

Sentinel Asia DAN Updates

PHILIPPINES



MANILA OBSERVATORY

Committed to a scientific culture for sustainable development

7th Joint Project Team Meeting for Sentinel Asia
STEP-3 (JPTM 2019)
12-14 November 2019,
Bangkok, Thailand

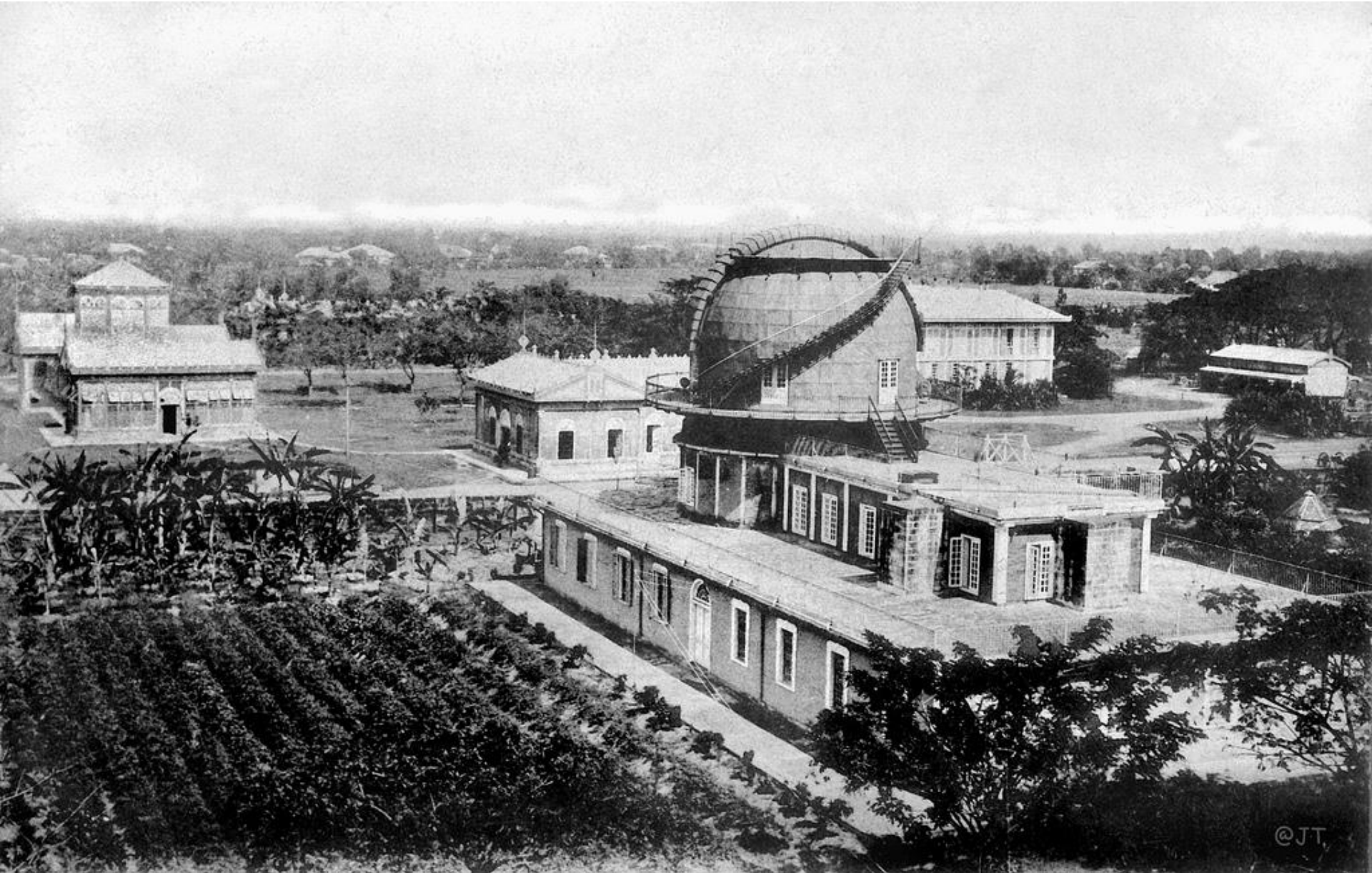
Ma. Flordeliza P. Del Castillo

RS-GIS Specialist

**MANILA
OBSERVATORY**



150



@JT

MANILA OBSERVATORY ARCHIVES



Climate Map of the Philippines based on the Modified Coronas Classification



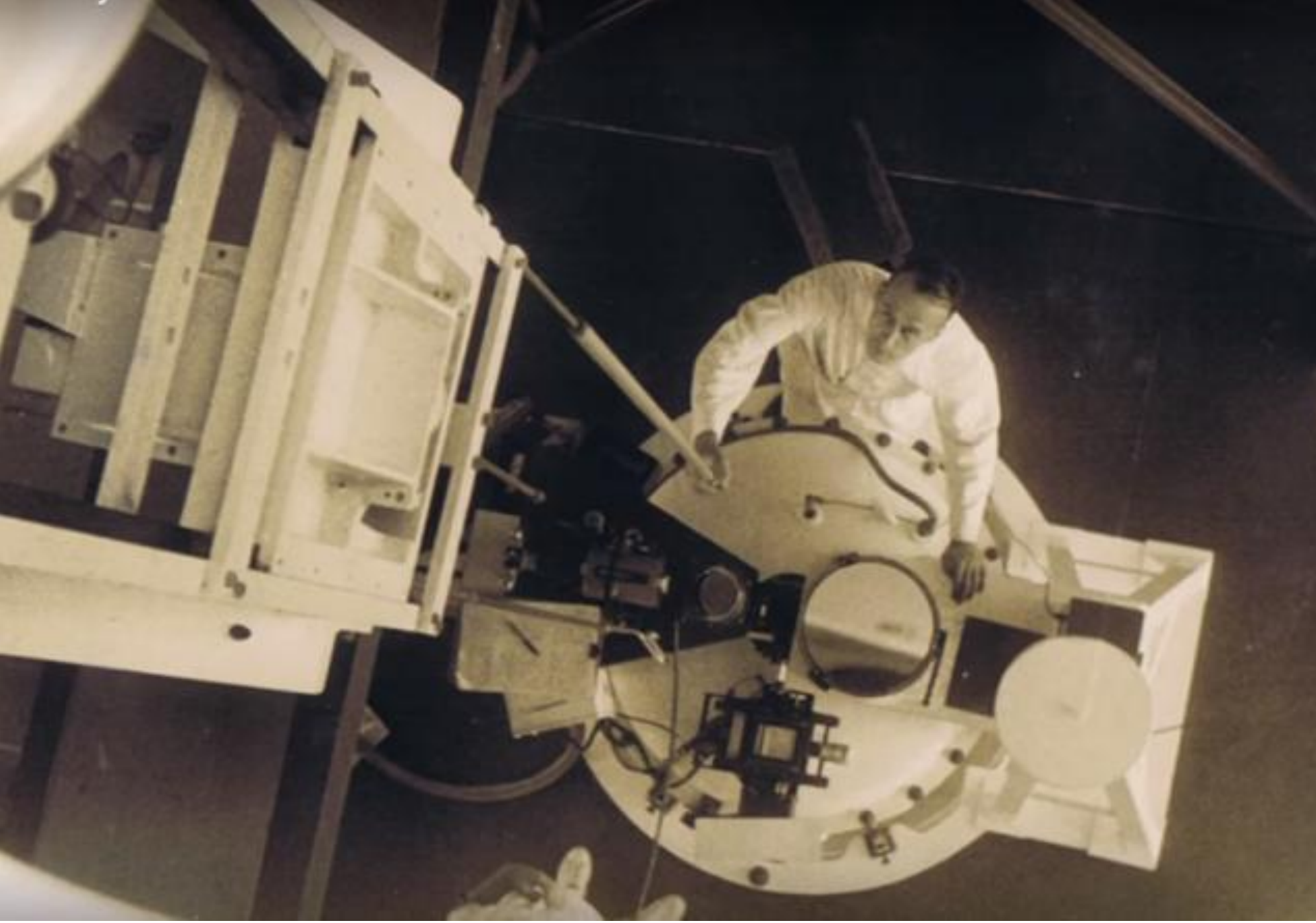
Description

Type I - two pronounced seasons, dry from November to April and wet during the rest of the year. Maximum rain period is from June to September.

Type II - no dry season with a very pronounced maximum rain period from December to February. There is not a single dry month. Minimum monthly rainfall occurs during the period from March to May.

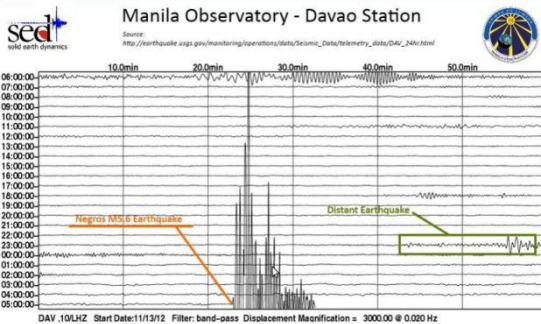
Type III - no very pronounced maximum rain period with a dry season lasting only from one to three months, either during the period from December to February or from March to May. This type resembles types I since it has a short dry season.

Type IV - rainfall is more or less evenly distributed throughout the year. This type resembles type 2 since it has no dry season.





