Review of the available data on four Elasmobranches species caught by the French fleets on the Mediterranean coast (Gulf of Lions and Corsica)

F. Poisson
IFREMER - Unité Halieutique Méditerranée (HM), Méditerranéenne et Tropicale

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Objectives

provide a picture of the temporal evolution of the state of the population of:

- the thornback ray (Raja clavata),
- the Mediterranean starry ray (Raja asterias),
- the Brown ray (Raja miraletus),
- the small-spotted catshark (Scyliorhinus canicula)
  - Squallus spp.
Data sources

Three key documents published in the 90s’


- National fisheries statistics
- MEDITS 1994-2009

Spatial distribution of the activity: French trawler fleet

- Increase of fishing effort 1957-1999
- In 1998: 140 Trawlers
  - Bottom trawling Demersal fish
  - Pelagic trawling
  - Mixed activity
- Recently, major changes occurred
Displacement of fishing effort pelagic towards demersal-use of twin trawl

Spatial distribution of the activity: vessel using nets (trammel nets)
16 years ago .... modification in occurrence

![](image)

**Trend Rank-frequency diagrams**
Landings time series (1)

**Raja clavata**

- **All Fisheries**
- **Landings Sète (mainly Trawls)**

**Raja asterias**

- **Landings Sète (mainly Trawls)**

Landings time series (2)

**Rajidae**

- **All Fisheries**
- **Landings Sète (mainly Trawls)**
Spatial distribution: A constant decrease 1983-1997

*R. clavata*

*R. clavata*
Scyliorhinus canicula

Recurent surveys

- Bathymetric distribution charts
  - The CPUEs (weight/fishing hour)
- Spatial distribution maps
- Index of biomass
  - The trends of the biomass index on the continental shelf (10-200 m) and for the slope (200-800 m) weight per area unit (km2).
- Size frequency
- Descriptive analyses
  - the presence/absence of fish species, continuous occurrence, stable, increasing or decreasing frequency.
  - Rank-frequency diagrams were used to point out modifications both in absolute frequency and in relative rank of species for sharks and rays.
Conclusion

- Good historical data in Sete
  - close cooperation with the stakeholders is essential, valuable and rewarding.

- A decline took place since the middle eighties,
  - firstly on the continental shelf and later on the slope.
  - Since the fishing effort has been increased steadily by the entry in the fleet of more powerful vessels

- The surveys’ data confirmed that negative changes

- Concerns about the sustainability of Rajidae populations
  - in the Gulf of Lions were addressed by scientists several years ago
  - Situation is much better in Corsica