

# Using the expert's traditional ecological knowledge in the mapping of coastal species

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## Abstract text

Local knowledge of fishermen is a source of valuable information that has been scarcely integrated in the fisheries management. Nevertheless, habitat mapping using traditional ecological knowledge has been considered very accurate (Aswani and Lauer, 2006).

The Ría of Arousa (NW Spain) and nearby oceanic area (Fig. 1) supports an intense fishing activity exerted by a diverse commercial fleet. Its S-fisheries are overexploited (Freire, *et al.*, 2002) to the point that fishers of the area have proposed the implementation of a MPA, as they believe this would improve the health of their resources. The current economic crisis and the lack of basic information to build spatially explicit assessment models, e.g. on the spatial distribution of the exploited species has prevented the creation of the MPA.

To make the information on the distribution of the species available to managers, we identified local experts by a snowball procedure and performed 19 semi-directed personal interviews to fishers. They sketched in maps the extension of the areas where they fish their different target species. The information was introduced in a GIS superimposing the information obtained from each fisher to achieve a single layer for each species.

We obtained detailed maps with the distribution of a total of 48 species in a studied area of 456 km<sup>2</sup>. Fish species dominated the catch, with 29 species (Fig. 1).

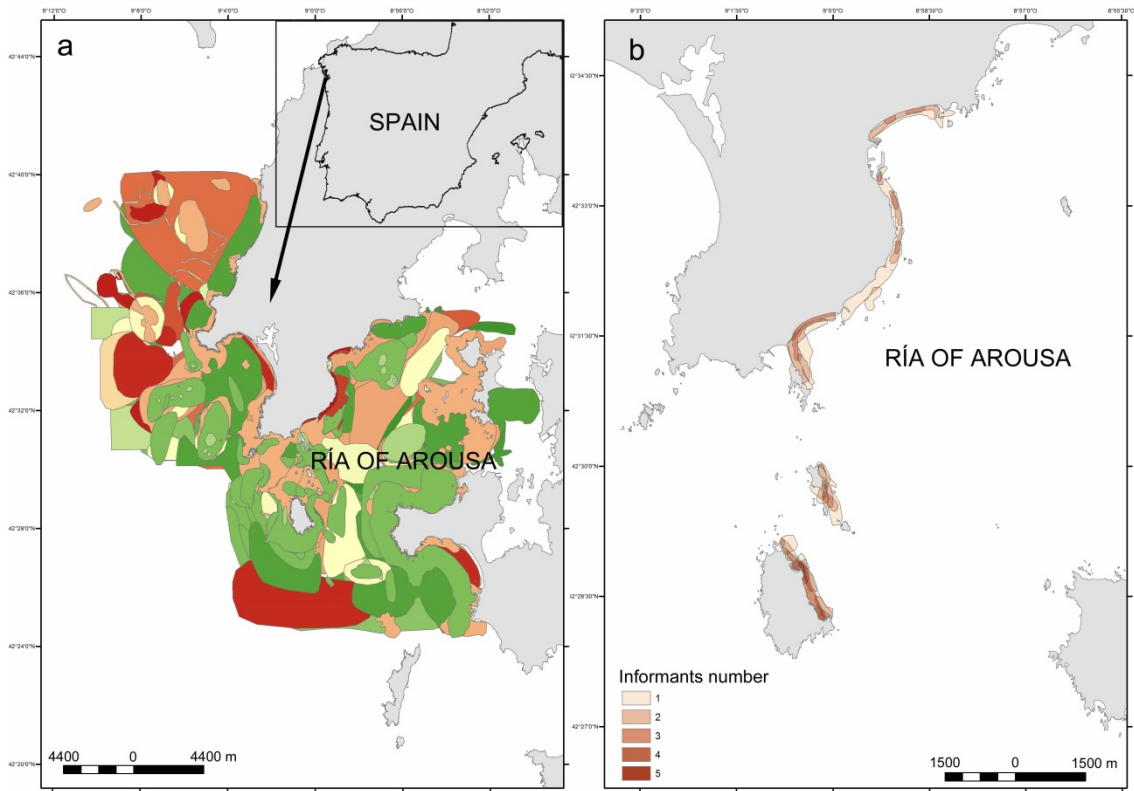


Fig. 1. Map of the study area showing the distribution of 48 species based in the traditional ecological knowledge of the fishers of the Ría of Arousa (a). In detail (b), an example of the distribution of yellow carpet shell *Venerupis rhomboides*.

#### Reference list

Aswani, S. and Lauer, M. (2006). Benthic mapping using local aerial photo interpretation and resident taxa inventories for designing marine protected areas. *Environmental conservation* 33: 263-273.

Freire, J., *et al.* (2002). Management strategies for sustainable invertebrate fisheries in coastal ecosystems of Galicia (NW Spain). *Aquatic Ecology* 36: 41-50.