generate report

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0.1 Activities proposed includes:

i. Analyze CAS data collected from 2014 - 2018 and report trends in total catch, catch per unit effort, species composition and stock health
ii. Analyze catch in terms of species, size CPUE different between FISHCOM area and the rest of the area along the cost.
iii. Assess any reappearance of fish species in the study area and its link to conservation
iv. Assess any appearance of new fish species in the area and its link to conservation
v. Identify gaps in the current statistical system and give recommendations on how to improve

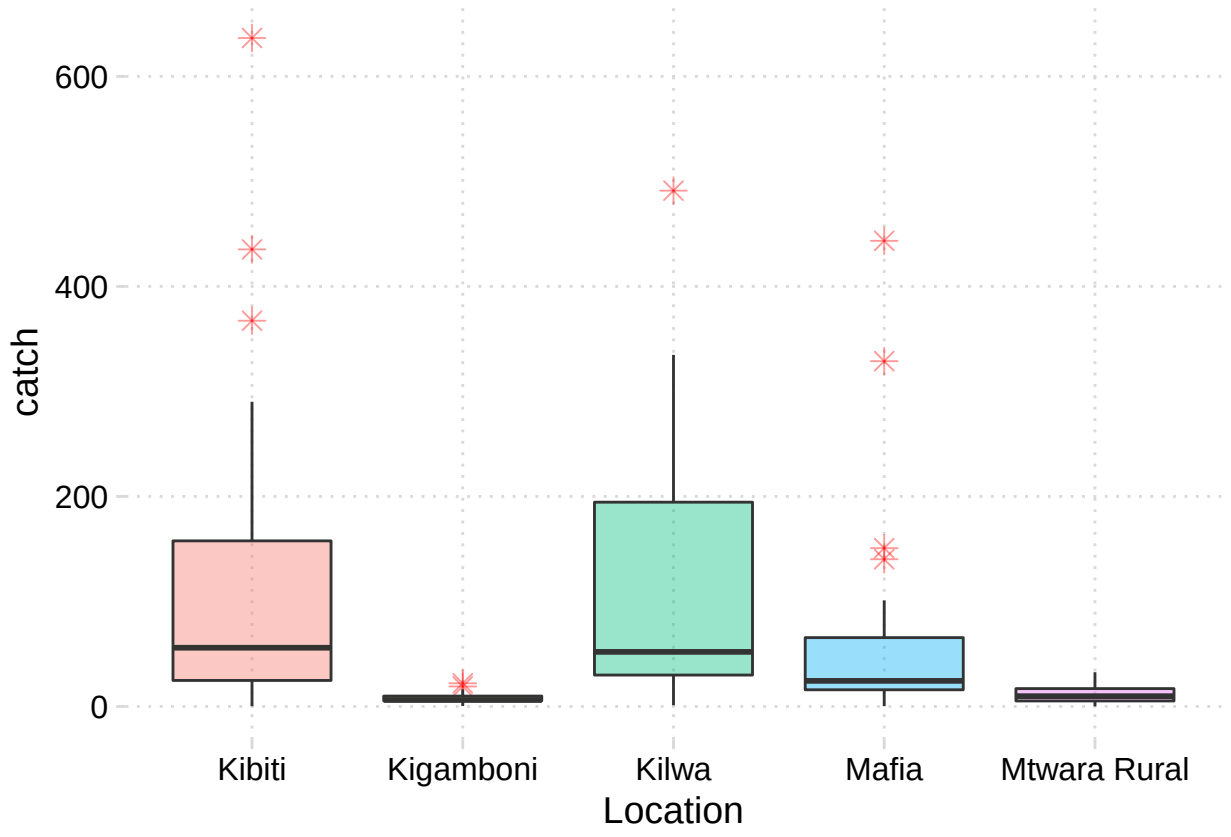


Figure 1: Total catch per location using raw data. Spot the outlier from all sites except Mtwara Rural

