

A new approach to science communication: The case of the “Marine food chains – A knowledge to share” project

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The marine ecosystems balance is strongly related with biodiversity, food chains and nutrients cycle sustainability. The Ocean represents a vast and complex environment where a big diversity of organisms lives. The trophic relationships between the organisms are usually complex food webs but can be broken in simpler food chains and represented as food pyramids that represent the energy and biomass flux throughout the system.

The public awareness, education and involvement through science communication initiatives regarding the marine food chains is essential to create better attitudes and behaviours towards the human exploration of marine resources and marine habitat preservation.

The “Marine Food Chains: a knowledge to share” is a science communication project of the Interdisciplinary Centre of Marine and Environmental Research (CIIMAR) financed by EEA Grants that aims to awareness and endow the general public and children from several schools in the metropolitan area of Oporto with knowledge about the sea food chains and tools to share their knowledge through science communication initiatives.

A variety of science communication products were implemented along the project, including the development of mini science communication projects performed at schools. Though a new distinguished approach that involve to “Acquire” (informal science talks about the marine food chains); “Do it” (visits to the CIIMAR labs to perform lab activities) “Recognize” (a science communication workshop of new tools and practices) and “Share” (science communication presentations and artistic representations of marine organisms) the 250 students were able to understand the complex sea food chains theme and share it to their colleagues and teachers using new science communication tools based on multimedia and art performances.

The artistic representations of the different organisms were based on previous research about Portuguese native marine species and in most of the cases the schools were very creative in the use of the materials and very faithful to the organism’s physical characteristics, predator-prey relationships and diversity. The free format communications used by the students included videos, interviews, plays, Power-point presentations, Prezi presentations and animated stories. The results of the mini science communication projects were also integrated to the project exhibition in a 3D food pyramid along with a dynamic and interactive informative panel.

In addition to the project objectives, the collaboration with students from a public artistic school of Oporto resulted in the development of six didactic toys related with the marine food chains subject and addressed several concepts as biomass, energy, balance, cannibalism, predation and food chains.

The team is running a two moments evaluation to understand if the project was able to contribute to a better understanding of the concept and the importance of science communication to the participants.

References

- <http://www.ciimar.up.pt/cadeiastrificasmarinhas/>
- <http://www.dgpm.mam.gov.pt/>