

Republic of the Philippines
GEODETIC ENGINEERS OF THE PHILIPPINES
Regional Division 3

46th Annual Regional Convention

Subic Bay Peninsular Hotel, Burgos Corner, Canal Road
Subic Bay Freeport Zone
February 14 - 15, 2020

*Theme: "United GEP Promoting Members'
Empowerment Towards Sustainable Goals"*

"Applying GIS/RS Techniques for Land
Development and eSurvey"

Land Reclassification

Engr. James Dexter A. Grageda

Geodetic Engineer – RS/GIS/IT Specialist

Tools



LibreOffice
The Document Foundation



QGIS

LibreCAD



Office



Geoidex
Surveying and Mapping Systems

Development PERMITS

- Development Permit
 - Agriculture
 - Residential
 - Commercial
 - Industrial
 - Forestland

- RECLASSIFICATION REQUIREMENTS (LGU)

LGU RECLASSIFICATION REQUIREMENTS

- Application letter addressed to the Sangguniang Bayan requesting for reclassification.
- Proof of ownership of land. TCT/OCT and other documents establishing ownership.
- Special Power of Attorney / Board Resolution / Secretary's Certificate (*if petitioner is other than the owner of the land*).
- Sketch vicinity and location plan showing TCT No., Lot No., Area per title duly prepared by a licensed Geodetic Engineer.

LGU RECLASSIFICATION REQUIREMENTS

- Certificate from the Department of Agriculture (DA)
 - *(as provided for under Presidential AO No. 20, s. 1992 & Presidential MC 54, s. 1993) indicating:*
 - *That which lands are not classified as non-negotiable for reclassification.*
 - *That the land ceases to be economically feasible and sound for agricultural purposes.*
- True copy of Tax Declaration and Tax Clearance covering the subject property (current year).

LGU RECLASSIFICATION REQUIREMENTS

- Zoning Clearance with Official Receipt Certification
 - *specifying that the property applied for is within the 10% limit and indicating the remaining balance of the total zoned agricultural land area in the municipality based on the approved CLUP prior to the application for reclassification (as provided for under Section 20 of RA 7160 & Presidential MC No. 54, s 1993)*
- Approved Barangay Resolution
 - interpose no objection....
- HLURB Certification
 - *Specifying the total area zoned agricultural lands in the municipality based on the approved Comprehensive Land Use or Zoning Ordinance prior to the application for reclassification (as provided for under Presidential MC No. 54, s 1993 & Presidential AO No. 363, s. 1997)*

LGU RECLASSIFICATION REQUIREMENTS

- DAR Certification
 - *indicating that such lands are not distributed or not covered by a Notice of Valuation under CARP (as provided for under Presidential MC No. 54, s. 1993 & Presidential AO No. 363, s. 1997);*
- NIA Certification
 - *indicating the area to be reclassified is not covered under Presidential AO No. 20, s 1992 (further supplemented under Presidential AO No. 363, s. 1997);*
- DENR Certification
 - *indicating the land area applied for reclassification has been classified as alienable and disposable, and is not needed for forestry purposes in case the area applied for falls within public lands (as provided for under Presidential AO No. 363, s. 1997).*

HOW TO APPLY FOR ECC ONLINE

- Click [here](#) to go to ECC Online.
- **Register** first. You may download the ECC Online User Guide **here**. It will provide you a step by step tutorial on how to fill out the registration.
- After registration, prepare your ECC Application. In this step, you will be asked to verify your project. **Take note of the industry your project falls under.**
- Once qualified, fill out the online **Initial Environmental Examination (IEE) Checklist form.**
- After filling out the IEE Checklist form, **download and print** the Order of Payment. Go to any LandBank Branch nationwide and pay the processing fee of **Php 5,055.00**
- Have your accomplished IEE checklist with accountability statement of proponent **notarized.**
- Submit and upload the necessary documents (Please see FAQ#3)
- The EMB Regional Office will evaluate the applications filed online.
- The evaluation could result to an either **approval** or a **need to submit additional information.** Check your ECC Online Account frequently.
- After all the pertinent documents are passed, EMB RO **may deny or approve** the ECC Application.
- Results can be printed on both EMB Online System through your ECC Online Account.

