

Innovative data collection in French lesser Antilles to improve biological knowledge of demersal fish stocks



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Context

- Data collection of landings and fishing effort started in 2008/2009 in Guadeloupe and Martinique
- Small-scale, multi-species, multi-gear fisheries with predominant fishing effort in coastal waters
- Huge number of scattered landing points on these territories (e.g. > 125 in Martinique)
- No centralization of sellings, quick dispatch of the catches to buyers and other places
- High diversity of commercial species with sometimes a lot of small individuals
- \Rightarrow Catch composition monitoring and biological sampling extremely difficult

Pilot survey in 2021-2022

- ACCOBIOM project: new biological data about demersal fishes from Guadeloupe and Martinique
- Field work in laboratory: 15 days in each island at 3 distinct time periods of the year
- Integral catches were bought directly from a sample of commercial fishers
- Gears: pots, gillnets, trammel nets, beach seines, handlines, bottom lines, longlines, free diving
- Agreement from local French authorities (Sea Directorate) for scientific surveys
- => Data necessary to assess the health and size of fish populations

Data collection

- Species identification: scientific name
- Individual weights: total weight, precision ± 0.1 g
- Individual lengths: total length and fork length, precision ± 0.5 cm
- Sex: macroscopic gonad observation (male, female, indeterminate, not assessed)
- Sexual maturity staging in fish (A, B, C, D, E, F) / Age estimation: otolith, scale or spine
- \Rightarrow First data collected for some species or parameters (*e.g.* age)

First results

- 122 fishing trips, 181 different species, 6 609 kg fishes (25 271 individuals)
- Fishing trips and catches composition data
- Size distributions and morphometric relationships between length and weight
- Sexual maturity size and maturity guidelines
- Otolithometry and growth parameters
- \Rightarrow Results will be used to improve data collection on a routine basis with new biological parameters from a priority list of species defined at EU Common fisheries policy level





High risk

zone

Overfished

Fishing mortality rate

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The life history data will facilitate the development of effective stock assessment procedures with data-poor methodologies for a better management of marine commercial resources