management association (CMA) is working with the Somaliland government to plan and implement a marine protected area (MPA) to preserve their livelihoods and this unique marine environment. The visualization in Project Badweyn of areas of interaction between important habitats, foreign vessels, and community fishers will inform MPA planning.

### **Conclusion**

The Zeila case study shows that Project Badweyn's comprehensive repository of coastal data for the Somali region offers government agencies, communities, funders, and anyone with an internet connection the ability to make informed decisions for sustainable resource use and conflict mitigation in Somali waters.