



RUET GIS Club organized their first webinar at 9.00 PM 7 June, 2024 on “Map Beautification”. The webinar is hosted by Asst. Event Planning & Management Secretary, Rahat Raiyan Robin and conducted by Club President Rubayet Arafin Rimon. Some of the important keynotes of the meeting are pointed out.

## INTRODUCTION

- GIS: It is system to capture, manage, analyze and displaying spatial data.
- Vector Data: Mainly lines, points or polygons to represent the geometry of the real-world entities like roads, rivers, lakes, farm lands etc.
- Raster Data: It represents continuous phenomena that may change continuously across a region E.g. Elevation, Rainfall, Temperature, Soil moisture etc.
- Remote Sensing: It is a process of obtaining information about an object or area, by a device that is not in contact with that object or area.
- Landsat Images: Landsat images are collected from the satellite. Various Landsat satellites are available, among them Landsat 9(September 27, 2021) is the latest.
- Satellite Image Bands: In satellite imagery, "bands" refer to different ranges of wavelengths captured by the satellite's sensors. Here, more bands mean more information, so the higher the band count, better the image. E.g. Landsat 7 has 8 Bands; Landsat 8 has 11 Bands.
- Image Pixels: It refers to the smallest unit of digital image. Every image is made of pixels organized as a grid. Pixel size varies from bands to bands. Every pixel has a value ranging from 0-255.

## Map Beautification [Map Components]

- Title: Smallest description of the map’s content and purpose. It helps users quickly understand what the map is about.
- North Sign: A symbol indicating the direction of north on the map.
- Legends: Also known as a key, the legend explains the symbols, colors, and patterns used on the map.
- Scale: It indicates the relationship between distances on the map and actual distances on the ground.
- Grid Line: Grid lines are lines that cross the map vertically and horizontally, usually representing coordinate systems like latitude and longitude or Universal Transverse Mercator (UTM) coordinates.

- Base Map: A background reference layer over which thematic data is overlaid.
- Data Source: It indicates where the map's data came from, including the organizations or individuals who collected or provided the data.

### Map Beautification Competition

RUET GIS Club is going to organize their first ever competition on “Map Beautification”. The task is to collect district wise data from “Bangladesh Sample Vital Statistics, 2022”, import those data in GIS. This could be any kind of data like, internet access rate, ownership of mobile phones, access to bank etc. After that, link those data to shape file and create a Beautiful Map. You can use any formatting style, but make sure all the map components are present. More information will be published later in the official group/page.

**Deadline:** 11.59 PM 14 June, 2024

### Q&A

1. What is the difference between satellite image pixels & mobile pixels?

Ans: Both satellite image pixels and mobile pixels are similar but there are some key differences. In satellite images, 12-meter resolution means, each pixel covers a 12x12 meter area on the ground. The higher the number, higher the ground coverage. Satellite also takes more detailed shots as it need to zoom a lot for analysis purposes.

In Mobile Phone, a 12 MP camera means, it can capture images of 12 million pixels only. The details are much lower in compared to satellite images.

2. What is the difference between GIS & Remote Sensing?

Ans: GIS deals with integration, analysis & visualization of spatial data from multiple sources but Remote sensing primarily involves the acquisition and interpretation of data about the Earth's surface using sensors on remote platforms. GIS utilizes GIS software, hardware, and databases to manage and analyze spatial data. Remote Sensing utilizes sensors, platforms, and image processing software to capture and analyze remote sensing data.

### Important Links:

- [QGIS](#)
- [DIVA GIS](#)
- [USGS Earth Explorer](#)
- [Bangladesh Sample Vital Statistics 2022](#)

Map Prepared By, Rubayet Arafin Rimon

