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Orientation: Integrated Management of the Sea  
 Specialization Area: Analysis and Environmental assessment  
 Research Area: 3.8 Economic and legislative assessment of coastal ecosystems and of environmental impacts

**PhD project: Production or protection? Efficient management of coastal ecosystem services exposed to high risk industrial activities**

Supervisors: Dr. Peter Cornelis Roebeling (University of Aveiro)  
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**Summary:** Within the generic thematic “Production & Protection”, the purpose of this project is to take the concepts of “economic value” and “ecosystem value” in a complementary stand point –NOT antagonist one–as to identify risk abatement strategies that provide the highest welfare value to local communities. The kind of pre-emptive attitude provided by a risk abatement strategy is of utmost importance at the imminence of a high-risk disturbance threatening the habitat equilibrium (e.g. oil spills or unexpected pollution disasters). While such strategies have been studied in the face of ‘continuous risks’ impending over ecosystems, environmental –economic studies assessing high-risk abatement strategies are lacking. Therefore, by means of an environmental-economic dynamic optimization approach (EE-DOA), this research seeks to identify high-risk abatement strategies that, through sustainable economic development, maximize social wealth within coastal socio-ecological systems. This EE-DOA will be based on an environmental cost-benefit analysis between alternative adaptation/mitigation measures being proposed a crosstime and space, subject to public budget constraints.

