



Partner Profile Form

Call FP7-AFRICA-2010

Date : 2009 11 02

Details of the organization and of the main researcher				
Contact person details				
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Organization/Research Group details				
Name	Instituto Tecnológico e Nuclear / <i>Environmental and Analytical Chemistry</i>			
Address	Estrada Nacional nº 10			
City	Sacavém	P.O Box	2686-953 Sacavém	Country Portugal
Website				
Organization activity type¹	<input type="checkbox"/> HES	<input type="checkbox"/> IND	<input checked="" type="checkbox"/> REC	<input type="checkbox"/> N/A <input type="checkbox"/> OTH _____
Organization legal status type	<input checked="" type="checkbox"/> Public	<input type="checkbox"/> Private	<input checked="" type="checkbox"/> Non-profit	<input type="checkbox"/> OTH _____

Brief description of the activities of the research group/organization (max 12 lines)

The activities of the Group of *Environmental and Analytical Chemistry* (EAC) combine fundamental and methodological research related to *Elemental and Isotopic Analysis* as well as their applications in the fields of *Isotope Hydrology and Environmental Geochemistry*. Different facilities have been implemented and maintained by the team: *Energy-Dispersive X-Ray Fluorescence, Light Isotope Mass Spectrometers, Radiocarbon Dating, Tritium Unit and a Liquid Chromatograph/Inductively Coupled Plasma Mass Spectrometer*. The Team has participate in the following research projects in Africa

- HYDROARID – Evaluation of the hydrogeological potential and sea water intrusion monitoring in semi-arid zones using a multitechnique approach: application to the Santiago and Maio islands (Cabo Verde), POCTI/CTE–AST/55399/2004,); the overexploitation of coastal aquifers and pollution are among the main problems related to groundwater resources assessment and management in Santiago Island. Solute and isotope data obtained in different groundwater systems were used in the identification of groundwater resources degradation.
- Evaluation, Management and Protection of the Hydrological Resources in Semiarid Zones. Application of Hydrodynamic, Hydrochemical and Isotopic Methods in the Essaouira Synclinal Basin (Morocco). GRICES / Proc. 4.1.5. A multidisciplinary approach has been applied to evaluate the hydrogeological potential of arid zones and environmental climatic change within Essaouira Basin (Morocco).

Former participation in EU Framework Programmes (FP) projects

YES NO

If yes:

Project (s) Title / Acronym (Activities performed)

- Management of Coastal Aquifers in Europe. Palaeowaters, Natural Controls and Human Influence (PALAEAUX)" - ENV4-CT95-0156-PL950680, Two coastal aquifers of Portugal are being studied by ITN: the Aveiro Cretaceous Aquifer and the Lower Tagus and Lower Sado Aquifer using environmental isotopes techniques (¹⁸O, ²H, ³H, ¹³C and ¹⁴C) and chemical data.

¹ **Organization activity type (fill all that apply):** **HES** - Higher Education (i. e. organisations only or mainly established for higher education/training, e. g. universities, colleges); **IND** - Industry (i. e. industrial organisations private and public, both manufacturing and industrial services such as industrial software, design, control, repair, maintenance); **REC** – Research organization (i. e. "research organisation" means a legal entity established as a non-profit organisation which carries out research or technological development as one of its main objectives); **OTH** – Others; **N/A** – Undefined.


Topics of interest in the CALL FP7-AFRICA-2010
http://cordis.europa.eu/fp7/dc/index.cfm?fuseaction=UserSite.FP7DetailsCallPage&call_id=268&act_code=KBBE&ID_ACTIVITY=2
Project Type Large Collaborative Project |CP-IP x Small or Medium Collaborative Project |CP-FP Coordination and Support Action |CSA

Theme/topic	Scheme
Theme 1: HEALTH	
<input type="checkbox"/> HEALTH.2010.2.3. 2-4: Controlling malaria by hitting the vector: New or Improved – Vector Control Tools	CP – IP (SICA)
<input type="checkbox"/> HEALTH.2010.2.4. 1-4: Infectious agents and cancer in Africa	CP – FP (SICA)
<input type="checkbox"/> HEALTH.2010.3.4-1: Develop and assess key interventions and policies to address the human resource crisis in the health sector	CP – FP (SICA)
<input type="checkbox"/> HEALTH.2010.3.4-2: Feasibility and Community effectiveness of Innovative intervention packages for maternal and newborn health in Africa	CP – FP (SICA)
<input type="checkbox"/> HEALTH.2010.3.4-3: Building sustainable capacity for research for health in Africa	CSA (CA)
<input type="checkbox"/> HEALTH.2010.3.4-4: Assessment of migrants' health, disease patterns and impact on health systems	CSA (CA)
Theme 2: FOOD, AGRICULTURE, AND FISHERIES, AND BIOTECHNOLOGY	
x <input type="checkbox"/> KBBE.-2010.1.-2-03: Sustainable water resources Management (WRM) and Soil fertility conservation for food production in Africa – SICA (Africa)	CP – FP (SICA)
<input type="checkbox"/> KBBE.2010.2.2-03: Identifying research needs on malnutrition in Africa – (Mandatory Africa)	CSA (SA)
<input type="checkbox"/> KBBE.2010.3.5-02: Coping with water scarcity in developing countries: Role of biotechnology in water treatment –Mandatory ICPC (Africa)	CSA (CA)
<input type="checkbox"/> KBBE.2010.4-02: Networking of nongovernmental Organisations involved in agricultural research for development	CSA (CA)
Theme 6: ENVIRONMENT (INCLUDING CLIMATE CHANGE)	
<input type="checkbox"/> ENV.2010.1.2.1-1: The effect of environmental change on the occurrence and distribution of water related vector-borne diseases in Africa	CP – FP (SICA)
<input type="checkbox"/> ENV.2010.1.3.3-1: Early warning and forecasting systems to predict climate related drought vulnerability and risks in Africa	CP – FP (SICA)
x <input type="checkbox"/> ENV.2010.2.1.1-1: Integrated management of water and natural resources in Africa	CP – FP (SICA)
<input type="checkbox"/> ENV.2010.3.1.1-3: Decentralised water supply and Sanitation technologies and systems for small communities and peri-urban areas	CP – FP (SICA)
x <input type="checkbox"/> ENV.2010.3.1.1-4: Water harvesting technologies in Africa	CP – FP (SICA)

Expertise/ Commitment offered
Keywords specifying the expertise:
Description of the expertise:

The scientific activity has been developed in the use of environmental isotopes in hydrogeology research studies, palaeohydrology and climate investigations, e¹⁴mphasis on the use of the ratios ²H/¹H, ¹³C/¹²C, ¹⁵N/¹⁴N, ¹⁸O/¹⁶O and variation of groundwater ³H and C content. The work is being focused on the study of the quality of groundwater for Human supply and groundwater resources protection and management, through the identification and quantification of pollution sources traced by environmental isotopes and definition of the recharge areas. Through the isotope hydrology research area contributions to a better understanding of the dynamic evolution response in time of aquifer systems have been carried out. The several projects carried out since 1988, have allowed to give answers to relevant scientific issues, such as the identification of the salts contamination in groundwater as sources of the groundwater deterioration (natural or induced by man), in the reconstruction of the palaeoclimatic environments, in order to investigate the extent to which groundwater retains the signature of past recharge events and Human influence.

Role/Commitment offered
 Technology development x Research Demonstration
x Training Dissemination OTH _____

I agree with the publication of my/our data: NO x YES

Please fill in the Partner Profile Form and return it to (no later than the 11th of September 2009)
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