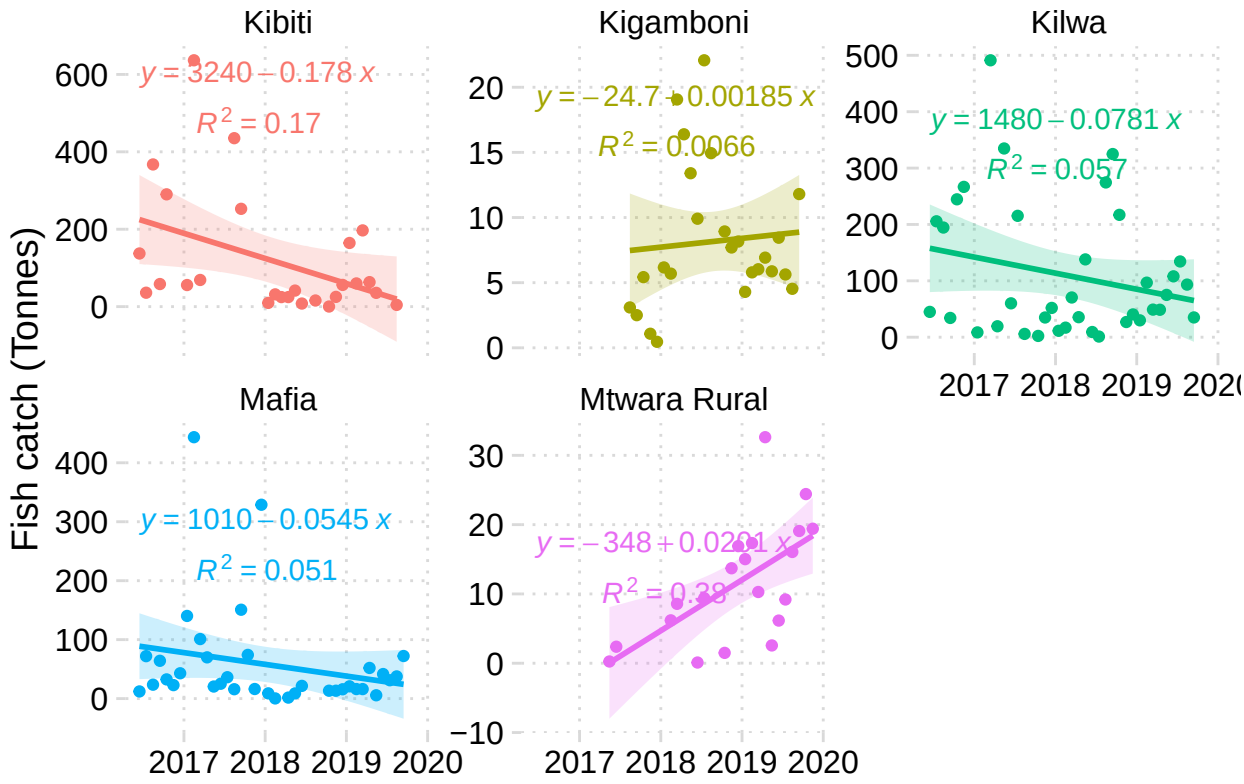


Figure 2: Trend of raw catch data per each site

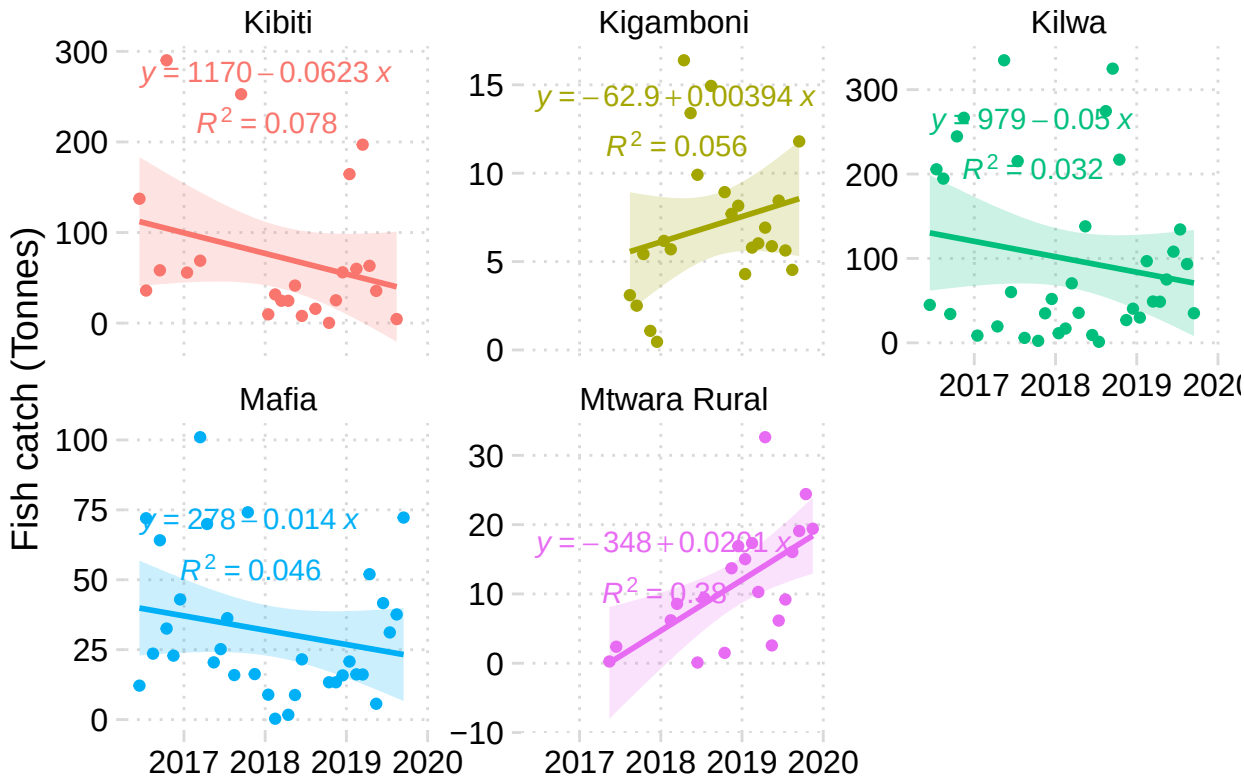


Figure 3: Trend of error free catch data per each site

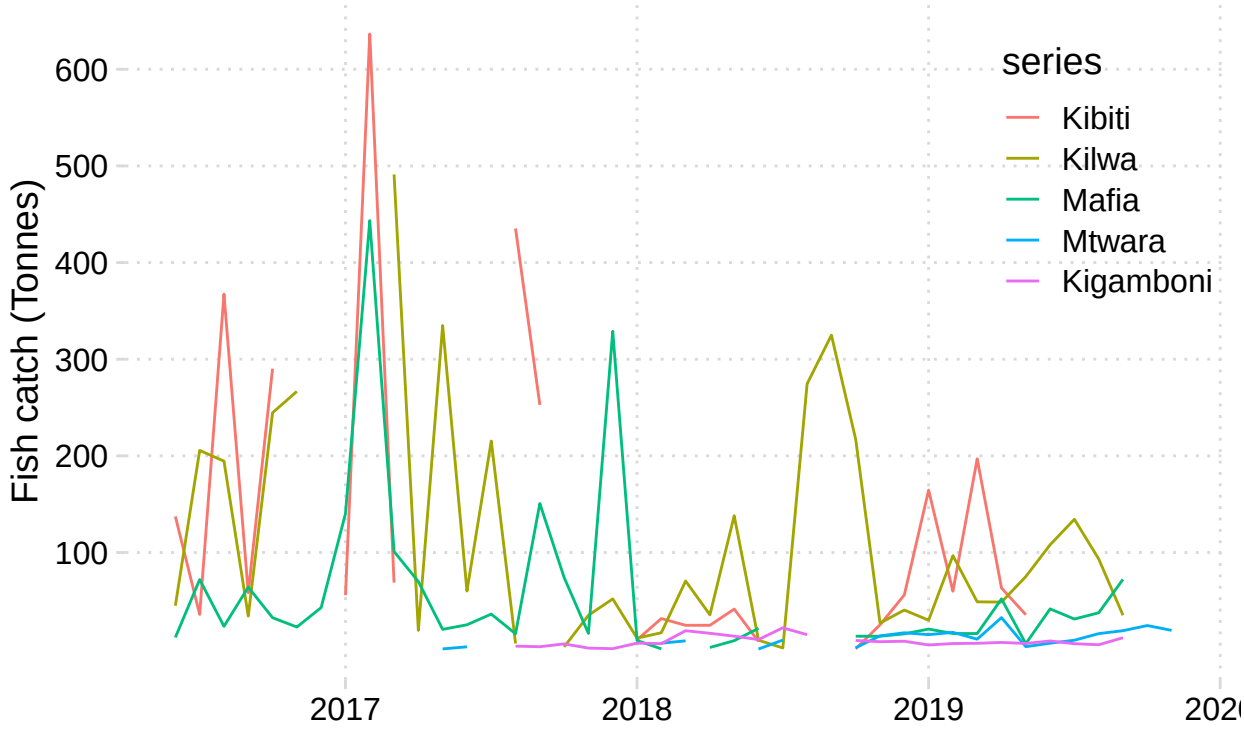
