

## AARSE2010 WORKSHOPS AND SPECIAL SESSIONS

### A. SUMMARY OF WORKSHOPS AND SPECIAL SESSION

Organisation	Title	Contact person	Period
Fugro EarthData, Inc.	Mapping Using IFSAR	Ms. Hansen/. L.G (Jake) Jenkins Senior Vice President, GeoSAR Services Office: +1.... Ext. 187 / Fax: +1.301.963.2064 Mobile: +1.... Email: <a href="mailto:jjenkins@earthdata.com">jjenkins@earthdata.com</a>	Pre-conference  Sunday 24 <sup>th</sup> October 2010. 1000-1300hrs
GARNET-E	GARNET-E (GMES and Africa: Regional Network for Information Exchange and Training in Emergencies)	Tsehaie Woldai ( <a href="mailto:woldai@itc.nl">woldai@itc.nl</a> ), Norman Kerle ( <a href="mailto:kerle@itc.nl">kerle@itc.nl</a> ), Hussein Farah ( <a href="mailto:farah@rcmrd.org">farah@rcmrd.org</a> )	Post-conference 30 – 31 October 2010 2 days
EnerGEO, GEO	Towards a Bioenergy Atlas of Africa (Energeo Project, GEO W/S)	Peter Zeil <a href="mailto:peter.zeil@sbg.ac.at">peter.zeil@sbg.ac.at</a> Fernando Ramos, <a href="mailto:FRamos@geosec.org">FRamos@geosec.org</a>	Pre-conference 22-23 October 2010 2 days
AMESD (Special session)	"African Monitoring of the Environment for Sustainable Development (AMESD)" preferentially the Tuesday 26 October in the morning or in the afternoon,	Marc Leroy <a href="mailto:marc.leroy@amesd.org">marc.leroy@amesd.org</a>	Tuesday 26 <sup>th</sup> October 2010. 1030 – 1230hrs
ESRI	ESRI Workshops	Willy Simons <a href="mailto:wsimons@esri.co.ke">wsimons@esri.co.ke</a> ;  Michelle McDonald <a href="mailto:mmcdonald@esri.com">mmcdonald@esri.com</a>	1400 – 1700hrs Sunday 24 <sup>th</sup> October 2010 and 1030 – 1230 Tuesday 26 <sup>th</sup> October 2010.
GEONETCast	Post Conference 2 weeks Refresher Course at the Department of Geography and Environmental Studies, Addis Ababa University.	<i>Read more at .....</i> <a href="http://www.itc.nl/Pub/study/Courses/C10-WRS-RC-01">http://www.itc.nl/Pub/study/Courses/C10-WRS-RC-01</a>	Post-conference. 01 – 12 November 2010

### B. METHOD OF APPLICATION

Participants willing to attend any of the workshops/special session should indicate their choice(s) on the registration form during online registration AND send an application to the workshop's contact person(s). The applicant should also indicate his/her membership status and that of his/her organization in AARSE, IEEE-GRSS, EIS-Africa and ISPRS; his/her organization and current job description or course of study (for students).

## **C: DETAILS OF THE WORKSHOPS AND SPECIAL SESSION**

### **1. GARNET-E Workshop**

In the framework of the European project GARNET-E (GMES and Africa: Regional Network for Information Exchange and Training in Emergencies), a session and a decision maker workshop will be organized at the AARSE conference in Ethiopia. The workshop will focus on the International Charter "Space and Major Disasters" and the Global Monitoring for Environment and Security (GMES) project of the European Union, and introduce their purpose, operational aspects and potential for emergency response in Africa. The event will be divided into an AARSE conference session with presentations and discussions on the topic, and a two-day decision maker level training event following the conference, organised by the Regional Center for Mapping of Resources for Development (RCMRD, Nairobi [Kenya]), Infoterra UK (Farnborough [UK], DMCii (Guildford [UK], and the Faculty of Geoinformation Science and Earth Observation (ITC, Enschede [Netherlands]). For further details, please contact the following persons: Tsehaie Woldai ([woldai@itc.nl](mailto:woldai@itc.nl)), Norman Kerle ([kerle@itc.nl](mailto:kerle@itc.nl)), Hussein Farah ([farah@rcmrd.org](mailto:farah@rcmrd.org))

### **2. Fugro EarthData Workshop**

**Workshop title:** Remote sensing and TLM creation with IFSAR

**Keywords:** Remote sensing, IFSAR, Radar, SAR, TLM, DEM, DSM

**Time:** 3 hours/180 min

**Target audience:** Geospatially aware, but general audience.

This workshop will be of interest to geospatial professionals in government, the private sector, and education who wish to understand the latest state-of-the-art technology in the mapping world, and the numerous applications with which it is capable.

**Organizer:** Steven Shaffer  
Fugro EarthData, Inc.  
Frederick, MD. USA  
Phone 301-948-8550  
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#### **Workshop Details**

Airborne interferometric synthetic aperture radar (IFSAR) is a hot topic in remote sensing with the corresponding use of IFSAR-derived products growing rapidly.

The workshop will broadly address the fundamentals of IFSAR data acquisition techniques, processing, and product development. There will be a section on IFSAR systems configuration, which demonstrates the latest technological advances, such as P-band with its jungle canopy penetrating capabilities and the integration of multiple radar bands and Lidar technology on to the same platform. There will be extensive discussions on vital applications such as TLM development for base mapping, disaster planning (including flood risk assessment and mitigation, landslip/slide modeling), 3D visualizations, natural resource and agricultural applications, as well as national security and defense applications.