Survey Requirements

- Consolidation of Lots
 - Titled or untitled
- Transfer of Title
- Topographic Survey
- Engineering Design Requirements
 - Preliminary Design/Concept

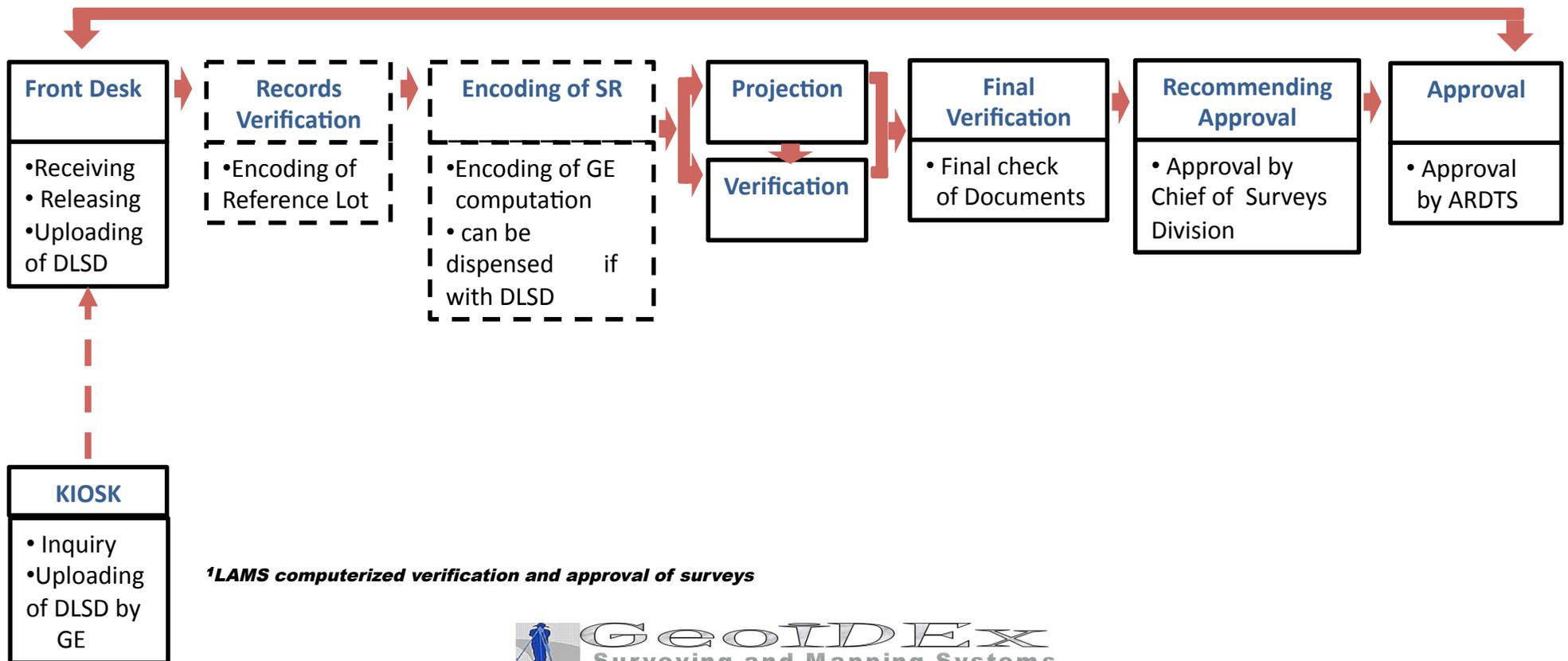
Environmental Compliance Certificate (ECC) Requirements

