**A demographic approach to conservation and management of the precious Mediterranean red coral (*Corallium rubrum*): insights into the demographic structure of two different populations.**

**Many exploited species are structured into genetically different populations. These populations have been and/or are subject to different exploitation as well as to different demographic and environmental constrains and thus show different life-history traits. A rational management of overexploited species therefore needs to be based on the peculiar structure and dynamics of each population. The Mediterranean red coral *Corallium rubrum* (L., 1758), dwelling on rocky bottoms between 10 and 600 depth and more, is a paramount example of an overexploited marine species. Due to the high value of colonies as raw material for carving jewels and art objects, red coral populations have been and are subject to an intensive harvesting, which affected, at first only the shallower populations (those living between 20 and 50 meter depth) and than was than extended to deeper populations (up to 130 -150 meters).**

**In the research here presented we analyse and discuss the basic demographic features of two different “shallow water” geographic populations living in MPAs subject to different regulation and enforcement in Italy (Portofino) and Spain (Cap de Creus). The final goal of the research is to set out demographic models suitable for sustainable exploitation of red coral populations. Recently red coral research was addressed towards the study of population structure and dynamics by means of demographic models. This approach, widely applied in Conservation Ecology, will supply tools to match harvesting to population growth rate fostering both conservation and rational management of the local populations of this precious species.**

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