FISHERIES DATA COLLECTION WORKING GROUP: SIGNIFICANT PROGRESS FOR SOMALIA'S FISHERIES

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Abstract

In November 2017, Somalia participated in the 13th WPDCS and presented a paper on the establishment of centralized data collection nationwide. The following year, Somalia took action to improve the catch data collection system for pelagic fisheries through Project Kalluun—a partnership between the Ministry of Fisheries and Marine Resources (MFMR), City University, Secure Fisheries, and FAO—and to pilot new fisheries data collection and community engagement. Its objective is to strengthen the data collection, processing, and reporting system to enhance the quality of data by increasing coverage and representativeness. Efforts have been made to improve sampling area selection, train data collectors on sampling and species identification, and revise data forms. Special attention was paid to identify and record species managed by the IOTC.

In October 2019, the Federal Government of Somalia began the Fisheries Data Collection Working Group (FDCWG).[1] The pilot project was led by Secure Fisheries, a program of One Earth Future Foundation. A team of Technical Working Group members, civil society representatives, and representatives from the Ministries of Fisheries and Marine Resources of the Federal Government of Somalia, and the Federal Member States of Jubaland, Southwest, Galmudug, HirShabelle, and Puntland, held an initial workshop to adopt a harmonized data collection protocol, fish identification guide, and set of data collection forms. Starting in late December 2019, a team of enumerators at the following fish landing sites began collecting catch and effort data from fishing vessels, three times per week: Kismayo, Merca, Mogadishu, Adale, Hobyo, and Bosaso. This effort has resulted in the creation of a catch database that holds the first nation-wide effort to rigorously collect scientifically valid fisheries catch data in Somalia in over 30 years.

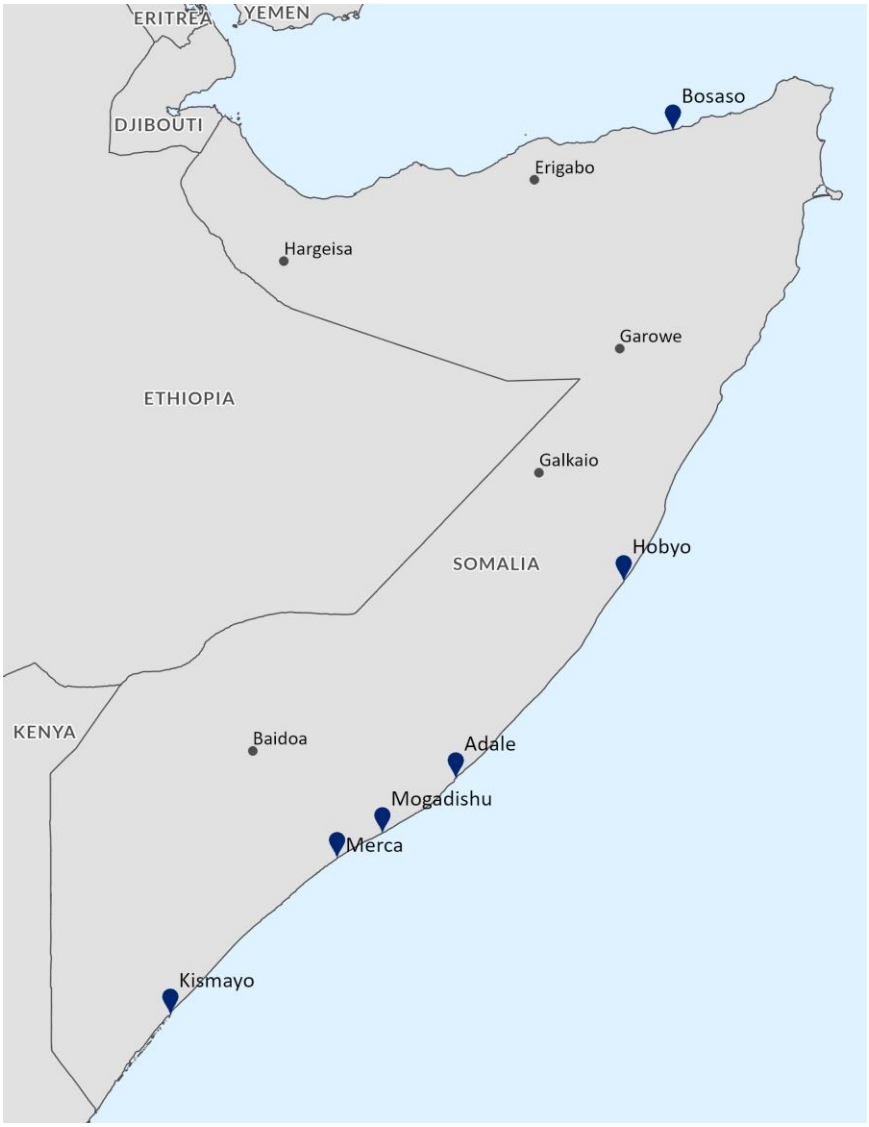
[1] *The FDCWG Project was supported by the Youth Employment Somalia (YES) project funded by the UN Multi-Donor Trust Fund but with particular funding provided by Italian Agency for Development Co-operation for this work and the Coastal Communities Against Piracy (CCAP) Project funded by the European Union.*