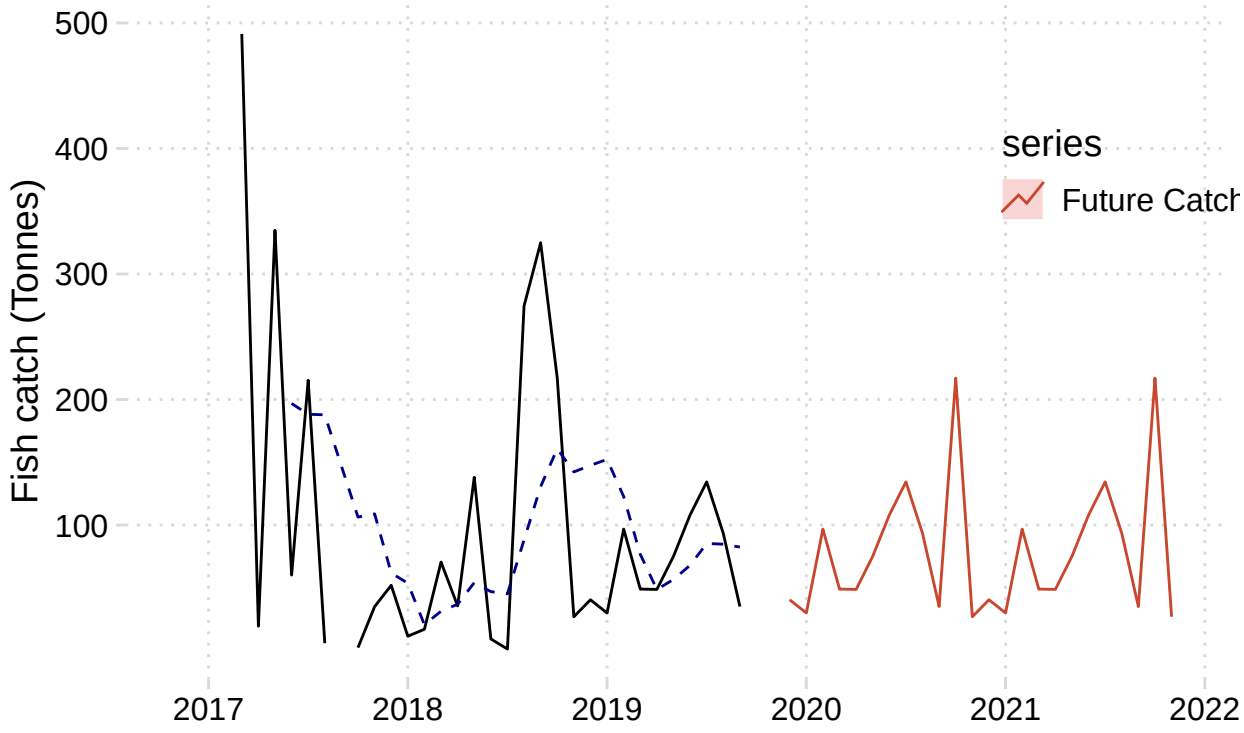


Figure 4: Trend of catch for all sites

We notice that only the catch data has few missing values. Then we use it to represent the trend of cath. Because the data ends in september 2019, we extended for two more years and forecast the catches of fish in this site until september 2021. We add six months moving average on the plot


500
400
300
200
100
Fish catch (Tonnes)
2017
2018
2019
2020
2021
2022
series
Future Catch

