

Training Course for Puerto Princesa City

GEOMATICS TRAINING COURSE FOR NATURAL RESOURCE MANAGEMENT

Part 1: Satellite Image Analysis

March 25-28, 2014

This training aims to increase the capability of the technical staff of the LGU of Puerto Princesa to do mapping and monitoring of the city's natural resources as well as the analysis of changes observed. The training will also enable participants to perform database management and spatial analysis. Thus, the training program "Geomatics Training Course for Natural Resource Management" consists of two parts:

Part 1: Satellite Image Analysis

Part 2: GIS Database and Spatial Analysis

The training program will be conducted by the UP Department of Geodetic Engineering/Training Center for Applied Geodesy and Photogrammetry as part of its extension services to local government units.

Outline of the Course

TOPIC	LECTURER/Lab. Assts.
<p>A. Overview Day 1 AM: Introduction to Resource Mapping and Remote Sensing</p> <ol style="list-style-type: none"> 1. Background of the training 2. Introduction to the fields of Geomatics 3. Overview of Remote Sensing (Physics of RS; Platforms and Sensors; Image characteristics; Introduction to various imagery) 4. Overview of Geomatics applications for natural resource management 5. Discussion of Requirements and Expected Outputs 	<p>ACB (4 hrs lecture plus workshop)</p>
<p>B. Image Preparation Day 1 PM:</p> <ol style="list-style-type: none"> 1. Image Display and Enhancement Techniques 2. Image Fusion/Pan-sharpening 3. Image Preprocessing (Image radiometric calibration) <p><i>Lab exercise: Introduction to ENVI</i> <i>Lab exercise on image enhancement</i></p>	<p>JAP (2 hours of lecture)</p> <p>ACB & JAP* (2 hours of lab)</p>
<p>Day 2 AM: Geometric and Atmospheric Correction of Satellite Images</p> <ol style="list-style-type: none"> 1. Photogrammetry and review of thematic mapping standards 2. Introduction to map projections and image 	<p>JAP (4 hours of lecture)</p>

<p>geometry</p> <ol style="list-style-type: none"> 3. Image rectification and registration 4. Image orthorectification & Mosaicking 5. Atmospheric correction <p>Day 2 PM: <i>Lab exercise on satellite image rectification (geometric)</i></p> <p><i>Lab exercise on satellite image rectification (radiometric)</i></p> <p>C. Image Processing and Feature Extraction</p> <p>Day 3 AM:</p> <ol style="list-style-type: none"> 1. Image interpretation I (interpretation keys, training area selection) 2. Image classification <p><i>Lab exercise on image interpretation and classification</i></p> <p>Day 3 PM:</p> <ol style="list-style-type: none"> 1. Discussion on field validation techniques 2. Overview of GNSS (GPS components; GPS errors; Positioning modes; Point positioning using GPS) 3. Planning for ground truthing <p><i>Lab exercise on sampling for validation</i></p>	<p>ACB* & JAP (2 hours of lab)</p> <p>ACB* & JAP (2 hours of lab)</p> <p>ACB (2 hours of lec)</p> <p>ACB & JAP* (3 hours of lab, AM & PM)</p> <p>JAP (2 hours of lec)</p> <p>ACB & JAP* (1 hour of lab)</p>
<p>Day 4 AM: Field work</p> <p>D. Evaluation and Accuracy Assessment</p> <p>Day 4 PM:</p> <ol style="list-style-type: none"> 1. Data Processing 2. Application of field data to image and accuracy assessment 3. Discussion on field validation results <p><i>Lab exercise on accuracy assessment</i></p>	<p>ACB & JAP</p> <p>ACB (2 hours of lec)</p> <p>ACB & JAP* (2 hours of lab)</p>

RESOURCE PERSONS:

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