The Manila Observatory's Mission and Research Programs



Urban Air Quality

Regional Climate Systems

Geomatics for Environment and Development

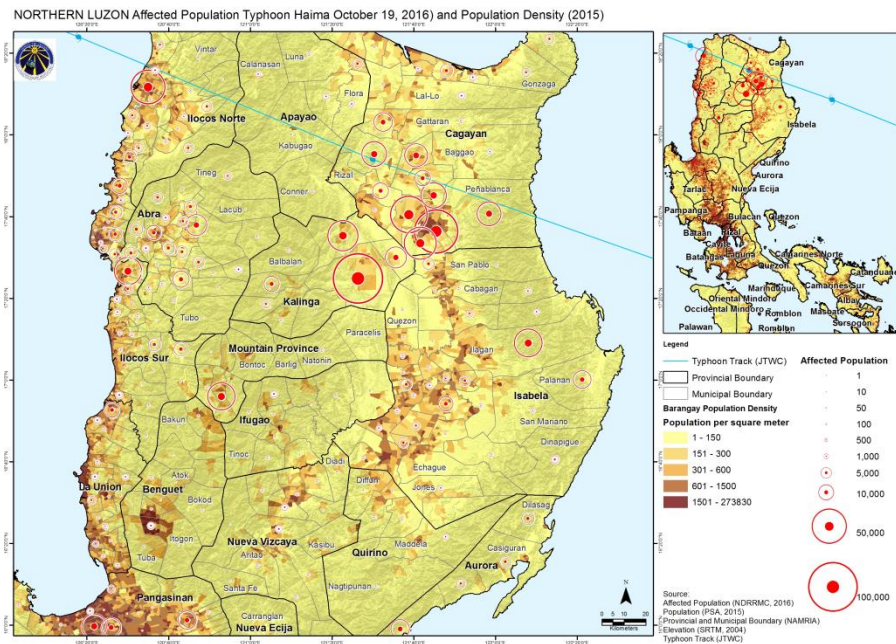
Solid Earth Dynamics

Iono-Geomagnetics

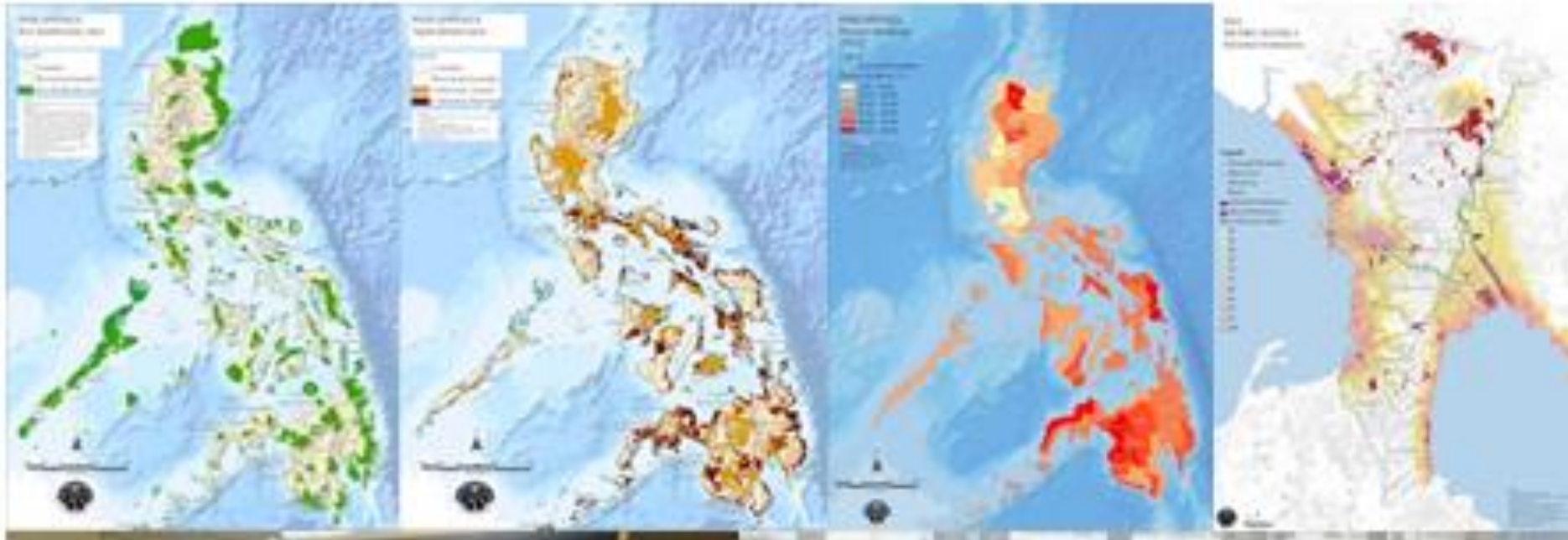
Instrumentation and Technology Development

