



# Space Applications and Environmental Science Laboratory (SPAEL)



## A Report of the Workshop on Principles of Remote Sensing and Geographic Information System held from November 2 – 6, 2009 at the African Regional Centre for Space Science and Technology Education-English, Obafemi Awolowo University, Ile-Ife, Nigeria.

### Introduction

The need to understand the environment we live in and its dynamics is crucial in managing and solving environmental problems. There is therefore the need for capacity building which is an essential step, not only for understanding the nature and intensity of environmental problems at hand, but also to acquire the ability to assess, monitor and analyze these problems with the major aim of proffering solutions amidst the several options. It is in line with this that a training workshop was organized by the African Regional Centre for Space Science and Technology Education-English (ARCSSTE-E) in collaboration with the Space Applications and Environmental Science Laboratory (SPAEL), Institute of Ecology and Environmental Studies, Obafemi Awolowo University, Ile-Ife and the Regional Centre for Training in Aerospace Surveys (RECTAS).

### Attendance

A total of eleven (11) participants from four Institutions attended the training workshop. Two of which are from National Population Commission (NPC), seven from National Space Research and Development Agency (NASRDA), and two from Ahmedu Bello University (ABU), Zaria.

### Lectures

The workshop was divided into three major sessions: Presentations, Practical Sessions and Field Visits. The workshop took off with a presentation on Introduction to Remote Sensing/ Geographic Information System. There was a presentation before every practical session took off. The major software used was ArcGIS 9.1; however, the participants were also introduced to ILWIS 3.1 for a day.

### Presentations

A total of eight (8) power point presentations were delivered during the period of the workshop viz:

1. Satellite products application areas and marketing.
2. Basic Concepts of Remote Sensing and GIS.



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3. Creating and Editing Shapefiles.
4. Vector analysis and attribute data handling.
5. Working with Raster Data.
6. Visualization, display of satellite imageries and Image enhancement techniques.
7. Multispectral Image Classification.
8. Introduction to AFREF

## **Practical Sessions**

The practical sessions in which more time was allotted gave participants the opportunity to handle the software themselves. A brief presentation was given before every practical session. The practical sessions included exercises and pilot project. Resource persons guided the participants through every practical session.

## **Field Visits**

Participants went on a field visit to RECTAS where the African Reference Frame (AFREF) is located and were adequately informed about the concept and rationale behind establishing AFREF. Field visits were also made to various places in OAU and in the town where they were taught how to handle a GPS and take readings. These points were identified on the Landsat image of Ile-Ife while AFREF was identified on the map of Nigeria.

## **Pilot Project**

The Training Workshop was wrapped up with a pilot project presentation. The participants presented a pilot project.

## **Conclusion**

The workshop ended with a closing address by the Director of ARCSSTE-E, Dr. Akinyede. He appreciated all the participants and encouraged them to come back for additional and in-depth knowledge of the environmental problems in Nigeria and how they can use remote sensing/geographic information system softwares in proffering solutions. Dr. W.B. Malgwi from ABU, on behalf of the participants appreciated the organizers of the workshop for a job well done. He also recommended that more workshops of this nature should be organized and the duration extended.



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Table 1: List of Participants

S/N	NAME	ADDRESS
1.	MR AYENI EMMANUEL	NATIONAL POPULATION COMMISSION, ABUJA
2.	MR HABILA MAGAJI	NATIONAL POPULATION COMMISSION, ABUJA
3.	MR OMWUBUARIRI E. IKECHUKWU	NATIONAL AGENCY FOR SPACE, RESEARCH AND DEVELOPMENT AGENCY, ABUJA
4.	MR EGURE DANIEL ASISHANA	NATIONAL AGENCY FOR SPACE RESEARCH AND DEVELOPMENT AGENCY, ABUJA.
5.	MR USMAN ALALU	NATIONAL AGENCY FOR SPACE RESEARCH AND DEVELOPMENT AGENCY, ABUJA
6.	MS PATIENCE O. NGAJI	NATIONAL AGENCY FOR SPACE RESEARCH AND DEVELOPMENT AGENCY, ABUJA
7.	MRS JOY U. OLAYIWOLA	NATIONAL AGENCY FOR SPACE RESEARCH AND DEVELOPMENT AGENCY, ABUJA
8.	MR AMUJO SUNDAY	NATIONAL AGENCY FOR SPACE RESEARCH AND DEVELOPMENT AGENCY, ABUJA
9.	MR DANLADI Y. YARO	NATIONAL AGENCY FOR SPACE RESEARCH AND DEVELOPMENT AGENCY, ABUJA
10.	DR. ABU SUNDAY THEMAN	AHMEDU BELLO UNIVERSITY, ZARIA
11.	DR. W.B. MALGWI	AHMEDU BELLO UNIVERSITY, ZARIA

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**Opening address and participants with the some resource persons**



**Lectures and practical sessions**



**Field Visit**