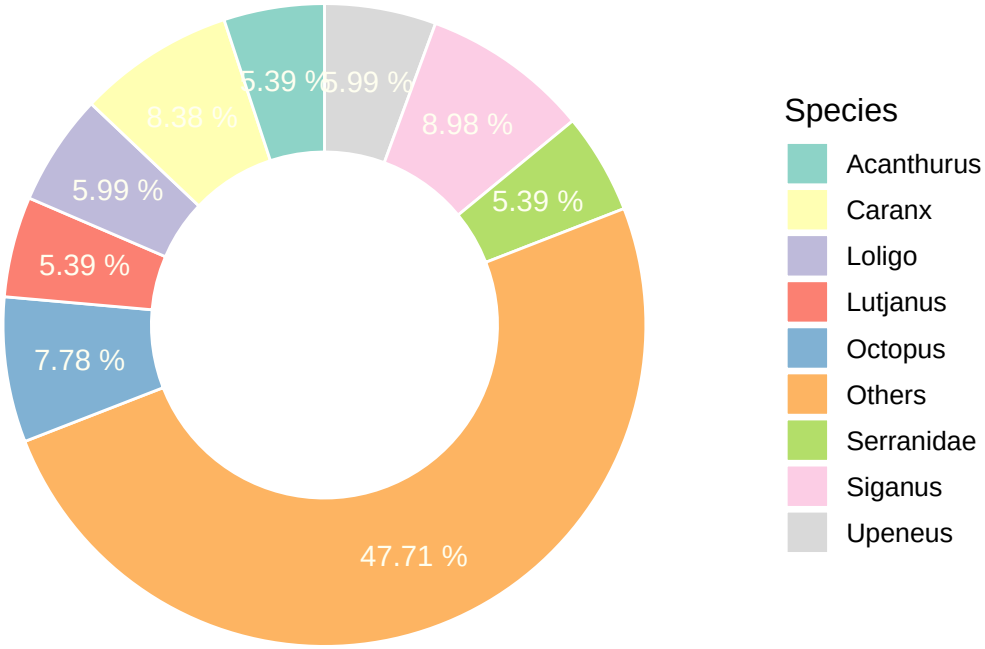


Figure 5: Species Composition at Mtwara

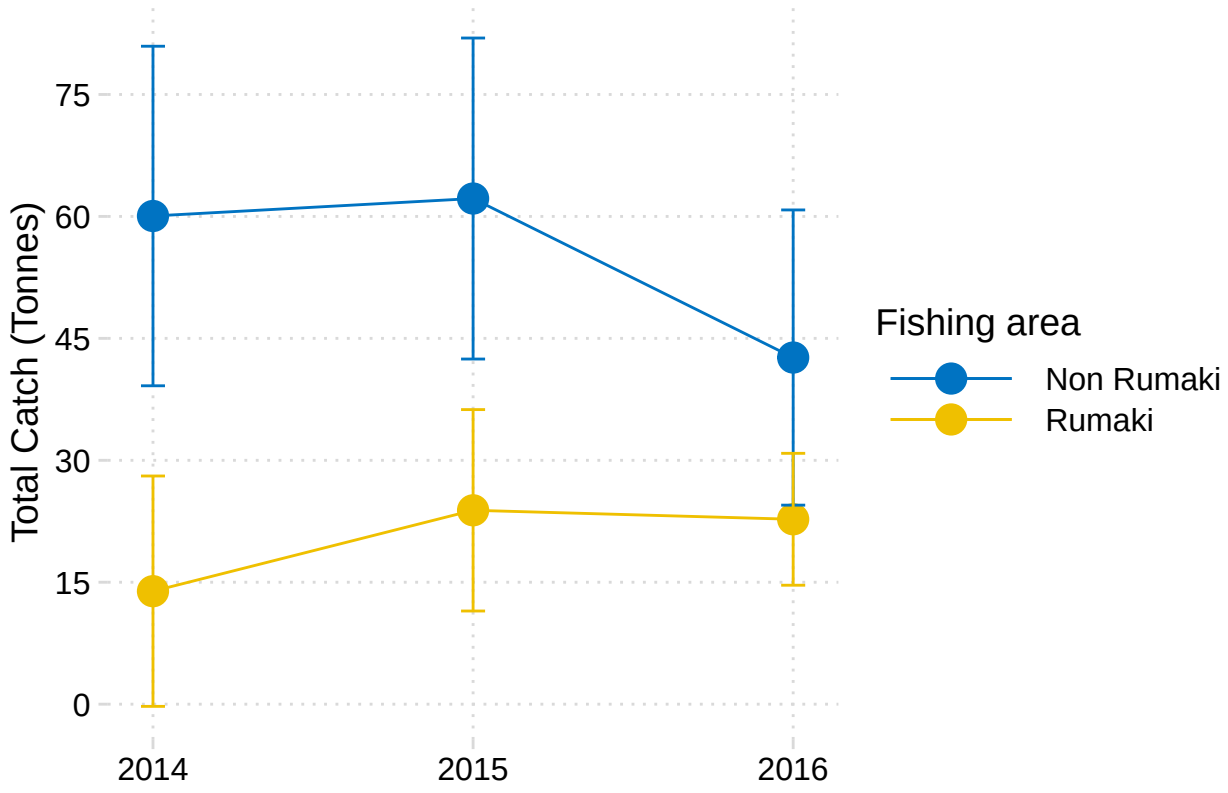


Figure 6: Catch comparison between Rumaki and other fishing