The Manila Observatory's EO mapping future plans

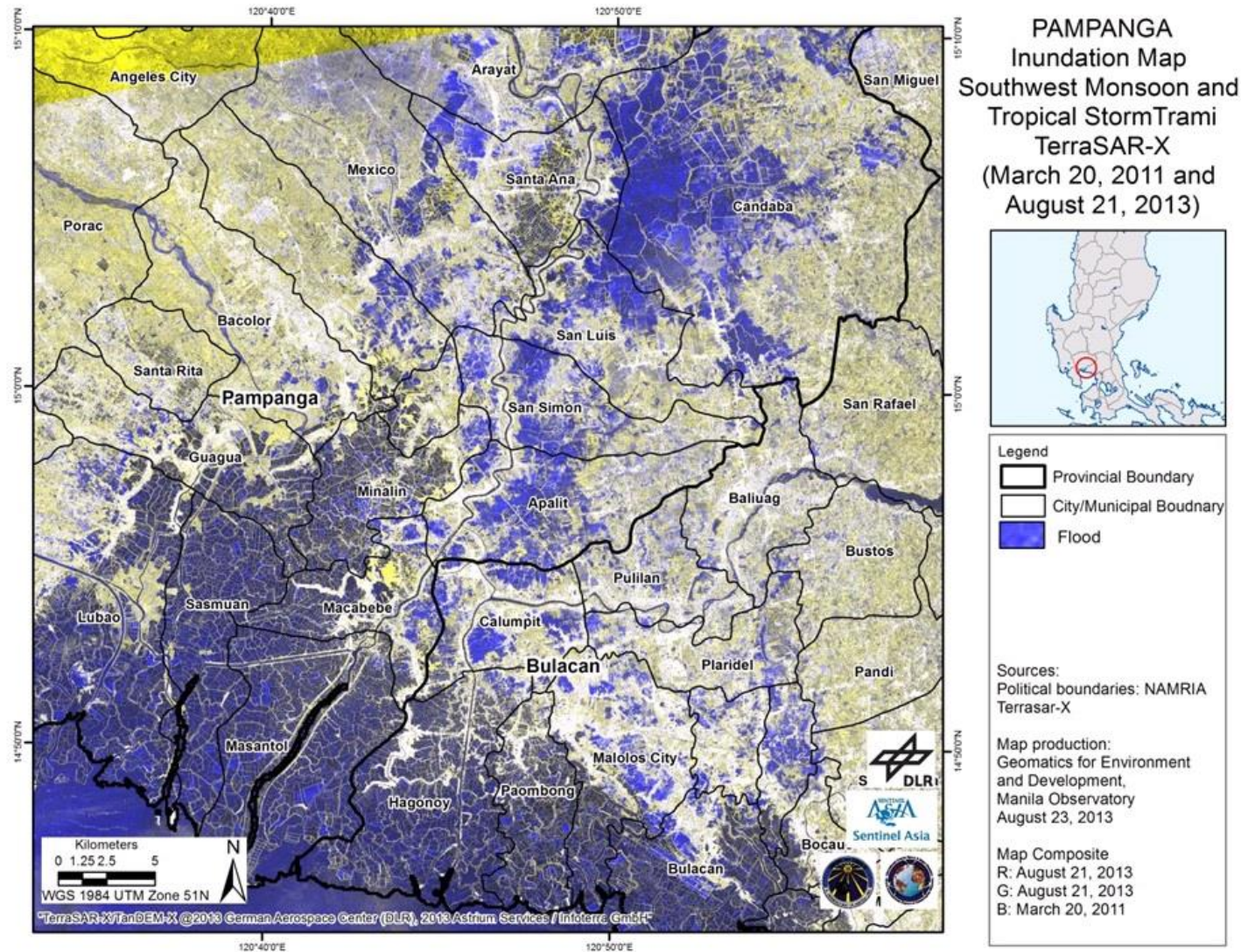
- Regular and continuous collection, preparation and updating of national and local spatial layers necessary for EO mapping



