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Orientation: Integral management of the sea  
Specialization Area: Environmental analysis and assessment  
Research Area: 3.9 Analysis and Environmental assessment

**PhD project: Integration of Chemical and Biological Parameters for the Implementation of an environmental Monitoring network in the coastal system of Cabo Verde**

Supervisor: Dr. Óscar Nieto (University of Vigo)

**Summary:** Considered as a coastal entity, the coastal areas of Cabo Verde play an important role in the sustainable economic growth. Therefore, the coastal areas are impacted by an overexploitation of resources, discharges of untreated effluents, uncontrolled discharges of solid wastes, and the use of organic compounds in the agricultural activity. Hence, there is a necessity of implementing an environmental monitoring program in Cabo Verde in order to control the pollution of persistent organic contaminants such as organochlorine pesticides, polychlorinated biphenyls (PCB's), polycyclic aromatic hydrocarbons (PAH) and metals.

This study present four main and sequential objectives:

- 1) Chemical analysis of metals concentration (Cr, Cu, Pb, Zn, Ni, As, Cd and Pb) and Organic Pollutants in the water column, sediments and biota *Persististrombus latus*, (Gmelin, 1791) from coastal environment of Cabo Verde;
- 2) Embryo toxicity bioassays with Sea urchin *Paracentrotus lividus* (Lamarck, 1816) and *Echinometra lucunter* (Linnaeus, 1758).
- 3) Integration of chemical and biological parameters; the use of statistical analysis will provide relevant information about the relationship between chemical pollution and the biological responses.
- 4) Definition of a control network to implement an environmental monitoring program in Cabo Verde. The monitoring of marine pollution and the state and quality of the marine environment is carried out through implementation of monitoring programs and environmental monitoring statements.

