



R3i Regional Training Workshop: Feature Extraction from Satellite Images

TRAINING OVERVIEW AND AGENDA

Prepared by
GESP – CGS/EI - GIS4C Joint Venture

May 21st-23rd, 2012



1.0 Workshop Background

The R3i participating states are generally lack current and high resolution land cover and land use thematic maps or GIS layers. Existing land cover/land use digital maps are mostly based on digitization of old topographic maps. Land cover/land use maps provide information on the location of natural and anthropogenic resources. They are critical to hazard risk analysis and design of mitigation measure. Very often, the quality of hazard maps and defined by the currency and quality of land cover/land use maps. It is ironic that most of these countries do have access to aerial photographs and high-resolution satellite imageries that may be used to produce new land cover/land use maps or update existing maps but lack the skills of extracting land cover/land use features from these photographs or imageries.

2.0 Training Workshop Objectives

The objectives of the training are as follows:

- a. To introduce participants to the field of remote sensing and digital image processing and its importance to disaster risk management.
- b. To demonstrate approaches, tools and methodologies for extracting and analyzing remotely sensed data.

3.0 The Learning Outcomes

At the end of the training, participants should be able to:

- a. Understand the electromagnetic spectrum, and how it applies to remote sensing.
- b. Interpret the basic features and characteristics of earth surfaces on satellite imagery.
- c. Know how to extract and interpret information from remotely sensed data.

4.0 Target Participants

Training would be offered to 2 state officials from each R3i participating state. Selected participants must be available to support the GIS data needs of State Disaster Risk Management Offices.

5.0 Resources Required

The following resources are required for the conduct of the training workshop.

- Hardware: Desktop or laptop computer for each participant (Please bring R3i laptops for the training)
- Software: ArcGIS software and **Feature Analyst Extension**.
- Data: Existing and most current high-resolution satellite imageries and aerial photographs of your island
- Participants: Basic GIS skill, attitude to learn, and willing to share knowledge gained with others



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Day 1	
Time	Training Module
08:30-10:00am	Introduction to Remote Sensing Concepts and land cover/land use mapping
10:00-10:30am	Break
10:30-12:00noon	Topic 1: Getting Started with Feature Analyst
12:00-1:00pm	Lunch
1:00-2:30pm	Topic 2: Urban Street & River Extraction
2:30-3:00pm	Break
3:00-4:30pm	Topic 3: Suburban Houses Extraction
Day 2	
Time	Training Module
08:30-10:00am	Topic 4: Scanned Map Extraction
10:00-10:30am	Break
10:30-12:00noon	Topic 5: Pervious/Impervious Extraction
12:00-1:00pm	Lunch
1:00-2:30pm	Topic 6: Multi-Class Extraction
2:30-3:00pm	Break
3:00-4:30pm	Topic 7: Change Detection
Day 3	
Time	Training Module
08:30-10:00am	Topic 8: Mosaicing Satellite Imagery
10:00-10:30am	Break
10:30-12:00noon	Topic 9: Batch Processing/Feature Modeller
12:00-1:00pm	Lunch
1:00-2:30pm	Topic 10: Field verification
2:30-3:00pm	Break
3:00-4:00pm	Review of concepts
4:00-4:30pm	Workshop evaluation