Preparation of Static Layers



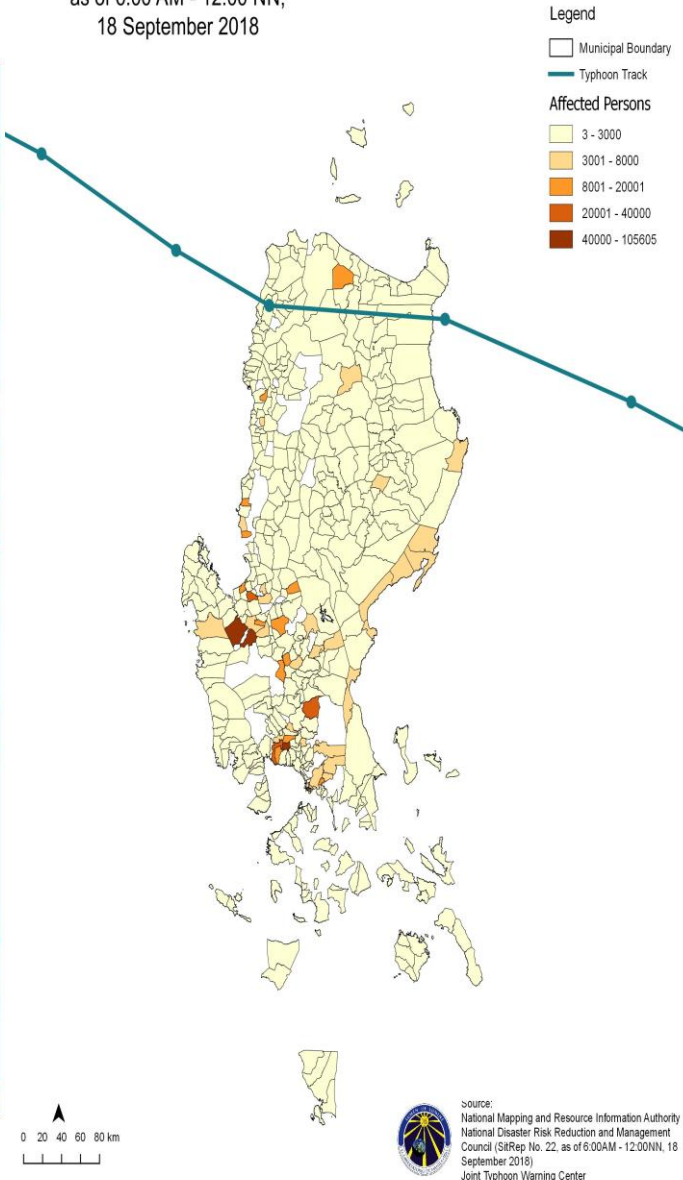
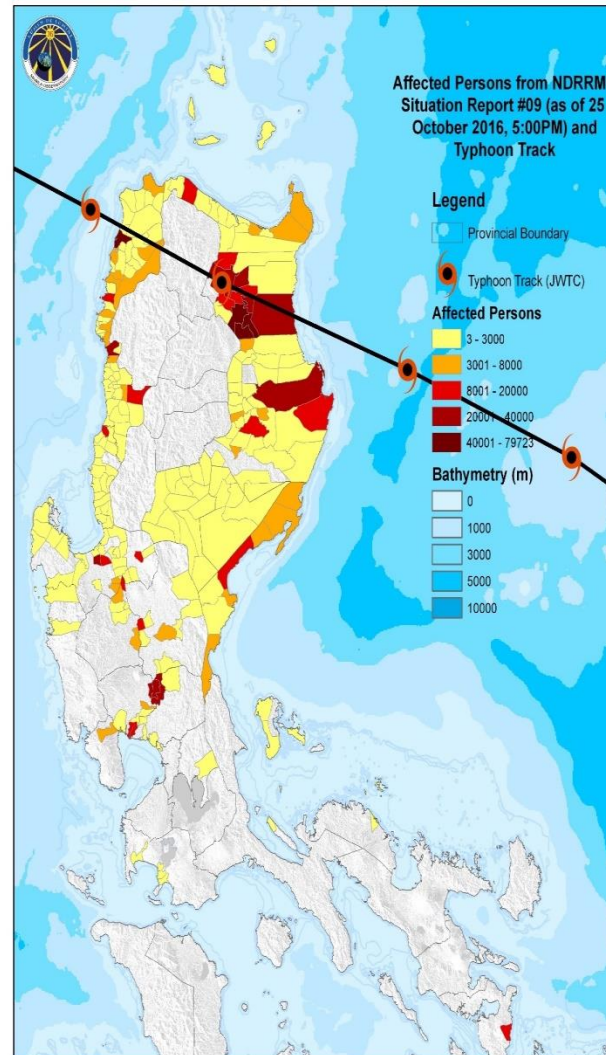
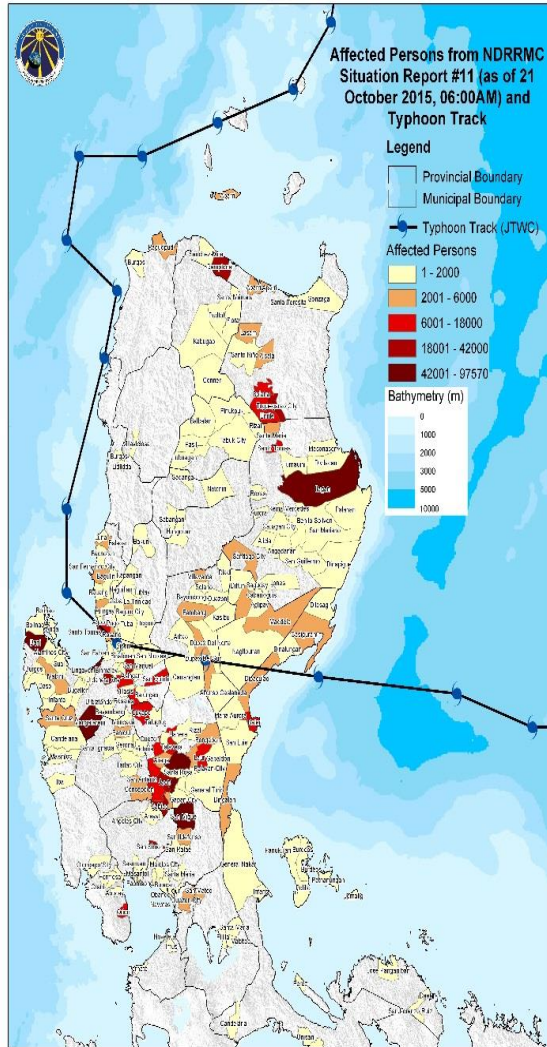
Extraction of information from satellite data