- Geotagged photographs of project site (taken for last 30 days)
- Topographic Map of impact/affected areas (at least 1 km from the project boundaries)
- Certification from LGU on the compatibility of proposed project with existing land use plan
- Site Development and/or Vicinity map signed by registered professionals
- Project/Plan layout signed by registered professionals
- Schematic diagram of wastewater treatment facility
- Schematic Diagram of Air Pollution Control Facility
- Organizational Chart in charge on environmental concerns
- Proof of authority over the project site (land title, lease contract, deed of absolute sale, etc.)
- Affidavit of No Complaint

MANUAL IVAS¹



LAMS PHILIPPINES IVAS



¹LAMS computerized verification and approval of surveys

Philippine Environmental Impact Statement

- Next Topic / Lecture

Philippine Environmental Impact Statement System

- Presidential Proclamation No: 803 – Declaring Golf Course Projects as Environmentally Critical Projects. 1996

Projects/Description	Covered (Required to secure ECC)			Not covered (may secure CNC)	Project size parameters / Remarks
	Category A:ECP	Category B: Non-ECP		Category D	
	EIS	EIS	IEE Checklist	PD (<i>Part I only</i>)	
4. GOLF COURSE AND OTHER TOURISM PROJECTS					
4.1 Golf course projects/complex	Regardless of number of holes	<i>None</i>	<i>None</i>	Driving Range only Regardless of area	Number of holes
4.2 Resort and other tourism/leisure projects	<i>None</i>	≥ 5 ha	> 0.1 ha but < 5 ha	≤ 0.1 ha	Project / gross floor area shall be the sum/total of total/gross floor area (of structures) plus open areas and other facilities (e.g., landscape, parking, pools) For hotels in urban areas, refer to categories for Building

- Revised Guidelines for Coverage Screening and Standardized Requirements under PEISS

