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ABSTRACTS



Mapping marine biotopes in Graciosa – Azores, a low budget methodology for oceanic Islands

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Marine protected areas (MPA's) in the Azores, have been traditionally based on old and scattered data. Recently, considerable effort has been dedicated to developing methodologies to assure a solid scientific basis that justify the protection of designated areas. On the island of Graciosa a project was implemented to identify and map littoral rocky substrate algae based biotopes. Fine data on subtidal near shore depth (1m intervals) and substrate distribution was gathered along transects with an ecosounder and a GPS. Intertidal substratum and shore height data was gathered with a spirit levelling method along transects and a GPS. Intertidal and subtidal surveys were undertaken during June 2006. 12 intertidal and 12 subtidal sites around the island were studied. The methodology involved quadrat readings and photography at 3 levels on shore (upper, mid and lower) and 4 depth intervals (4-6m; 12-14m; 20-22m; and 28-30m).

Biotopes were mapped with Geographic Information Systems software Arcgis 9.1. Littoral depth and altitude data was digitalized from information gathered *in situ* and combined with existing information provided by Portuguese army land maps and Portuguese Hydrographical Institute maps. Triangulated Irregular Networks (TINs) were built to model intertidal and seabed topography down to 30m depth. This information provided depth and altitude boundaries of biotope distribution built with ArcGis 9.1, which provided governmental agencies with a powerful tool that allows the combination of important biogeomorphological information with social-economic, and other information that can and should be used to propose a redefinition of the MPA's in Graciosa.