Mapping of dynamic layers

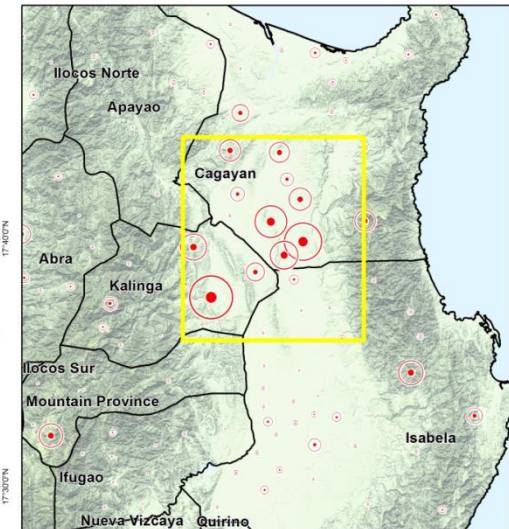
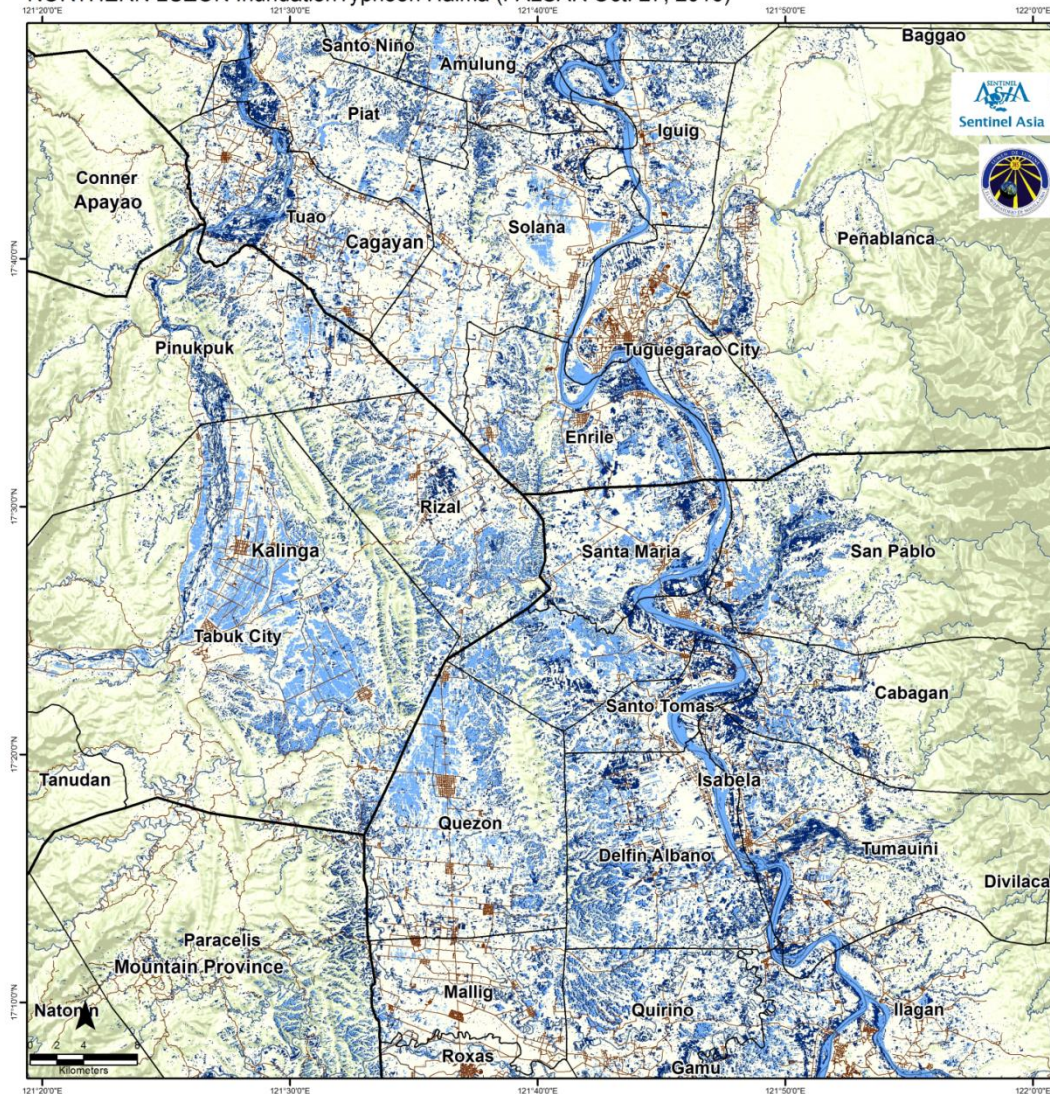
TC MANGKHUT IMPACTS

as of 6:00 AM - 12:00 NN,
18 September 2018



Extraction of information from satellite data

NORTHERN LUZON Inundation Typhoon Haima (PALSAR Oct. 27, 2016)



Legend

- Provincial Boundary
 - Municipal Boundary
 - Roads
 - Waterways
 - Water (detected on Sept. 15, 2016)
 - Water (detected on Oct. 27, 2016)
- Affected Population**
- 1
 - 10
 - 50
 - 100
 - 500
 - 1,000
 - 5,000
 - 10,000
 - 50,000
 - 100,000

This map shows water detected on PALSAR HV image taken on September 15, 2016 and on October 27, 2016. Possible flooded areas are indicated by water detected after the landfall of Typhoon Haima on October 19, 2016.