Forestland: Consultancy & Community Mapping

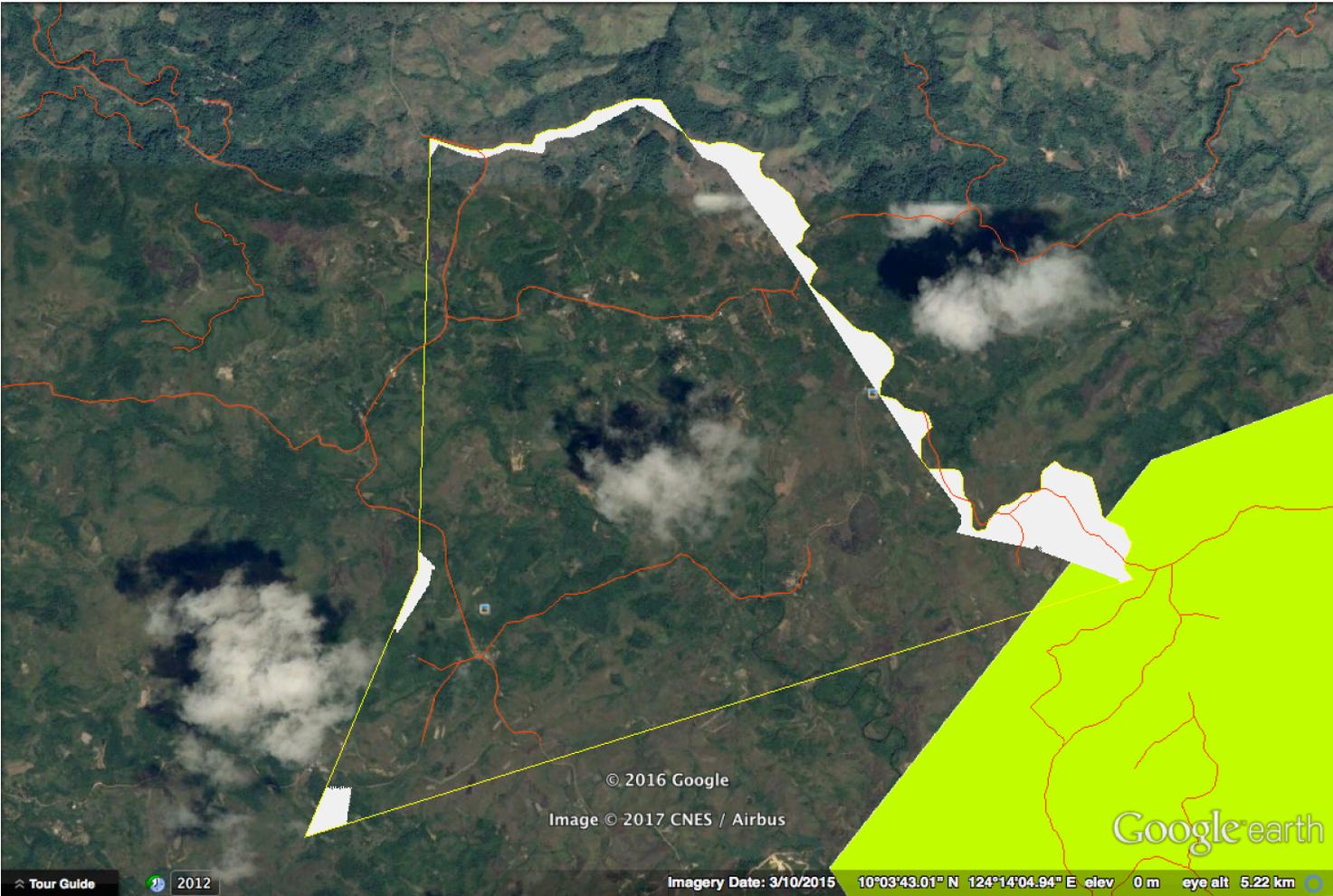
- LCD projectors and laptops with Google Earth Pro installed;
- Internet access for Google maps (if accessible onsite);
- Non-permanent and Permanent multi-colored pens;
- Acetate/plastic cover; and
- Digital camera / smart phone (at least 8 megapixel resolution).

CMP Workshop

CESM BOHOL URB DTL Dexter Grageda explains the objectives and mechanics of the workshop (right) while CESM BOHOL URB IEC and PP Specialist Milagros Tetangco (lower right) briefs the participants on the mission-vision exercise