## **Workshop Outline**

- i. Overview (15 min)**
  - Technology history
  - SAR/IFSAR sensors
  
- ii. RADAR Theory (30 min)**
  - Basic concept of Radar, SAR and IFSAR
  
- iii. IFSAR systems (45 min)**
  - Base products
  - Acquisition systems
  - Processing systems
  - Production specifications
  - Airborne IFSAR technologies comparisons vs. Lidar, aerial photography, and satellite
  
- iv. IFSAR data applications (60 min)**
  - Data products review (elevation and imagery)
  - Base mapping (including topographic line maps)
  - Elevation data (including first surface v. under-canopy elevation comparisons, contours, TINs)
  - Disaster planning (including flood risk assessment & mitigation, landslip/slide modeling)
  - Vital national security and national defense applications
  - Exploration and natural resource management (including automated biomass determination and carbon accounting methods)
  - Agricultural applications (including automated crop identification)
  - 3D Visualizations
  
- v. Summary (10 min)**
  
- vi. Question and Answer (20 min)**

## **3. BIOENERGY WORKSHOP**

### **Title of workshop:**

Towards a Bioenergy Atlas of Africa

**Relevant keywords:**

Dedicated crops, agricultural and forestry residues, animal wastes, biogas, planning for atlas production

**Contact details of Organizer(s):**

Peter Zeil, [peter.zeil@sbg.ac.at](mailto:peter.zeil@sbg.ac.at)  
Fernando Ramos, [FRamos@geosec.org](mailto:FRamos@geosec.org)

**Short description of the workshop:**

The term “bioenergy” includes energy derived from dedicated crops, agricultural and forestry residues, animal wastes, and biogas. A Bioenergy Atlas for Africa shall combine layers of data (land-use, hydrology, soils, demography, infrastructures, etc) with analysis tools, allowing planners to visualize existing and potential bioenergy resources, and to determine which technologies are viable solutions at national or regional scales. The atlas shall be appealing and easy to employ by users from different backgrounds and a wide range of experience. It shall also provide users with metadata, on-line help support and built-in scenarios exemplifying its application. Users shall be able to interact with it through queries that, once submitted, produce a map that meets the specified criteria, in a selected level of detail, and within a reasonable time.

Space-based and in-situ Earth observations shall be integrated with ground surveys, historical records and market information, and assimilated with geographic information systems (GIS) analytical tools to illuminate short- and long-term trends on bioenergy demand and supply, at regional and local scales.

Building on the outcome of the Workshop on Biomass Energy Modelling with GIS and Remote Sensing, held at Makerere University, Kampala, Uganda in conjunction with the AfricaGIS 2009 Conference, the objective of the workshop at AARSE 2010 is to draft a project plan (with outputs and milestones) and its respective Implementation with interested parties. The project description and the plan of activities will form the basis for securing funding from donor and private sector organizations. So far, South Africa and Brazil have already been approached and informally expressed their interest in this initiative.

**Target audience:**

Experts for energy planning, biomass estimation, remote sensing, geoinformatics, and related fields from Africa and abroad

**Period and duration of workshop**

October 22-23, 2010; 2 days

**Funding support**

The workshop will be supported by the European Commission through the FP7 Project EnerGEO ([www.energeo-project.eu](http://www.energeo-project.eu)) and GEO ([www.earthobservations.org](http://www.earthobservations.org)). Possible other contributor: UNEP DEWA Nairobi.

The organizers will support selected participants from African countries (registration fee, travel and subsistence allowance).

## 4. AMESD WORKSHOP/SPECIAL SESSION

**Workshop Title:** African Monitoring of the Environment for Sustainable Development (AMESD)

**Workshop organizer:**

Dr. Marc Leroy  
AMESD Project  
Technical Assistance (TA) team  
African Union Commission  
P.O. Box 200 288  
Addis Ababa  
[marc.leroy@amesd.org](mailto:marc.leroy@amesd.org)

**Target Audience:**

Scientists and decision makers interested in the AMESD program.

**Period and Duration:**

Tuesday 26 October 2010, 10.30 – 12.30hrs

**Abstract**

The goal of the African Monitoring of the Environment for Sustainable Development (AMESD) workshop is to raise awareness in the African remote sensing community about the program development, its advances, and of course its limitations.

Presenters would be drawn from the following organisations:

AU Commission, AMESD Project Secretariat, ECOWAS, AGRHYMET, IOC, IGAD, RCMRD, CEMAC and SADC

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## **5. GEONETCast-Toolbox for natural and water resource management**

**Venue:** Department of Geography and Environmental Studies, Addis Ababa University.

**Date:** 01 – 12 November 2010 (Post-conference)

**Brief Description:** The course will help to bring people up to speed with recent developments with respect to Meteosat and METop, associated modelling and GIS applications, and it will stimulate them to develop educational and research activities in these fields. The subject matter that is central in the contents of the course has a direct link to the subject of natural disasters and disaster management (such as for example drought and flood monitoring) that bears great relevance to the African Region. Also for appropriate management of these processes a good understanding of temporal (near-real time) development is essential.

The refresher course is meant for Alumni of the Netherlands Fellowship Programme (NFP) and will therefore contribute to further development and strengthening the networks of environmental and water research and management institutions in the region, it will help scientists to

incorporate contemporary issues in their own research programmes and it will also enable them to keep curricula in academic institutions in pace with newly developed knowledge and skills. Read more.....( <http://www.itc.nl/Pub/study/Courses/C10-WRS-RC-01>)