Source:
 Provincial and Municipal Boundary (NAMRIA)
 Elevation (SRTM, 2004)
 Roads and Waterways (Openstreetmap.org)
 ALOS PALSAR HV (Sept. 15, 2016 and Oct. 27, 2016)

The Manila Observatory's EO mapping future plans

- Regular and continuous process documentation of EO mapping process for different satellite data

In this process documentation, we will generate a flood map using SAR data products via multi-temporal water change detection method.

I. Download images from scihub.copernicus.eu

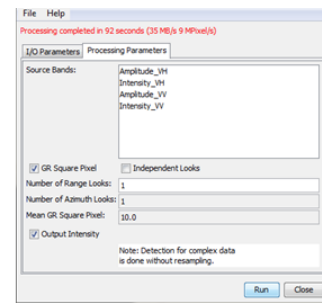
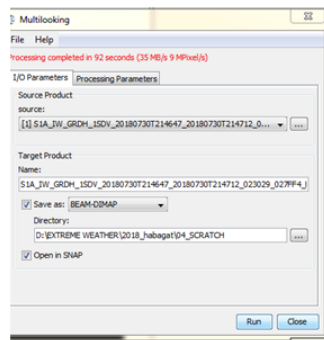
Go to this website <https://scihub.copernicus.eu/dhus/#/home>. Log in if you already have an account. If not, then register. Drag the pane to your region of interest. This will generate a yellow box in the online map. Now, you can indicate the product that you want. Select S1A for the SAR products. Now, look for the IW and GRDH with the time period that you want to study.

II. Processing in SNAP

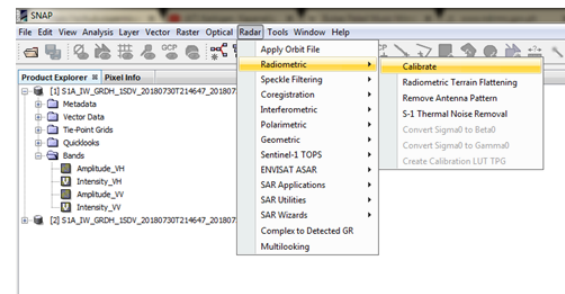
Click Open Product and select the image you want to process (pre image and post image). We will first process the pre-flooding image.

A. Multilooking

Raster > Multilooking



B. Calibration



The Manila Observatory's EO mapping future plans

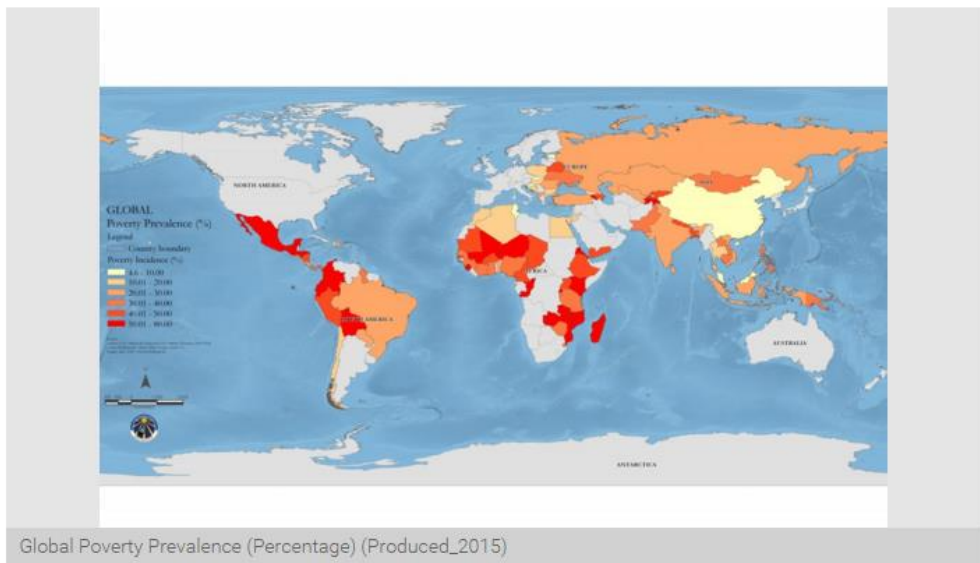
- Training of other personnel in EO mapping



