GAP_2
Month 12 progress report

Each GAP_2 partner is required to complete a progress report detailing activities and advances during the period **October 1, 2011- March 30, 2012**. Please use this document to outline your activities during this period and return by email to Pablo Pita (UDC) [ppita@udc.es] by **March 23, 2012**.

Partner organisation name: Universidade da Coruña

Partner number: 2

Lead scientists: Pablo Pita and Juan Freire

Stakeholder organization name: Federación Galega de Confrarías de Pescadores
Partner number: 23

1. Progress over the past 6 months (October 2011 – March 2012).

Please, report the number of fishermen involved in the different GAP2 activities, separate by WP where possible [1-3 written pages].

In our study area (Fig. 1) operates a very heterogeneous, multi-gear artisanal fleet, linked to several *Confrarías de pescadores* (fishing associations). In our first meetings with our operational partner, the *Federación Galega de Confrarías de Pescadores* (FGCP) we decided to involve the main *Confrarías* of the area and remained clear that our better choice were the *Confrarías de Aguiño*, *Cambados* and *Ribeira* (Fig. 1). We contacted with them and presented our project to fishers belonging to these *Confrarías* that had been summoned by our partners, the FGCP (Fig. 2).

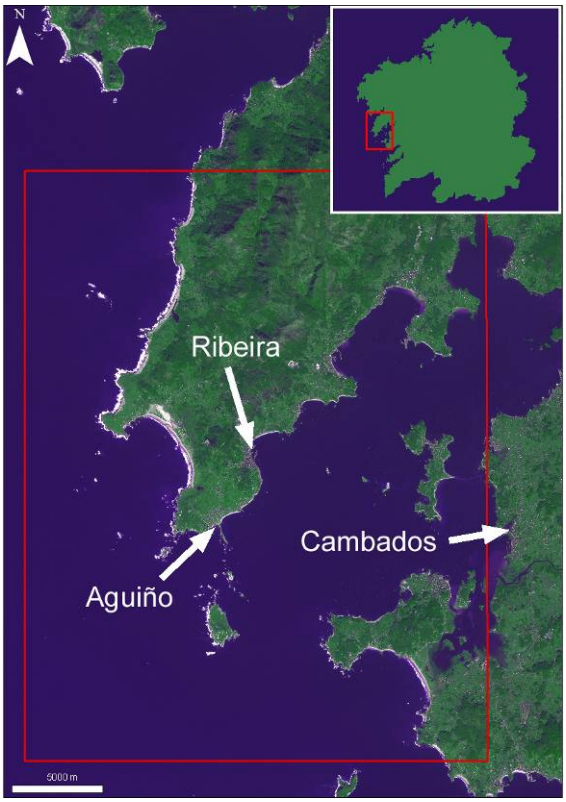

Fig. 1. Map of the study area.

After two months of work, we completed the field phase of Ecosystem Mapping based on the collection, categorization and integration of the expert ecological knowledge of fishermen as part of scientific knowledge. During this stage, we developed nineteen personal interviews with fishermen belonging to the *Confrarías de Aguiño*, *Cambados* and *Ribeira*.

Each interview was divided into two parts. The first asked about the general characteristics of the fleet operating in the area of study (technical aspects of the craft, arts distribution, annual cycle of fishing, major resources and catches). The second part of the interview, which uses charts of the area of study, examined the characteristics of marine ecosystems, types of habitats and microhabitats, distribution areas of the species, breeding areas (nursery habitats), quality (size) and productivity (abundance) of resources and changes in population dynamics of the species.

Fig. 2. Workshop between scientists and fishers.

Our sample design took into account all the *metiers* which were previously identified as the observation units. Thus, it was necessary to be represented in the interviews all the different gears operating in the study area. The most important fishing gear in the area are the dredges for clams and scallops, the pots for octopus, crab, pout and shrimp, poaching of barnacle, sea urchin and razor shells, gillnets, different kinds of purse seines, and hook gears.

