



# Mtafiti Monthly

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01 Kenya Exclusive Economic Zone Fisheries Stock assessment

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## KMFRI surveys show healthy stocks of migratory bill fish, tuna and sharks

Kenya Marine and Fisheries Research Institute (KMFRI) has conducted fish stock assessment covering the entire Kenya Exclusive Economic Zone (EEZ) to evaluate the economic status of the fishery resources. The entire assessment consisted of five longline surveys targeting large pelagic fish, and two mid-water trawls targeting small and medium fish. Pelagics are found near the ocean surface.

### Longline surveys...

From the pelagic longline data, a total of 47 species of fish were identified after 120 fishing events carried out in the surveys undertaken between April and October 2020. Preliminary results show Swordfish dominated the total catch with 70.2 per cent.



Swordfish/Photo. Courtesy

Oceanic blue shark came a distant second with 7.8 percent, Bigeye tuna constituted 4.3 per cent, Oceanic whitetip shark stood at 3.6 per cent, Silky shark was 3.2 per cent with Yellow fin tuna captured being 2.1 per cent of the total catch in the longline surveys. Yellow fin tuna was abundant in shallow depths of about 30 metres, whereas Bigeye tuna species were more in depths of approximately 100 metres.



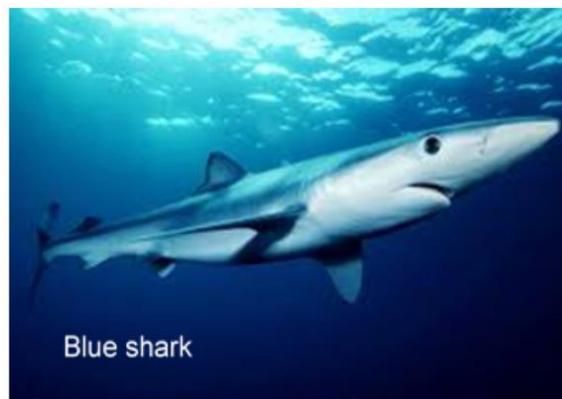
Left, KMFRI team headed by Chief Research Scientist Dr Edward Kimani and Ms Mary Ontomwa, a research scientist. Right, sea birds observed at the EEZ during the surveys, which form a rich diversity of the Kenya EEZ.



Yellowfin tuna



Bigeye tuna



Blue shark

Photos/ Courtesy

The total fish catches obtained during the survey period weigh 137,907kgs, of which 89,152kgs are saleable. Results of an evaluation of the longline



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fisheries data show that fishing efforts and catches of the four main species has been increasing. The size of the key species also indicates minimal impact of fishing on reproduction capacity of the stock over the last few years.

The estimated annual catch rate is 1,118,163kg per vessel. Preliminary analysis of fisheries catches indicates the potential Maximum Sustainable Yield (MSY) of the key commercial species is 12,950metric tonnes.

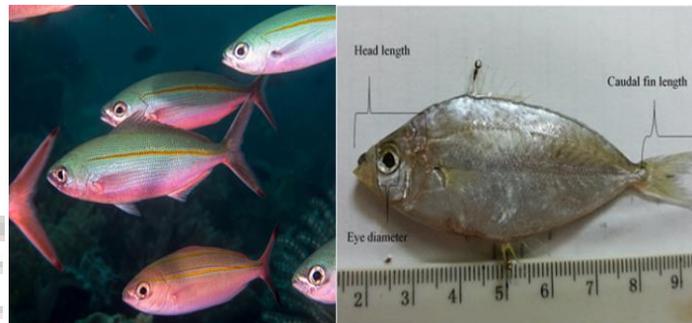
The results indicate healthy stocks of migratory bill fish, tuna and sharks that are able to support up to 12 vessels against the current four targeting these stocks. The catch from the vessels will go a long way in providing jobs in fishing, fish handling and processing facilities, support food security in the coast region and enhance fish export to foreign markets.

## Mid-water surveys...

In two mid-water surveys carried out between January and June 2021, no dense midwater schools of fish were detected through echo sounding, but the signals indicated presence of fish near the sea bottom in areas with depths of below 400m. Also, 23 sets were made of which 15 were mid-water, and eight epibenthic trawls.

Data shows a total catch of 3,453.7kg was realized comprising 551.9kg finfish, 18.5kg crustaceans, 2524.9kg cephalopods, and 296.8kg of sharks and rays. Of this catch 3,372.6kg was retained and 81.1kg discarded.

Marine ray-finned fish species dominated the catch with banana fusilier representing 37.2 per cent, followed by Berber ponyfish, whose total catch was 6.1 per cent. The Indian pellona catch, a species of longfin herring native to the coasts, mangrove swamps, and estuaries of the Indian Ocean, constituted 5.1 per cent.



Top Left, banana fusilier, Right, berber ponyfish Bottom, Indian Pellona species/ Photos Courtesy

In the mid-water stock assessment, key commercial species caught included the longfin yellowtail, followed by the pickhandle barracuda.



Pickhandle barracuda/Photo.Courtesy

Kenya plans to expand the use of the EEZ fisheries resources to enhance economic activities and employment in the coast region following the current economic development plan Vision 2030 and the blue economy initiative. The state of the fishery stocks from the current surveys is fundamental to the planning of investment in the marine fisheries sector.

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