

## **Environmental change dynamics - long term research position**

*Duration of contract: 5 years starting 1<sup>st</sup> September 2008*

*Place of assignment: Universidade do Algarve, Faro, Portugal - Centro de Investigação Marinha e Ambiental (CIMA)*

*Deadline for application: 2<sup>nd</sup> May 2008*

### Main scientific goals of the research project:

The announced position will be occupied by a researcher whose specialization is compatible with one of the two, general goals defined below:

(1) Impacts of global change on the S. Iberian land – ocean interface and its significance in global framework.

The researcher searched for this position should be able to apply his/her knowledge of modelling of sedimentary/biogeochemical processes in order to quantify the impacts of global phenomena (sea-level rise) and regional/local scale phenomena (sediment supply), which are changing the shape and position of coastal interface and thus modulating the delivery of nutrients to coastal habitats. The quantitative estimation of these processes will be tied to the global carbon cycle, including the variation of atmospheric carbon content in the time-scale of centuries to millennia. In alternative, the effects of the studied changes may be analysed in terms of modulation of the biodiversity of coastal habitats. The results of the model simulation should allow a formulation of the forecast for the future trends/scenarios along the South Iberian coasts. The successful candidate will have specific assignments in teaching of selected topics related to biogeochemical cycles and promoting of new topics within seminars on pos-graduate level. He/she is expected to promote international cooperation, within LOICZ and GEO initiatives , in particular at the European level, with the aim of submitting new research projects. Additional information can be obtained from CIMA (Dr. Tomasz Boski ([tboski@ualg.pt](mailto:tboski@ualg.pt)) or Dr. Alice Newton ( [anewton@ualg.pt](mailto:anewton@ualg.pt) )

(2) Characterization of climatic change in SW Europe and human adaptation to the to environmental change .

The researcher searched for that position should have solid experience in terms of paleoenvironmental proxies in coastal/marine sedimentary record. His/her work will be dedicated to the study of pollen spectra and/or microfossil indicators (ex. Diatoms , ostracodes) of the last 20 ky obtained from estuarine/lagoonal/marine and/or lacustrine continental cores. The methodological work on the constraints and bias imparted on the pollen diagram by salt marsh conditions will be carried out through the comparison with contemporaneous pollen spectra. The pollen diagrams will be also analysed in an integrated way together with geomorphological geochemical and mineralogical data in order to obtain complementary information on early human settlements. The work may be extended geographically to the deep sea sediments of Iberia and to the Canary Islands and Madeira. The successful candidate may be requested to collaborate in teaching the selected topics on palynology , palaeoecology or micropaleontology in alternative, at post-graduate level.and will participate in the international programs like IGBP, IGCP and GEO with a special emphasis on formulation of new research national/nternational projects in the field of global change. Additional information can be obtained from CIMA (Dr. Tomasz Boski [tboski@ualg.pt](mailto:tboski@ualg.pt) )

**Requirements:**

1. PhD in a relevant research area.

For objective 1 (Biogeochemistry, Oceanography, Geochemistry with clear emphasis on modelling)

For the objective 2 (Geography, Paleoecology, Quaternary Geology)

2. Three years minimum Post-doc experience in the domain related to the above described objectives
3. Background knowledge on southern European coastal ecosystems
4. The fluent knowledge of English is mandatory, notwithstanding the active knowledge of Portuguese language is a strong asset
5. Requested documents: CV, motivation letter, 2 reference letters from senior researchers