The level of participation and the quality of information obtained from fisheries has far exceeded initial expectations, but we were not able to involve fishermen using gillnets regularly during the annual cycle of fishing. However we have enlisted their support for the phase of Fisheries Monitoring.

Once we have collected data on the distribution of fish, shellfish and substrate composition of the seabed in our study area, we have integrated the data in a GIS tool and obtained a detailed image of the different habitats in the area (substrate typology and algae species) of the fish species (nursery areas, abundance, productivity, resource quality and exploitation levels) and shellfish resources (ground location and extension, exploitation levels, species, productivity and qualities).

The second phase of our case study (Fisheries Monitoring) began in February, 2012. During the initial phase of Ecosystem Mapping fishers of 23 vessels agreed to participate and provide detailed information on the fisheries operating within our study area. Then, we performed workshops with fishermen and the Technical Assistance of the 3 *Confrarías* involved. During the workshops we agreed together a methodology for the use of data loggers that will store their daily movements and the daily fishing forms in which fishers record their catch and effort.

We are already working with a lot of information from the data loggers and from the forms. During the first weeks of implementation we have been dealing with practical problems related to the collection and integration of information. First, we downloaded the data loggers provided to the fishermen to check if their configuration were the most appropriate. We have detected some problems like a shadow zone that blocks the GPS signal because the presence of a metal lighthouse (Fig. 3). Also, we had to redesign the forms for some of the 8 *metiers* that we are analyzing with the help of the fishers.

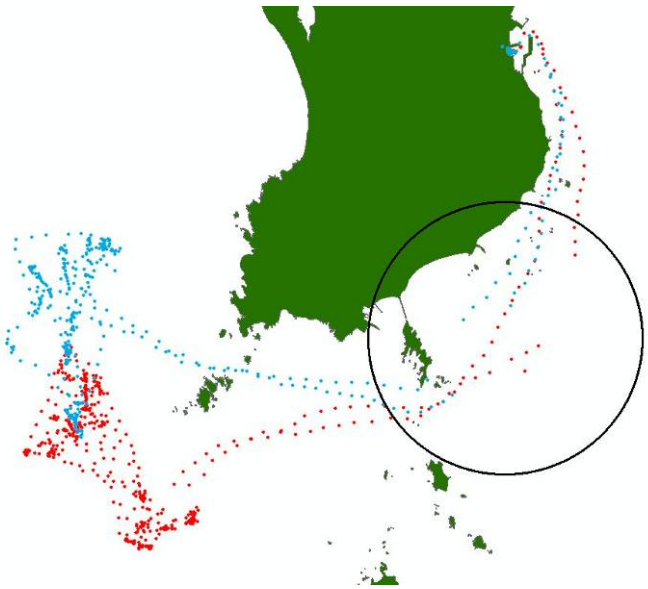

Fig. 3. The shadow zone in our study area is showed in the circle. Some of the detections in the data loggers are blocked there.

Finally, a visit of WP4 representatives was organized and performed.

2. Objectives for the next 4 months (April 2012 – July 2012).

Please, report the number of fishermen involved in the different GAP2 activities, separate by WP where possible [1-3 written pages].

We must validate our preliminary cartography derived from the initial phase of Ecosystem Mapping (Fig. 4). For this purpose we will perform workshops with the fishers that provided the information and also new others and we will ask them to find mistakes and to resolve some doubts that have emerged on certain habitats. Our final cartography will be delivered to our operational partner, the FGCP, which is very interested in the utility of the data for the future management of the fisheries in the area. Then we will write a report about the phase of Ecosystem Mapping. This report will be also the basis for a scientific paper on this issue.

