

# Protecting bycaught species in mixed fisheries (PROBYFISH)

The overall objective of the PROBYFISH project is to develop a modelling framework and a support tool to assess whether proposals for regionalised management measures are in accordance with the objectives of the CFP. The project addresses this task through the development of agreed and robust methods to define target and bycatch species, identify the species for which TAC management of target species would be sufficient to ensure sustainable exploitation without additional safeguards, identify measures that will lead to the sustainable development of the bycatch stocks which are not sufficiently protected by target species TACs, produce agreed reference levels to safeguards tocks in accordance with the CFP and combine the results of all activities in a user-friendly and flexible tool.

## Task 1: Identification of target and bycatch species

- Task 1.1. Format of input data on catch composition in weight, value and effort of all regional fleets and métiers
- Task 1.2. Methods to classify stocks as “target”, “hybrid”, “valued bycatch” and “collateral bycatch”
- Task 1.3. Identification of main fleets, métier, seasons and areas contributing the majority of catches

## Task 2: Effect of management through TACs of target species on protection of bycatch species

- Task 2.1. Development, conditioning and expansion of mixed fisheries models to include data-limited stocks
- Task 2.2. Classification of robustness of assessment, reference points and fleet based data for all stocks
- Task 2.3. Effect of TACs for target species on bycatch species
- Task 2.4 Sensitivity of mixed fisheries models to changes in key productivity parameters on whether single species TACs are sufficient

## Task 3 Identification of bycatch species where target stock TAC management is insufficient

- Task 3.1. Extent and consistency of correlation between identified target and bycatch species
- Task 3.2. Analyses of the possible causes of consistent correlations
- Task 3.3. Identification of optimal fleet units for a proper management strategy evaluation
- Task 3.4. Identification of bycatch species not protected by TAC management of target species

## Task 4. Identification of appropriate management measures for bycatch stocks

- Task 4.1. Effect of single species TACs
- Task 4.2 Effect of grouped bycatch species TAC.
- Task 4.3 Gear and métier based approaches.

- Task 4.4 Fixed spatiotemporal management measures: closed areas and closed seasons
- Task 4.5 Adaptive spatiotemporal management approaches.

Task 5. Identification of candidate indicators and appropriate trigger values

- Task 5.1: Existing indicators and trigger values for bycatch species
- Task 5.2 Test the performance of indicators and trigger values
- Task 5.3 Determine a final list of indicators and trigger values

Task 6. Development of a management tool

Task 6.1. Developing the stakeholder interface

- Task 6.2 Developing the tool to determine regional target and bycatch species.
- Task 6.3 Developing the tool to identify whether TACs for target species are sufficient.
- Task 6.4 Developing the tool to identify the effect of additional management measures

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