Approach

The FDCWG effort was punctuated by three workshops: the initial workshop to harmonize efforts and develop a standardized data collection protocol; a review workshop in January 2020 to adjust the protocol and report progress; and a final workshop in May 2020 (remotely held) to discuss successes, suggest improvement, and determine a way forward.

In each of six landing sites (Figure 1), a team of two enumerators was trained and overseen by a Landing Site Coordinator. This team of 18 data collectors reported data on a regular basis through August 2020.

Figure 1. Map of landing site locations for data collection by the FDCWG.



During this phase of the project, the following data were collected at each location:

- Vessel information
- Gear information
- Effort
- Catch by species or family (in numbers and kg)
- Length and weight
- Ex-vessel price

Preliminary results

Data were collected for 31 unique categories of fishes. Species-level data were collected for all IOTC-managed species. An additional seven species-level categories, three family-level categories, and three higher-taxa categories were included. To date, the database includes entries on over 30,000 fish, weight and length measurements for over 8,000 fish, and effort data for over 900 vessel-trip entries. We report here preliminary estimates of nation-wide catch composition (Figure 2), and length-weight and length-frequency (Figures) for a few key IOTC-managed species.

The database is currently being validated for quality assurance, completeness, and data entry accuracy. Next steps include a validation workshop for all members of the FDCWG to achieve consensus on data collected during this phase. The FDCWG will continue when new funds are secured (by end of 2020) and data should be available for reporting in 2021.

Figure 2. Catch composition by fish type for six landing sites in Somalia, December 2019–August 2020.

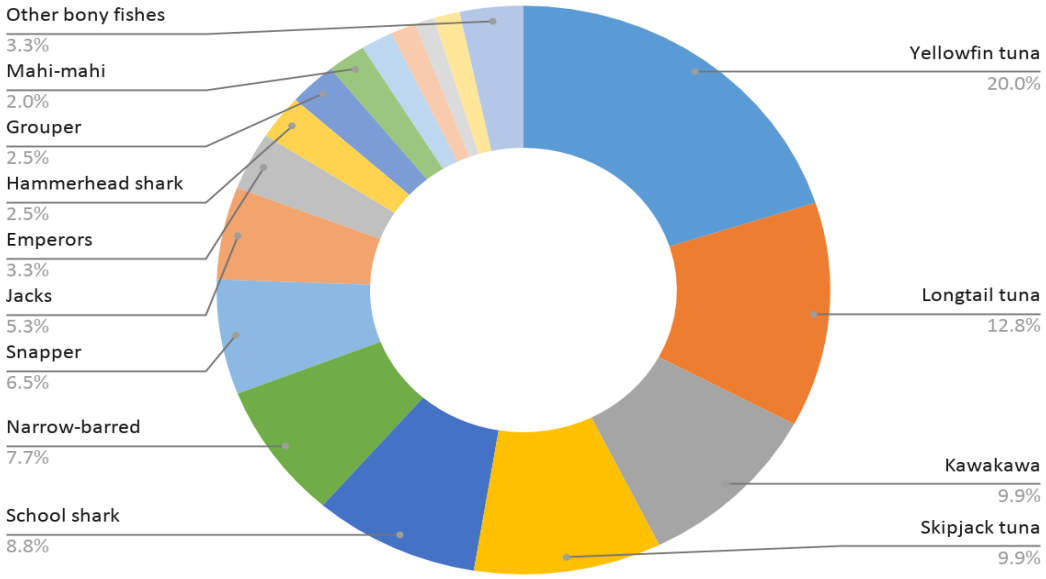
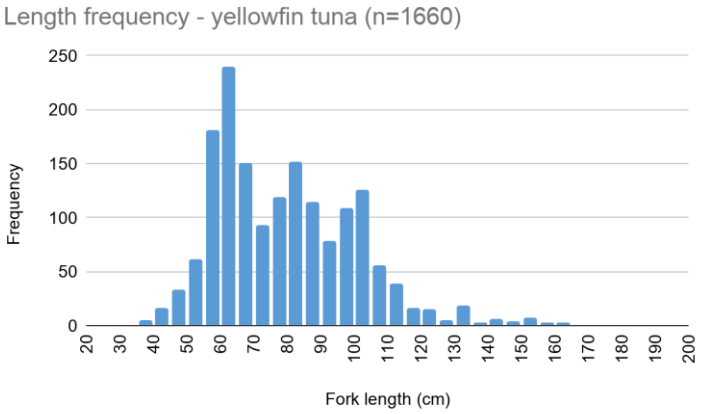
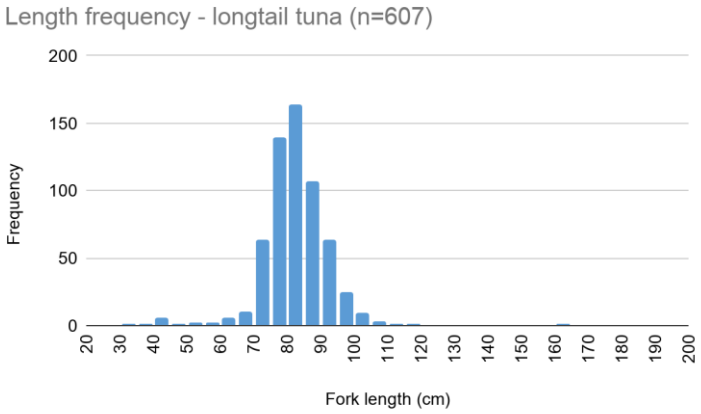
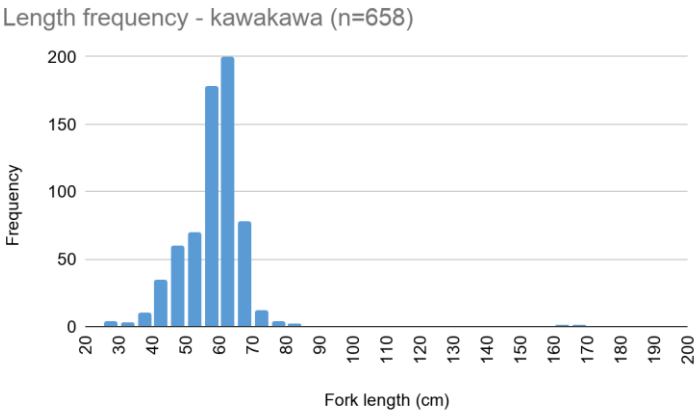