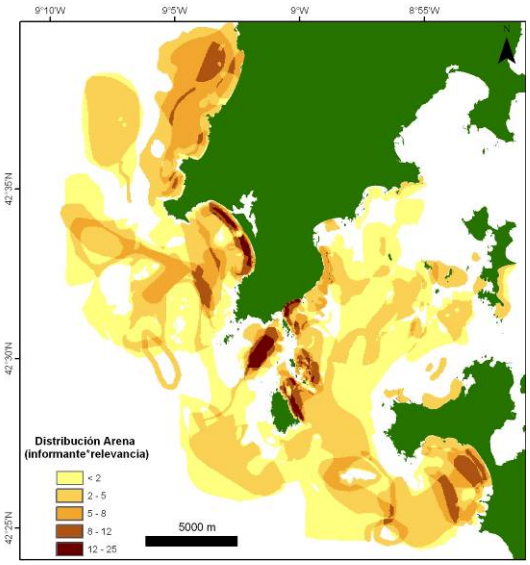

Fig. 4. Example of our initial cartography showing the distribution of sandy substrates in the study area.

During the next 4 months we will continue obtaining information relating to the phase of Fisheries Monitoring. We expect to increase the number of fishers involved (currently 23 vessels) when some *metiers* begin their seasonal activity.

We also must establish definitive protocols in order that the information on catches provided by the fishermen in their daily forms is properly referenced in the routes contained in the data loggers. There are several important issues regarding this matter, being the main one obtaining the highest accuracy in identifying the different activities of the fishing vessels.

3. Critical issues arising for the next 4 months (April 2012 – July 2012).

Please, list below the possible problems arising and the actions you are planning to face them.

The main critical issue for the next months is related to the participation of the fishers in the Fisheries Monitoring. We anticipate that some fishers could lower their participation in this phase, or even leave it, because is hard for them to fill the daily fishing forms. We have planned different approaches to face this problem:

A. We will improve our communication with our operational partner, the FGCP, the 3 *Confrarías* involved and the fishers by:

- We will write weekly reports to be delivered to the FGCP about the progress of the study case.

- We will write regular posts in the web of our study case (http://recursosmarinos.net/gap2/) informing about the progress of the study case.

- We will regularly visit the fishers involved in the project to get face to face feedback about the progress of the work.

B. We will deliver the results of the Ecosystem Mapping cartography to the FGCP so they can use it to improve the management of their resources. Then the fishers can verify that their work has practical feedback for them.

4. Publications, presentations and conferences.

Please list below any publications or presentations related to GAP2 that your team has produced in the last period (October 2011 – March 2012). You should include details of any conferences or workshops attended as part of GAP2 research.

1. October 20, 2011. We had a meeting with our operational partner to define actions for initiating our case of study. We used a presentation of Power point available at: http://recursosmarinos.net/gap2/?page_id=48.

2. October 26, 2011. We had workshop with fishers of the *Confrarías de Aguiño*, *Cambados* and *Ribeira* to present them the project GAP2. We used a presentation of Power point available at: http://recursosmarinos.net/gap2/?page_id=48.

3. January 20, 2012. We had a workshop with our operational partner to define methodological and practical issues and further actions needed.

4. January 26, 2012. We had workshop with fishers of the *Confrarías de Aguiño* and *Ribeira* to define methodological and practical issues and actions needed to begin the Fisheries Monitoring phase.

5. January 27, 2012. We had workshop with fishers of the *Confraría de Cambados* to define methodological and practical issues and actions needed to begin the Fisheries Monitoring phase.

6. February 28, 2012. We had a scientific informal meeting between members of the University of A Coruña and members of the University of Santa Cecilia in Santos, Brazil. Our intention was to establish formal links between the two institutions to collaborate in the near future in research issues regarding fisheries and coastal management. As a result of our visit, we will sign a collaboration agreement between the Universities. We presented the GAP2 project using the available presentations (http://recursosmarinos.net/gap2/?page_id=48).

5. Media contact/public outreach.

Please list below any GAP$_2$ related media coverage you have been involved with (including date and details of newspaper, radio station, etc.).

As part of our strategy for improving our communication with our operational partner, we have created a web of our study case (http://recursosmarinos.net/gap2/). We explain on it what the GAP2 project is, we write regular posts informing about the progress of the study case and we store public files relevant to the project.