

MEMBER COUNTRY:

Portugal

National Report to SCAR for year:

2008-09

Activity	Contact Name	Address	Telephone	Fax	Email	web site
National SCAR Committee	Adelino Canário	Centre of Marine Sciences (CCMAR), University of Algarve, FCMA, Campus Gambelas, 8000-139 Faro, Portugal				
SCAR Delegates						
1) Delegate 2) Alternate Delegate	Adelino Canário				acanario@ualg.pt	http://www.portalpolar.pt
Standing Scientific Groups						
Life Sciences						
1) 2) 3) 4)	José Xavier				jxavier@zoo.uc.pt	
Geosciences						
1) 2) 3) 4)						
Physical Sciences						
1) 2) 3) 4)						

Activity	Contact Name	Address	Telephone	Fax	Email	web site
Scientific Research Program						
ACE						
1)						
2)						
3)						
4)						
AGCS						
1)						
2)						
3)						
4)						
EBA						
1)						
2)						
3)						
4)						
ICESTAR						
1)						
2)						
3)						
4)						
SALE						
1)						
2)						
3)						
4)						

Activity	Contact Name	Address	Telephone	Fax	Email	web site
ACTION GROUPS						
1) 2) 3) 4) insert others as needed						
EXPERT GROUPS						
1) 2) 3) 4) insert others as needed						
JCADM						
1) 2)						
NATIONAL ANTARCTIC DATA CENTRE						
SCAR DATABASE						
insert name of database for which your country has responsibility						

A BRIEF SUMMARY OF SCIENTIFIC HIGHLIGHTS:

Portugal's polar research activities for the 2008/09 period, developed through the Portuguese Committee for the International Polar Year (IPY):

Paulo Catry, Rafael Matias (Eco-Ethology Research Unit, Instituto Superior de Psicologia Aplicada) and José Pedro Granadeiro (National Museum of Natural History, Centro de Biologia Ambiental, University of Lisbon) were at their study site on New Island, Falkland Islands, covering the period from October 2008 till March 2009. The main research is a long-term study on the demography and behavioural ecology of black-browed albatrosses (*Thalassarche melanophris*), a globally threatened species which is also one of the top predators of the Patagonian Shelf ecosystem. This year the main focus was on GPS-tracking foraging albatrosses and to contrast the results with Vessel Monitoring System (VMS) data provided by the Falkland Islands Fisheries Department, in order to better understand the interactions between birds and fishing vessels.

José Xavier (IMAR, University of Coimbra). Principal Investigator of the POLAR Project (within Portugal Scientific Program PROPOLAR) - IMAR, University of Coimbra (Portugal), British Antarctic Survey (UK) and Centre D'Etudes Biologique de Chizé-CNRS (France). Activities from January until December 2008 consist of: (1) RESEARCH: José Xavier was in the International Polar Year cruise onboard of the RRS James Clark Ross, of the British Antarctic Survey, to evaluate the ecology, abundance and distribution of fish, cephalopods and crustaceans in the Scotia Sea, from close to the Antarctic continent (on the Weddell Sea) to the Antarctic convergence north of South Georgia, between December 2007 and February 2008. Particularly attention was paid to fish families Myxichthysidae and Bathylagidae. The data was related to the foraging ecology of king penguins, that were satellite tracked at the same time of the cruise. The cruise was part of the multi-disciplinary and international programs ICED-IPY and CAML-IPY, in which José Xavier is the national contact, and the British Antarctic Survey core research programme DISCOVERY 2010, involving scientists from more than 30 countries worldwide. Funding came from the Foundation for Science and Technology (Portugal) and the British Antarctic Survey. José Xavier was also the leading scientist involved on supervising the collection of diet samples from land based predators at Bird Island, South Georgia, under the Long Term Monitoring and Survey (LTMS) program of the British Antarctic Survey, including samples from wandering albatrosses, grey-headed albatrosses, white-chinned petrels and black-browed albatrosses during 2008; (2) EDUCATION & OUTREACH: During the research cruise, José Xavier was actively involved in numerous education and outreach activities which included daily posts of the cruise blog, direct contact with schools from Portugal, Brazil and UK, interviews to national portuguese TV and radio stations and international education and outreach activities of the Association of Polar Early Career Scientists.

Rafael Mendes and Vanda Brotas (Centro de Oceanografia, Faculdade de Ciências da Universidade de Lisboa, Portugal) collaborate with Virginia Garcia (Instituto de Oceanografia, Universidade Federal do Rio Grande (FURG), Brasil). The work is integrated in the larger project entitled Southern Ocean Studies for Understanding Global-Climate Issues (SOS-CLIMATE). The main objective of this study is to understand the phytoplankton dynamics in the continental shelf of the Antarctic Peninsula (Bransfield strait, Drake Passage and Weddell Sea). To meet this objective, two scientific cruises were carried out in the Austral Summer of 2008 and 2009, integrated into the Brazilian Antarctic Program. Phytoplankton, constituted by microscopic autotrophic organisms, is the basis of marine trophic chain and is responsible, together with terrestrial vegetation, for the sequestration of atmospheric carbon. Due to its rapid turnover rate, phytoplankton is a key community to react to any climate shifts.

PI: Gonçalo Vieira (Centre for Geographical Studies - University of Lisbon)

The CEG-UL is leading the FCT-funded project PERMANTAR (Permafrost and Climate Change in the Maritime Antarctic) in Livingston (LI) and Deception (DI) Islands (Antarctic Peninsula region), which also involves the Centre of Geophysics of the University of Lisbon and Centre of Geophysics of Évora. The project includes also the universities of Alcalá (Spain) and Buenos Aires (Argentina), and the Bulgarian Antarctic Institute. PERMANTAR collaborates closely with the Spanish project PERMAMODEL-IPY. Field research took place in the Argentinean Station Deception, Bulgarian Station St. Kliment Ohridski and Spanish Stations Juan Carlos I and Gabriel de Castilla. Main activities focused in the the installation and upgrading of permafrost and periglacial processes monitoring sites: i) a new 8 m borehole in LI, ii) three new 4-5m boreholes (collaboration with the Russian Academy of Sciences) in DI, iii) new CALM-S sites in DI and LI, iv) a meteorological station in LI, v) solifluction, thermokarst and rockglaciers monitoring sites, vi) time-lapse cameras, vii) year-round monitoring with resistivimeter with datalogger in DI, viii) electrical resistivity tomography surveying in LI, and ix) n-factor monitoring sites in DI. The Antarctic season of 2008-09 counted with the participation of Gonçalo Vieira, Mário Neves, António Correia, Vanessa Batista and Alexandre Trindade. Master theses on Antarctic permafrost have been presented by A. Trindade and R. Melo. Education and outreach activities have been organized, including talks in schools, public lectures and a permafrost film "Permafrost! Polar science at 62°S" for classroom activities. The CEG-UL team continued the scientific coordination of the grant program New Generation of Polar Scientists funded by Caixa Carbono Zero (CGD). This program involves full-time funding of two students on permafrost research in a total of six grants in polar science.