Figure 3. Length-frequency for yellowfin, longtail tuna, kawakawa, and skipjack for six landing sites in Somalia, December 2019–August 2020.


Length frequency - yellowfin tuna (n=1660)
Frequency
Fork length (cm)


Length frequency - longtail tuna (n=607)
Frequency
Fork length (cm)


Length frequency - kawakawa (n=658)
Frequency
Fork length (cm)

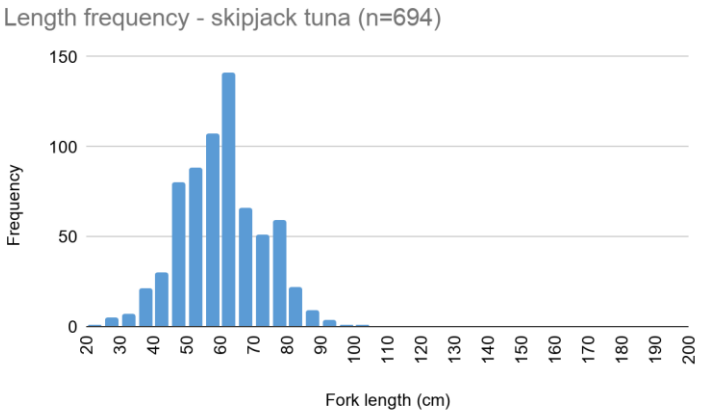
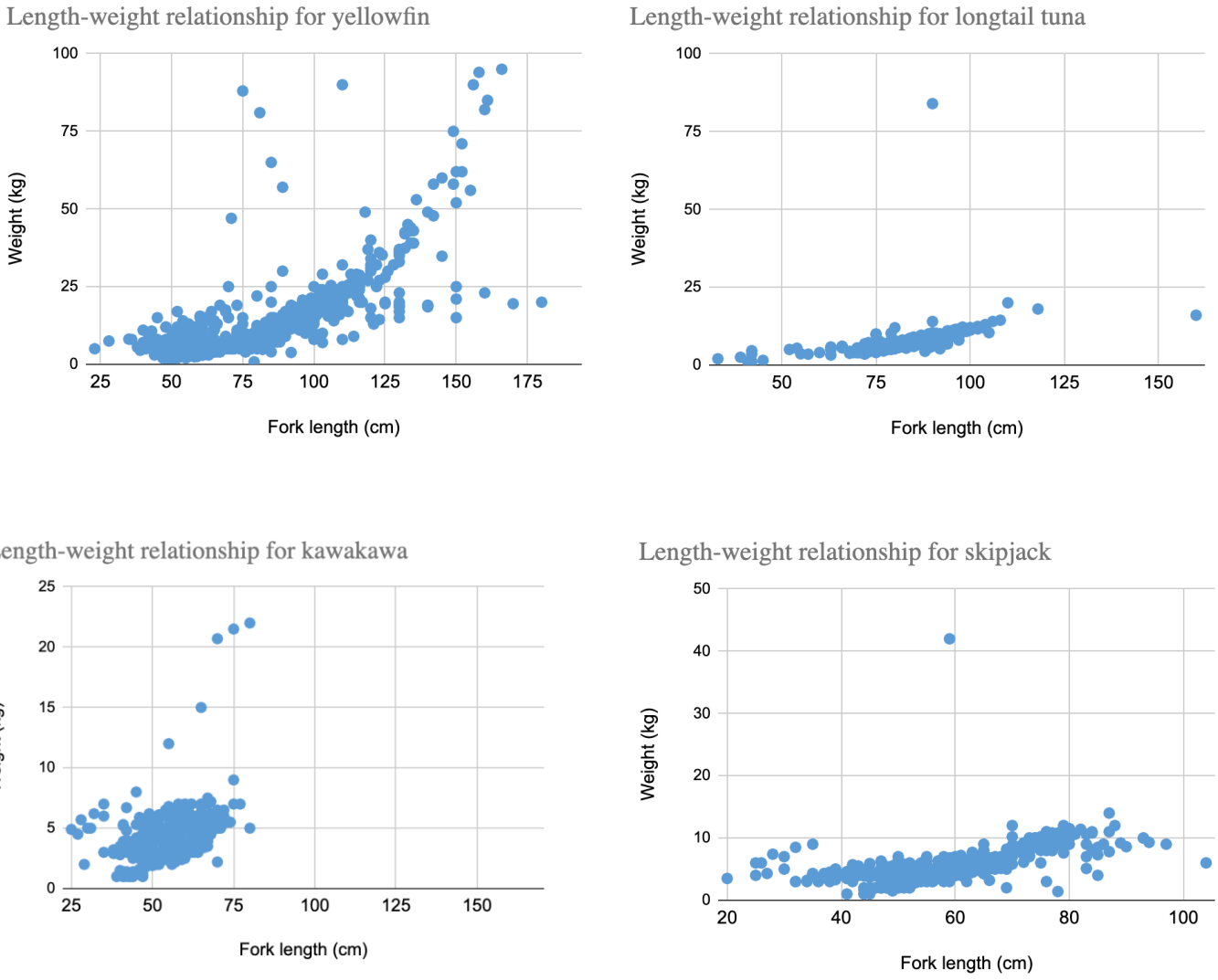

Length frequency - skipjack tuna (n=694)
Frequency
Fork length (cm)

Figure 4. Length-weight relationships for yellowfin, longtail tuna, kawakawa, and skipjack for six landing sites in Somalia, December 2019–August 2020.



During the COVID pandemic, data collection was interrupted in Mogadishu and Kismayo. The FDCWG pivoted and began including GPS tracking of fishing vessels to map fishing grounds, and a shoreline mapping project which improves our understanding of the Somalia coastal environment.

Conclusion and Way Forward

This paper discusses the recent improvements to the collection of artisanal fisheries statistics in Somalia through ongoing data collection, analysis, and management.

The piloted system, which is based on sampling and community participation in data collection, appears likely to generate more benefits than costs. This will reduce the workload of data enumerators and data entry personnel. Ultimately, the data were collected from 6 locations with 3 trained enumerators, and resulted in 967 vessel-days surveyed. There were 31,923 fish identified and counted within 121 unique days during December 2019–August 2020.

Improving domestic fisheries data collection is one of the top political agendas for the MFMR. The Somali government has given the whole task of data collection to community members who are closer to the landing sites. Building up the data collection and analysis capacity of data collectors should be a key task before the implementation of the improved system. This will give data enumerators and data entry personnel at the regional level the chance to acquire knowledge related to data collection and processing. The improved system in the domestic fisheries in the project will be extended soon.

Pending additional funding, the FDCWG will validate the existing data, continue data collection efforts in Kismayo, Merca, Mogadishu, Adale, Hobyo and Bosasso, and expand in 2021 to new locations.