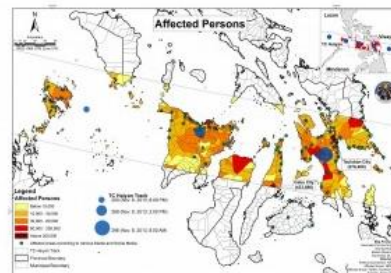
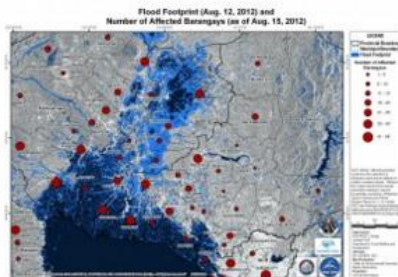


- HOME
- THEMES
- SPATIAL COVERAGE
- YEARS OF THE DATA SET
- ALL MAPS

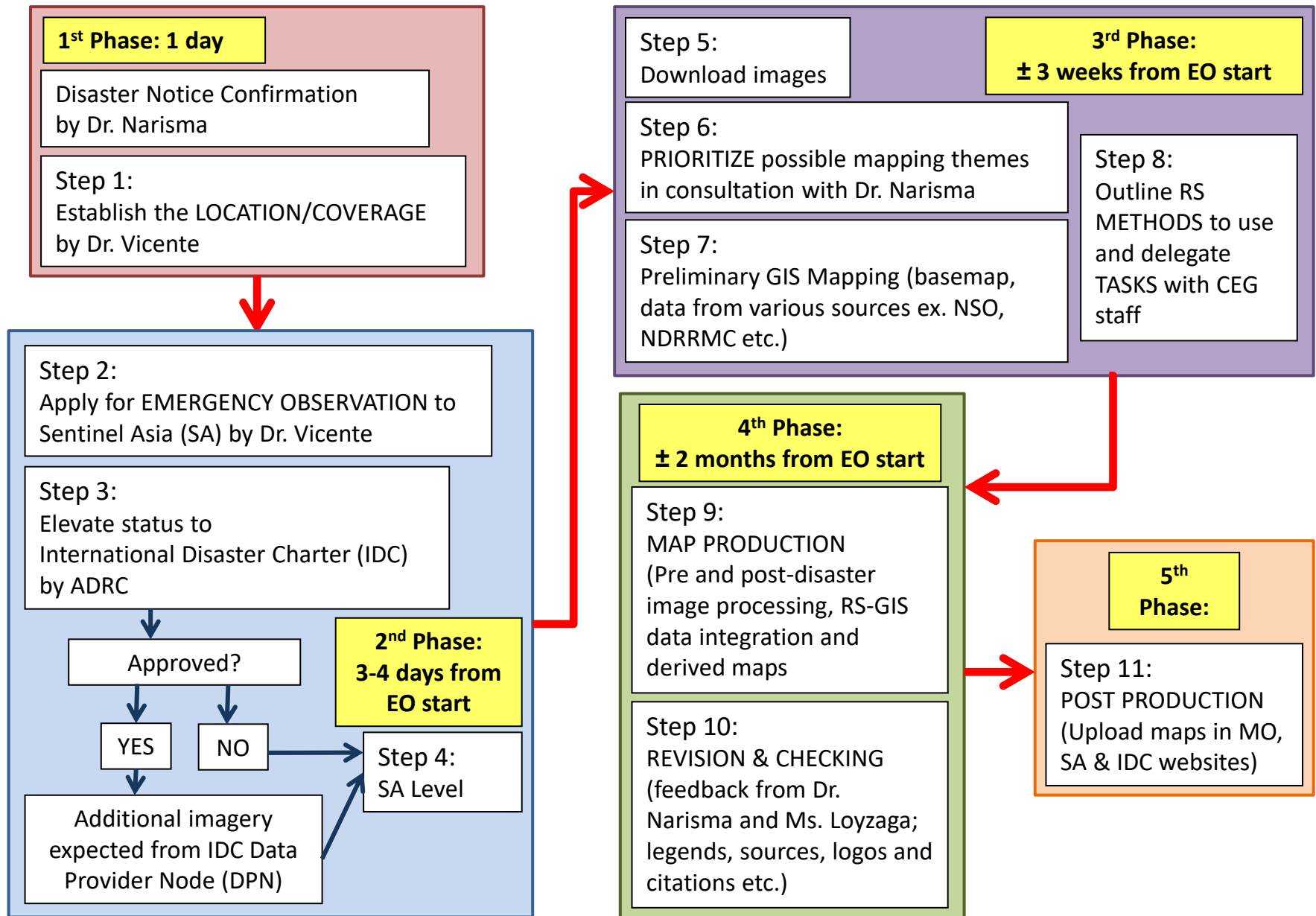
Featured Maps



Featured Data Sets



Updated Emergency Observation (EO) and Mapping Protocol



The Manila Observatory's Future Plans

- Integrating Risk Policy Research
 - Policy papers
- Mainstreaming CCA-DRM in Planning and Governance
 - CDRA Training of Trainors
- Upgrading and Consolidating Teaching and Research Laboratories among Academic Partners
- Improving the Network of Rainfall Monitoring Stations
- Strengthening Networking and Linkages
- Improving Access to Satellite Imageries and Regional Climate Models/ Scenarios
- Improving the Network of Ground-Based Sensors (Rain Gauges, LIDAR)