

## **Methods and Applications of Satellite Remote Sensing in African Coastal and Regional Seas**

**5-16 November 2012, Morocco**

As part of a continuing series of training courses in Africa that has been established in support to the strategic positioning of the JRC on the global arena and to EU 'Development Cooperation' policy, the JRC Institute for Environment & Sustainability offered and organized a 2-week course on: "*Methods and Applications of Satellite Remote Sensing in African Coastal and Regional Seas*", in partnership with the Chouaib Doukkali University of El Jadida (Morocco) and the Moroccan Association for Remote Sensing of the Environment (MARSE).

The course was organized in association with the EU EAMNet project (Europe-Africa Marine EO Network) with additional and significant contributions from the International Ocean Colour Coordinating Group (IOCCG), the University of Cape Town (UCT) and the South African Council for Scientific and Industrial Research (CSIR), and the Western Indian Ocean Marine Science Association (WIOMSA).

### **Course Structure** (time table)

The course provided a series of lectures chaired by international experts from Europe and Africa, and covering a large range of topics from the theoretical basis of ocean colour satellite measurements (signal processing, under-water optics, algorithms) to specific applications addressing important environmental issues such as climate change and time series analysis, fishery management and water quality assessment (see course synopsis).

The course also included practical sessions during which the participants were trained on various image processing and applications software freely available from space agencies and other organizations.

The 'mini-project' sessions enabled the participants to demonstrate their understanding of the acquired knowledge through short investigations using data sets from different satellite platforms and marine / lake regions.



### **Course Highlights**

Due to late cancellation of some of the participants, only 13 participated to the course, representing 10 different African countries: Morocco, Uganda, Ghana, South Africa, Cameroon, Togo, Egypt, Ivory Coast, Tanzania, and Kenya (see list of participants).

The course took place in the Faculty of Sciences at the Chouaib Doukkali University of El Jadida (Morocco), following the 9<sup>th</sup> International Conference of the African Association for Remote Sensing of the Environment (AARSE). Dedicated rooms were provided by the University, including a computer room equipped with 12 computers that were configured prior to the event with appropriate software. Professor Kamal Labbassi, chair of the Moroccan Association for Remote Sensing of the Environment (MARSE), opened the training event giving a welcome introduction.



In spite of late cancellations, the training course was a successful event, with participants always showing great motivation and capacity to learn and applied satellite techniques that represented new scientific domain for most of them. The high quality of their 'mini-projects' presented on the last day reflected the impressive work they achieved during the course period.

### **Acknowledgement**

Many thanks are addressed to all participants, trainees and trainers, for their excellent contributions and for their enthusiastic cooperation in sharing their knowledge and their time during the course.

We are specifically grateful to Professor Labbassi for all the arrangements made with the local host Institution to provide the best environment possible for a smooth proceeding of the course.

Finally, we are very much thankful to all organizations and project partners for providing and managing financial support to the participants. We very much look forward to further opportunities of collaboration.

### **List of participants**

- Adnane Habib, Department of Earth Sciences, Chouaib Doukkali University, El Jadida, Morocco.
- Aissa Benazzouz, National Institute of Fisheries Research, Casablanca, Morocco.
- Angella Namugga, Makerere University, Department of Geomatics and Land Management, Kampala, Uganda.
- Bennet A. Foli, Department of Oceanography and Fisheries, University of Ghana, Legon Accra, Ghana.
- Constance Banura, Makerere University, Department of Geomatics and Land Management, Kampala, Uganda.
- Emma Bone, Council for Scientific and Industrial Research, Cape Town, South Africa.
- Henry Nibam Abi, Marine Research Institute (MARE), University of Cape Town, Cape Town, South Africa.
- Heou Maleki Badjana, WASCAL-GRP Climate Change and Water Resources, University of Abomey-Calavi, Cotonou, Benin.
- Maged Mohamed A. Hussein, National Institute of Oceanography and Fisheries (NIOF), Alexandria, Egypt.
- Maffoue Jeanne Kouadio, Centre Universitaire de Recherche et d'Application en Télédétection, Cocody University, Abidjan, Ivory Coast.
- Masumbuko Semba, Institute of Marine Sciences, Zanzibar, Tanzania.
- Pascal Thoya, Kenya Marine and Fisheries Institute (KMFRI), Mombasa, Kenya.
- Zineb El Ouehabi, National Institute of Fisheries Research, Casablanca, Morocco.

### **Lecturers and organizing committee**

- Christo Whittle, Department of Oceanography, University of Cape Town, Cape Town Rondebosch, South Africa.
- Frédéric Mélin, Institute for Environment & Sustainability, EC-Joint Research Centre, Ispra, Italy.
- Jesus Morales, Fisheries Oceanography, IFAPA Centro 'Agua del Pino', Huelva, Spain.
- Kamal Labbassi, Department of Earth Sciences, Chouaib Doukkali University, El Jadida, Morocco.
- Marié Smith, Department of Oceanography, University of Cape Town, Cape Town Rondebosch, South Africa.
- Nicolas Hoepffner, Institute for Environment & Sustainability, EC-Joint Research Centre, Ispra, Italy.
- Pascal Derycke, Institute for Environment & Sustainability, EC-Joint Research Centre, Ispra, Italy.
- Roland Doerffer, Helmholtz Center Geesthacht/Brockman Consultants, Germany
- Stephanie Henson, National Oceanographic Centre, Southampton, UK.
- Steve Groom, Plymouth Marine Laboratory, Prospect Place, Plymouth, UK.
- Stewart Bernard, Council for Scientific and Industrial Research, Cape Town, South Africa.
- Valborg Byfield, National Oceanographic Centre, Southampton, UK.