areas. This figure is before removing outliers

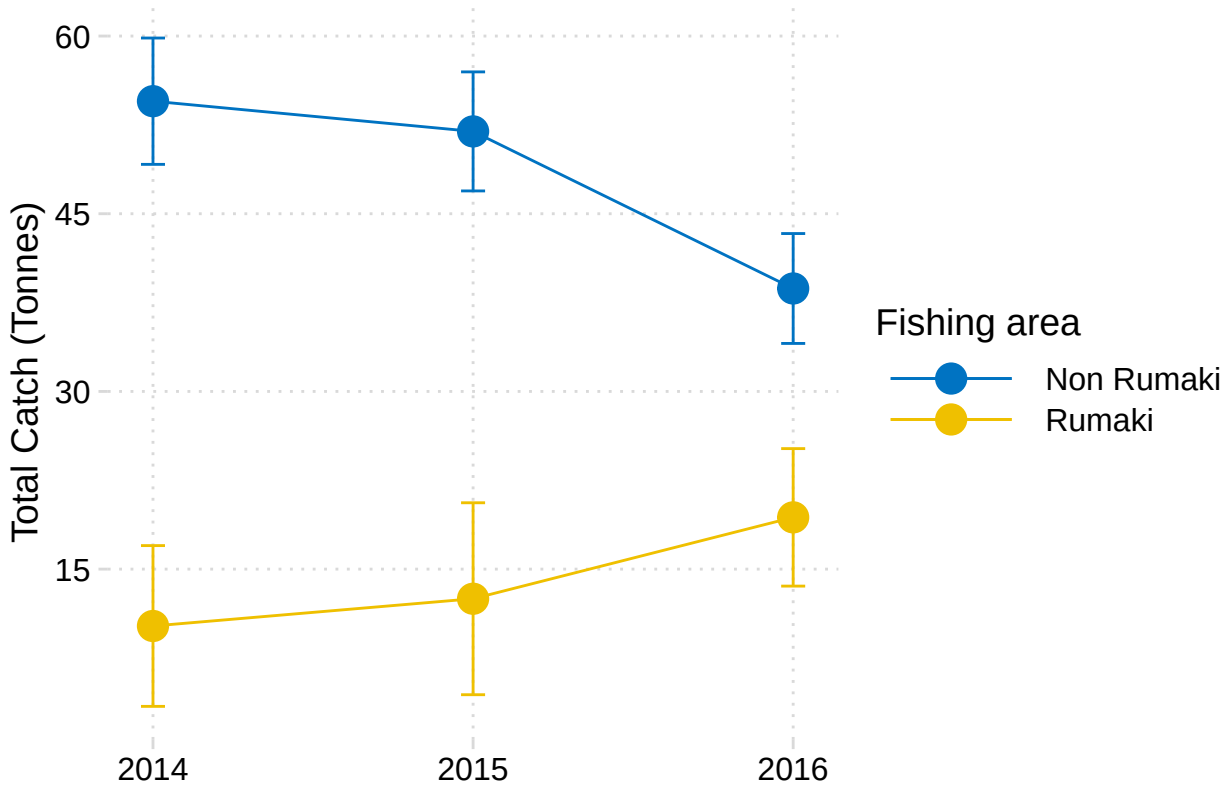


Figure 7: Catch comparison between Rumaki and other fishing areas. This figure is after removing outliers

