The EU’s experience in the protection of cold-water corals in the high seas:
The Hatton Bank (NEAFC Regulatory Area) – a case study

P. Durán Muñoz, M. Sacau, and M. Sayago-Gil
on behalf of the ECOVUL/ARPA Team

Spanish Institute of Oceanography - IEO
Vigo (Spain)
INTRODUCTION

NEAFC requests to ICES: distribution of cold-water corals on the Hatton Bank?

March 2005

ICES recognized: seabed mapping is essential to know the distribution of corals


<< Without a properly planned habitat mapping exercise based on wide-area acoustic survey (e.g. multibeam sonar) with adequate visual ground-truthing, it is impossible to provide a true picture of the distribution of cold-water corals on the Hatton Bank … … Only with these mapping data can the distribution of substantial reef structures on Hatton Bank be determined >>

October 2005

A multidisciplinary seabed mapping programme was launched by EU-Spain

Western slope of the Hatton Bank (main trawling grounds)

OBJECTIVE

Implementation of UNGA resolution 61/105

Selection of closed areas to protect cold-water corals (deadline: 2008);

A pilot experience to study other high seas fisheries
INTRODUCTION

UNGA resolution 66/68 adopted in 2011 (paragraph 131), recognized the utility of seabed mapping programmes.

- **(2005-08)**
  - Spain
  - Hatton Bank Study Area

- **(2007-10)**
  - Spain
  - ATLANTIS project

- **(2009-10)**
  - Spain, Canada, UK, Russia
  - NEREIDA project

- **(2008-10)**
  - Spain, Namibia
  - RAP-Sur project

MULTIDISCIPLINARY METHODOLOGY

Observers (1996-2006)

VMS plots

Science-industry cooperative surveys (2005-2008)

Commercial trawling

Commercial longlining

NEAFC

Multibeam echo sounder

Sub-bottom profiler

TOPAS

Boxcorer

Scientific trawls

Multidisciplinary scientific surveys (2005-2007)

Dredge

RESULTS: Fishery footprint

Main trawling grounds:
W Slope (1000-1500 m)

RESULTS: Megahabitats


Hatton Drift:
- Flat and soft seabed
  (sedimentary drift: sand and mud)
- Nowadays extensive coral reef structures are unlikely to occur
- Easy to trawl: Intensive trawling since 1996

Hatton Outcrop:
- Rugged and hard seabed
  (rocky outcrop: ridges, carbonate mounds*, basalts)
- Not / slightly covered by sediments
- Coral diversity (reefs and gardens)
- Difficult to trawl: few trawling.
  Feasible to static gears (e.g. longlining)
RESULTS: Coral protection areas

2009: “western slope”
~ 4,600 km²

2007 - 2008: “top of the bank”
~ 11,300 km²

Current closed area:
~ 16,000 km²

NEAFC Recommendation 8:2012
EC Regulation 1288/2009

DISCUSSION: ICES-WGDEC Database

Established in 2012: Corals and sponges

HATTON BANK area

642 records (EU)
- Scientific Surveys (Spain & UK)
- Cooperative Surveys in collaboration with fishers (Spain)

Parts of the SW tip (Ireland)

Parts of the top (UK)

The W Slope
100% multibeam coverage
~ 19,000 km² (Spain)

Multibeam maps (EU) were available to the WGDEC (georeferenced images):

- 431 “presence”
- 96 “total absence”
- 115 "presence" + carbonate mounds
DISCUSSION: advice on closed areas

**HATTON BANK**

- **ICES-WGDEC DATABASE:** bycatch of total corals * & total sponges * (kg and/or presences), location of carbonate mounds;

- **Data sources:** commercial trawls and longlines (Spain) and scientific survey data (Spain & UK).

- Symbols were associated to the middle point of the stations (trawl/longline, dredge, etc.);

- Size of the symbols is proportional to the bycatches of total corals (triangles) and total sponges (circles).

*black corals, cup corals, gorgonians, lace corals, sea pens, soft corals and stony corals

*large and small sponge species
DISCUSSION: advice on closed areas

ADVICE from ICES-WGDEC (March 2012)

- Area 1: sponge grounds
- Area 2: corals & sponges
- Area 3: sponge grounds
- Area 4: corals
DISCUSSION: advice on closed areas

Final Advice from ICES (June 2012)

After WGDEC, a new “Area 3” was delineated, but:

- Multibeam maps were not considered;
- Fishery footprint was not considered;
- Absences of corals/sponges (“+”) were not considered;
- A criteria “all the records have the same value” was used (only in this case, but not in others: e.g. north of Hatton, Rockall, etc.);
- Small sponges and small pieces of dead coral were considered as “classical VME indicator species”.

Absence of cold-water corals and/or sponges in the bycatch
DISCUSSION: advice on closed areas

HATTON BANK
Historical fishery footprint
Spanish trawlers
2000-2011

Fishery footprint data from the Spanish observer programme (1996-2006)

DISCUSSION: advice on closed areas

HATTON BANK
Recent fishery footprint
Spanish trawlers 2007-2011

Besides bycatch of corals and sponges, other data are also essential to advice on closed areas!!:

• Effort data;
• Mapping data;
• Surveys;
• Absence data.
Conclusions

- Science is necessary as a basis for the management of deep-sea fisheries: UNGA resolution 66/68 adopted in 2011, has recognized the utility of seabed mapping programmes;

- EU members are developing multidisciplinary seabed mapping programmes along the Atlantic Ocean, with the aim to identify and protect VMEs in the high seas;

- Such programmes have resulted in identification of VMEs within the NEAFC Regulatory Area (as well as within other high seas areas) and in the adoption of conservation and management measures to prevent SAIs on such ecosystems:
  
  e.g. closure of areas to bottom fishing in the Hatton Bank
  (in accordance with paragraph 119 b of UNGA resolution 64/72)

  NEAFC Recommendation 8:2012 - EC Regulation 1288/2009

- EU members are making efforts to collect information with the aim to feed the new international databases on VMEs (e.g. ICES-WGDEC Database) and to improve the advice;

- Bycatch information (coral and sponges) is not sufficient to produce an appropriate advice on closed areas: fishing effort, mapping data, surveys and “absence” data are also recommended.
Acknowledgements

Funding

- EU, IEO (Spanish Ministry of Economy & Competitiveness), SGP (Spanish Ministry of Agriculture, Food & Environment).

Thanks to

- DG MARE / Unit C.2 (EC);
- IEO - ECOVUL/ARPA team (Spain);
- SGP (Spain);
- BGS (UK), IPIMAR (Portugal), University of Vigo (Spain);
- Crews of the research vessels & SGP staff on board (RV Vizconde de Eza & RV Miguel Oliver); observers & fishers: they help us to collect the data.

Fotos: M. López