

## Project Summary

### “Pilado” crab for bio-medicine

**FLAG: Oeste**

**Peniche, Portugal**

#### Project overview

**By looking into the biological components of the common swimming crab’s shell, this pilot project aims to increase the economic value of a resource that is presently discarded and to create market bridges between fishermen and other stakeholders of the area.**



In Portugal, the “caranguejo pilado”, or Henslow’s swimming crab, is an abundant species, commonly caught in the nets of seine fishermen but subsequently discarded as it holds no commercial value. And yet, the species is believed to be a source of biological compounds, such as chitin and astaxantin. These substances have been known for several years for their biological and medical properties, used, for example, by the pharmaceutical and bio-medical industry as nutritional additives, as well as in water treatment and tissue regeneration. Recognizing this potential, and with the support of the Oeste FLAG, the Polytechnic Institute of Leiria, has set up a pilot study in partnership with fishermen, bio-medical companies (CERAMED/ALTAKITIN) and other research institutes, to assess the potential of the species as a source for these compounds. The study will also define the extraction processes and the distribution circuits which would need to be set up in order to take advantage of this resource, while ensuring the involvement of all relevant stakeholders.



In order to add value to this local resource and develop new market opportunities for fishermen of the area, the study will follow three main steps:

1. Develop a bio-chemical characterization for the “pilado” crab’s shell by determining its composition.
2. Refine the isolation procedures for the biopolymers targeted.
3. Create links between the fishermen and the bio-medical industry in order to develop an economic value circuit from capture to the bio-technology industries both within and beyond the area.

## Key lessons

- › **Relevance to FARNET themes:** Adding value to local fisheries products, innovation, by-products.
- › **Results:** In January 2012, the project was still in its very early stages. However, the preliminary analysis on the crustaceans had started and the initiative was already showing good signs in terms of the participation of fishermen, their involvement in collecting the crabs and a greater awareness among bio-technological companies of the potential of such local resources and the role they can play for the communities involved in their management.
- › **Transferability:** The resource (crab by-catch) is common in a number of fisheries areas and indeed chitin and astaxantin can also be found in other crustaceans which could also be considered for bio-medical use. The process itself (cooperation between fishermen and local research institutes) can be applied to many areas be it in the field of bio-medicine or other innovative uses of fisheries by-products.
- › **Final Comment:** Developing some of the more lucrative fisheries by-products such as those linked to the pharmaceutical industry requires specialised knowledge that fishermen can sometimes find amongst specific actors present in the area. This project illustrates how, with an inclusive and a well communicated local strategy, FLAGs can support very specific actors (fishermen, research units, biomedical companies) to develop links and work towards a common goal for mutual profit.

## Total cost and EFF contribution

- › **Total Cost:** €26 842
- › **Axis 4 contribution:** €11 072.33
- › **National /Regional co-financing:** €3 690.67
- › **Private match-funding (Polytechnic Institute of Leiria):** €12 078.90

## Project information

**Title:** Exploring the value of the *pilado* crab in bio-medicine

**Duration:** 24 months (November 2011 – November 2013)

**Case study date:** January 2012

### Project promoter

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