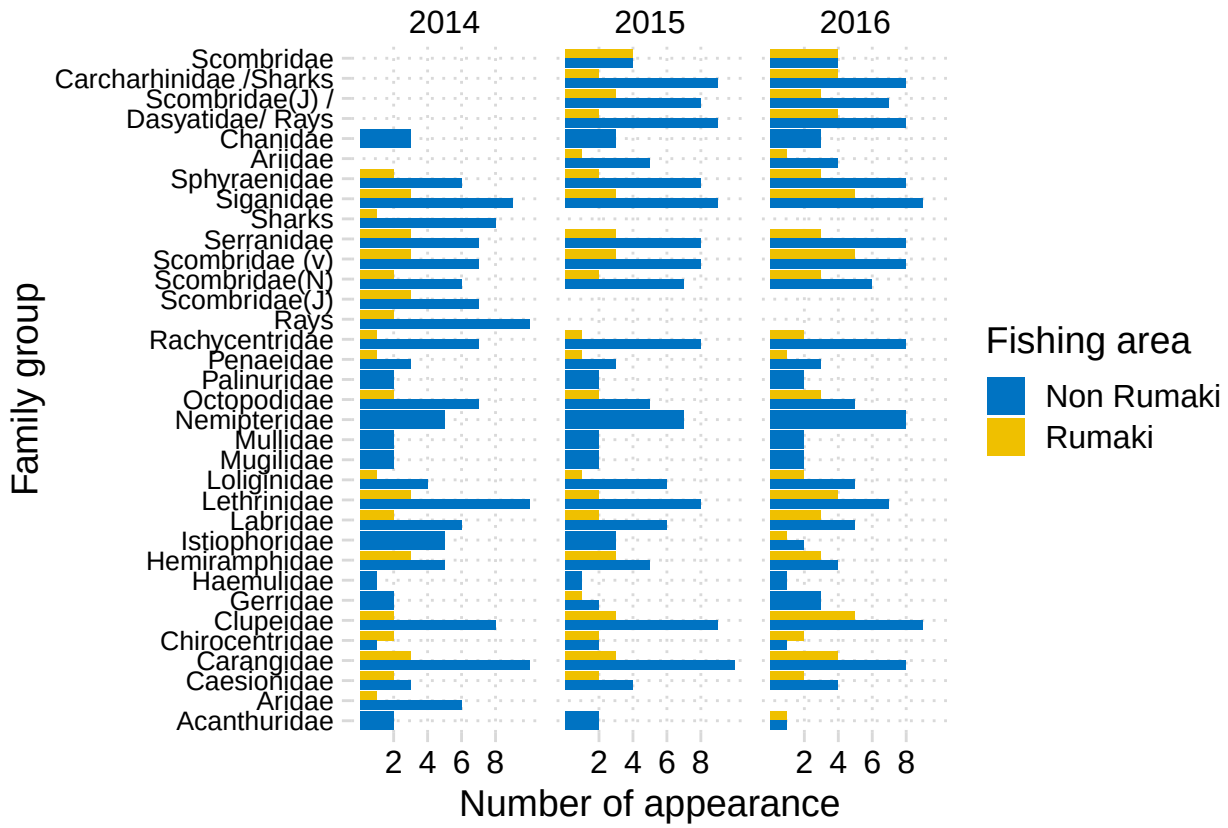


Figure 8: Common species caught in both Rumaki and other areas

Table 1: Species found in Rumaki fishing area

	Non Rumaki		Rumaki	
Species	2015	2016	2015	2016
Caesio xanthonota	absent	absent	present	present
Hemiramphus far	absent	absent	present	present
Xiphias gladius	absent	absent	present	present

Table 2: Species found in Non Rumaki fishing area

	Non Rumaki		Rumaki	
Species	2015	2016	2015	2016
Netuma thalassina	present	present	absent	absent
Sardinella neglecta	NA	present	NA	absent
Panulirus ornatus	present	present	absent	absent
Rachycentron canadum	present	present	absent	absent
Cephalopholis argus	present	present	absent	absent
Sphyraena obtusata	present	present	absent	absent

Table 3: Species found in Rumaki and Non-Rumaki fishing areas

	Non Rumaki		Rumaki	
Species	2015	2016	2015	2016
Sardinella neglecta	present	NA	present	NA
Lethrinus harak	present	present	present	present
Octopus chromatus	present	present	present	present
Penaeus Monodon	present	present	present	present
Pastinachus sephen	present	present	present	present
Rastrelliger kanagurta	present	present	present	present
Siganus Canaliculatus	present	NA	present	NA