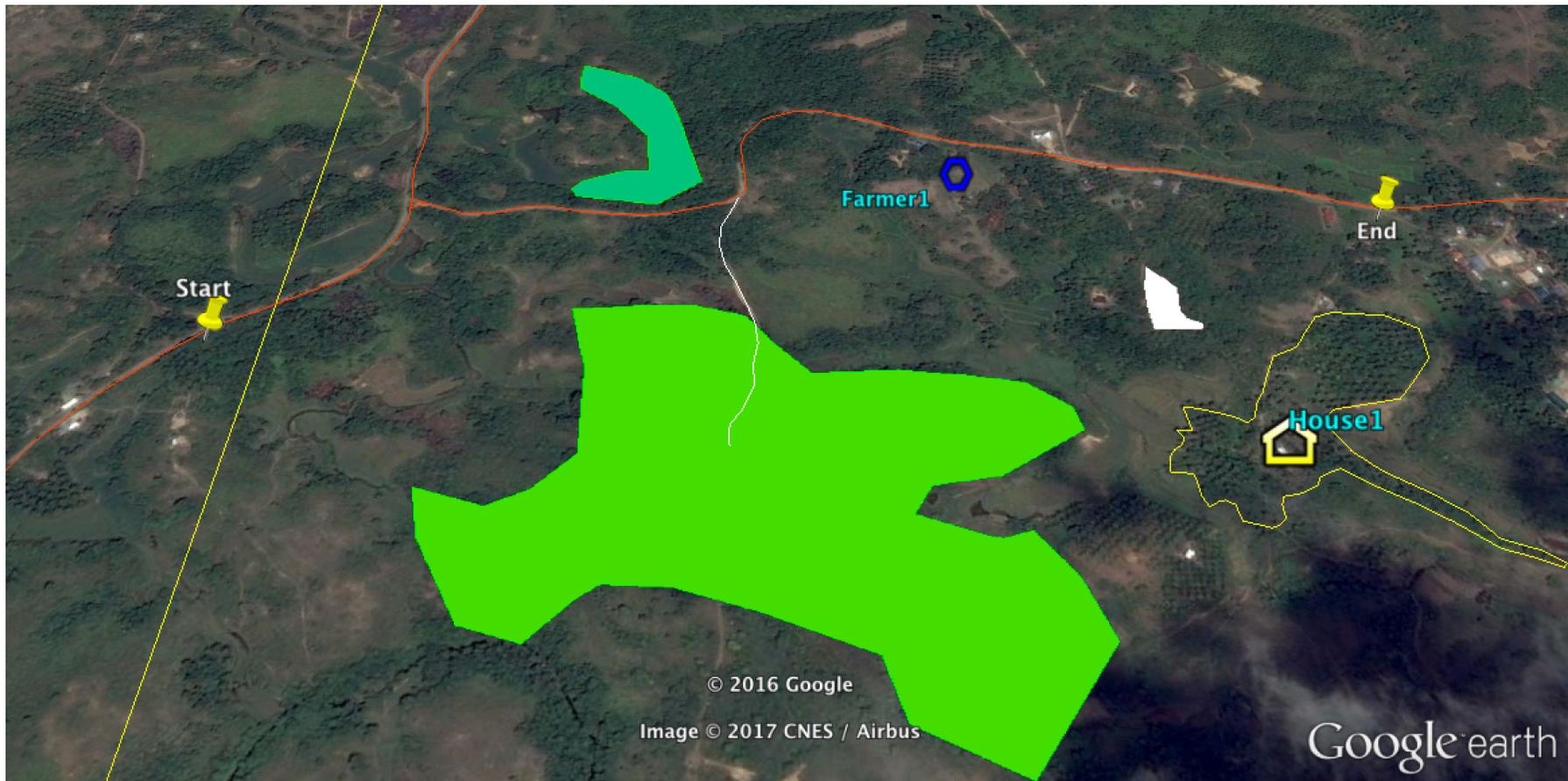
Mapping Existing / Actual Land Use



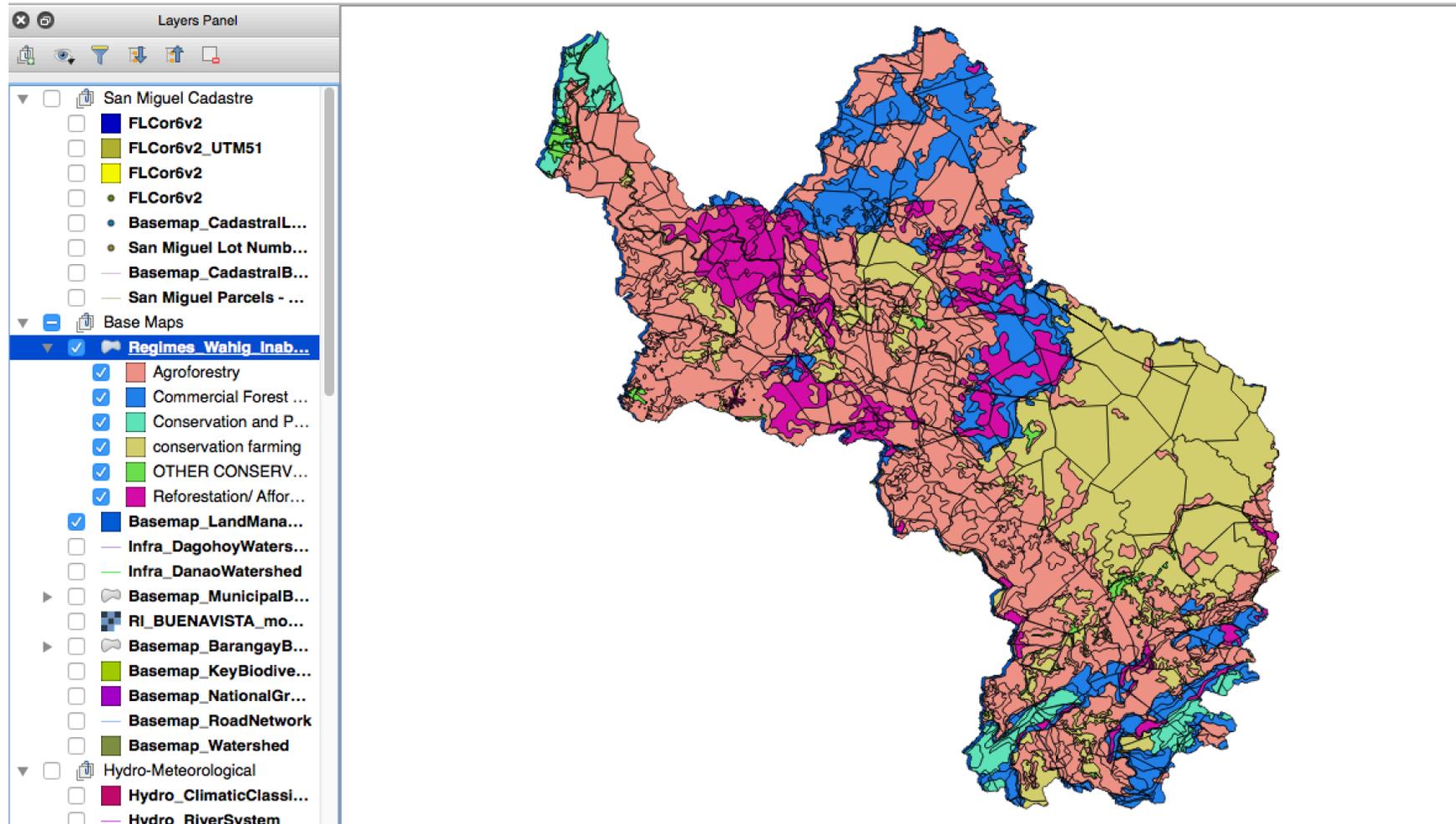
Mapping Existing / Actual Land Use



RI/NRM Interventions



Land Regimes



Community Mapping

The POs developed their community maps in an exercise aided by Google maps and the GIS specialists of the project.



Legitimization / Consultation



Digital Elevation Models

- 1.0-m NEXTMap One Elevation Data (Processing and Analysis)
- The Shuttle Radar Topography Mission (**SRTM**)
- **Japan**

Overlay Lot on Plan / Satellite Image

- Lotdata Computation
- Convert PTM to WGS'84 or Google Mercator
- Overlay on Satellite Image

Free Digital Elevation Models

The days of data shortage are gone. More and more DEM data sets are published under free licenses or as public domain. Through INSPIRE in Europe more and more will follow. The datasets below are not complete. This project will focus on free high resolution datasets with a spatial resolution of 30 meters and below on county/state scale. Have a look at the

[OpenDemSearcher map client on this website.](#)[For low resolution DEMs here is a great map client.](#)

- [Other sources, catalogues and lists for high resolution open DEM data:-](#)
- [OpenTOPO: Community lidar datasets-](#)
- [LAZIP: Download free and lossless LiDAR compression data-](#)
- [Wikipedia National Lidar Dataset-](#)
- [Wikipedia National Lidar Dataset \(United States\)-](#)
- [ArcGIS OpenData Catalog- OpenTerrain List](#)
- [Please read the license carefully. Not all versions of a dataset might be available for free usage.](#)

