Application of QGIS in Climate and Disaster Risk Assessment (CDRA) for Land Use Plan Preparation

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Historical Timeline of GIS Application in the Philippines’ Land Use Planning Process

1996 – HLURB developed the Mapping Guidelines for Land Use Plan Preparation

Early 2000 – HLURB Planners were trained on GIS (ArcGIS)

2007 – The CLUP GIS Cookbook was developed

2012 – Training Manual on Quantum GIS (QGIS) was developed. The manual is regularly updated in line with the QGIS versions released.

2014 – The Supplemental Guidelines on Mainstreaming Climate Change and Disaster Risk in the Land Use Plan was developed

2017 and onwards –
• Submission of Land Use Plans and Zoning Maps in GIS-ready formats
• GIS manual for monitoring land use plan and zoning implementation
Map Requirements for Comprehensive Land Use Plan (CLUP) Preparation

- Land Classification Map
- Existing Land Use Map
- Barangay Map
- Road Network
- Rivers and Streams
- Land Cover Map
- Landform Map
- Slope Map
- Climate Map
- Geologic Map
- Fault Lines
- Flooding Hazard Map
- Erosion Map
- S.A.F.D.Z.
Where are the Suitable Areas for Future Urban Expansion?
QGIS for Climate and Disaster Risk Assessment (CDRA)

1. Collect and organize climate change and hazard information
2. Scope the potential impacts of hazards and climate change
3. Develop the Exposure Database
4. Conduct a Disaster Risk Assessment
5. Conduct a Climate Change Vulnerability Assessment
6. Summarize findings
Sample CDRA Map Outputs

HAZARD MAPS
- Flood
- Landslide
- Storm Surge

EXPOSURE DATABASE
- Households Map
- Infrastructure and Utilities Map
- Road Map
- Existing Land Use Map

RISK AND VULNERABILITY MAPS
Climate and Disaster Risk Assessment Process
Thank you!

Please visit HLURB Website: http://hlurb.gov.ph/