Lotdata Computation

- Spreadsheet Software
 - Ground Control Points (GCPs)
 - Lookupfiles
 - Tielines – BLLM, MBMs, BBMs

A	B	C	D	E
MUNICIPALITY / CITY	CADASTRAL NUMBER	SAME NAME	MUN-PROV	LOOKUP
			bacolor, AURORA	CAD 231
			bacolor, BATAAN	CAD 231
			bacolor, BULACAN	CAD 231
bacolor	CAD 73	1	bacolor, NUEVA ECIJA	CAD 231
			bacolor, PAMPANGA	CAD 73
			bacolor, TARLAC	CAD 73
			bacolor, ZAMBALES	CAD 73
TIEPOINT		NORTHING	EASTING	
BBM 2	BBM 2, CAD 73	1658537.65	463623.94	
	BBM 9, CAD 382-D	1,727,612.71	439,559.90	

Lookupfiles

A	B	C	D	E
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			bacolor, PAMPANGA	CAD 73
			bacolor, TARLAC	CAD 73
			bacolor, ZAMBALES	CAD 73
TIEPOINT		NORTHING	EASTING	
BBM 2	BBM 2, CAD 73	1658537.65	463623.94	
	BBM 9, CAD 382-D	1,727,612.71	439,559.90	

Google Earth Image



http://gepr3.org

Geodetic Engineers of Region 3

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32nd GEP Cordillera Administrative Regional Division Annual Convention

Greetings!

The Geodetic Engineers of the Philippines, Inc. (GEP) is holding its 32nd Annual Regional Convention of the GEP Cordillera Administrative Region Division at the

Municipal Gym, Kiangan, Ifugao
on January 31 - February 1, 2020

with the theme:

“United GEP Promoting Members' Empowerment Towards Sustainable Goals”

During the technical sessions, significant topics will be presented and discussed by competent resource speakers where the delegates (geodetic engineers) could further enhance their skills and competence aside from earning CPE Units for the renewal of their respective professional licenses.

The following documents/presentations can be downloaded using the following links:

1. **REV. FR. VINCENT SAGANDOY** – "Moral Values and Ethics"
2. **HON. EPIFANIO D. LOPEZ**, Chairman, PRBGE - "Cushioning the Impact of Emerging Technologies on the GE Profession"
3. **ATTY. FRANCO G. BAWANG** – Regional Director, Cooperative Development Authority, CAR - "GEP-CAR Cooperative"
4. **ENGR. ELEANOR B. UBUAN** - Housing and Homesite Regulation Officer IV, Department of Human Settlement and Urban Development - "Board Resolution No 973, S 2018 Amending Pertinent Provisions of the Revised Implementing Rules & Regulations for BP 220"
5. **ENGR. ELEANOR B. UBUAN** - Housing and Homesite Regulation Officer IV, Department of Human Settlement and Urban Development - "Republic Act No. 11201: An Act Creating the Department of Human Settlement and Urban Development"
6. **ENGR. JAMES DEXTER A. GRAGEDA**, BOD, GEP R3, CPD Chair - "[Applying GIS/RS Techniques for Land Development and eSurvey](#)", [eTD-ApplicationForm](#), [Lotdata Template](#), [eTD_Lotdata Template](#), [Linear Regression Template](#)
7. **DIR. ANITA VERINA T. PARRADES**, Director II, Civil Service Commission, CAR – "Civil Service and the Geodetic Engineers in Government"

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Geodetic
Surveying and Mapping Systems

Next Steps

- Next Topic / Lectures
 - Single-Board Computers (SMC) developed to promote teaching of basic computer science in schools and in developing countries
 - Website Development – Content Management Systems (CMS)
 - Web-Based Applications – GIS, Real Property
 - Policy:
 - Common Line and/vs Common Point
 - Traverse Control vs. Single Station
 - Reference Points: Absolute or Relative

Dakal Salammat!

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