Exploring applications of Q-GIS for mapping natural resources.

- Anju Bhaskaran

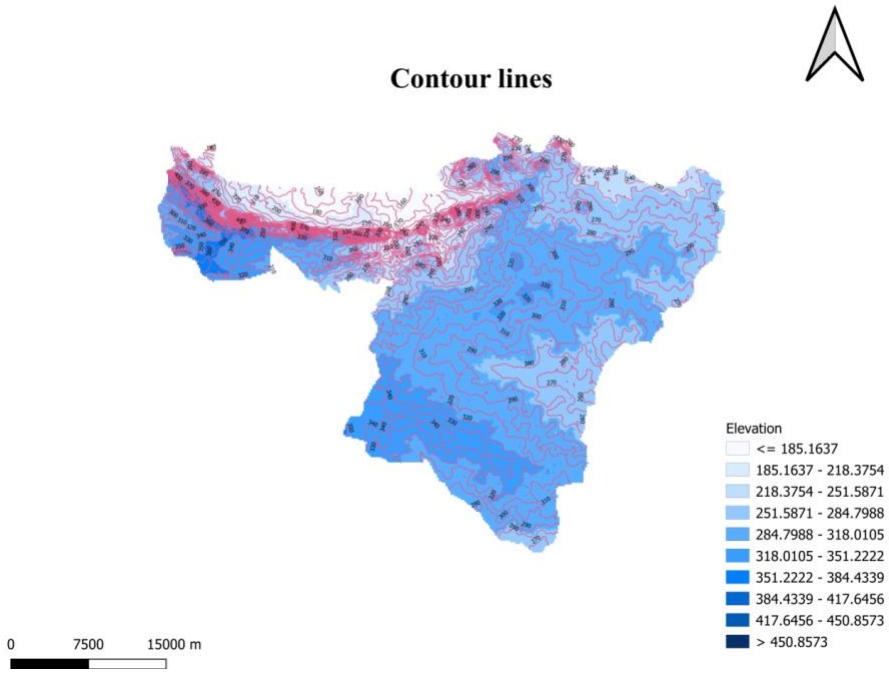
I had the opportunity to attend a 5-day workshop at Azim Premji University on Mapping and Geographical Information Systems using Quantum GIS. The workshop had 26 professionals from all over the country working in various domains of resource management.

QuantumGIS is an open-access software which allows users to use spatial information for advanced analysis and create digital geo-referenced maps. QGIS is fast developing, easy to learn, multi-platform, customizable and open source.

The workshop was divided into two parts. During the first two days, in-depth tutorials were arranged to familiarise everyone with the uses and functions of the QGIS software. The third and fourth day was structured to allow the attendees to work on a research question of their own. We worked on our study areas and developed projects that we could complete in two days.

I chose to work on developing a geo-referenced administrative boundary map of Chakai, Bihar. I used the data available from Bihar GIS website and the modified India shapefile created by Azim Premji University. I went on to create a Digital Elevation model (DEM) for Chakai. A DEM is a 3-dimensional computer graphics representation of a terrain surface. For creating the DEM I used data from GoogleEarthPro and TCX converter[1]. With this I was able to map the elevation levels and create a contour map with the same. This will be a base layer to create maps of water resources, soil characteristics and agro-climatic zones.

[1] TCX Converter is a versatile tool that may be used in the conversion of GPS and mapping data. This is a program that considers the incompatibility that exists between files. As such, it is capable of converting a wide array of file types.



Picture: Map of Chakai with elevation levels and contours that I created in the workshop

All the attendees in the workshop presented their projects on the final day and shared some innovative methods used by them in their respective projects. I got inputs from the Azim Premji University faculty as well as other attendees on new methods and techniques I can use for further analysis.

In the picture: Me presenting the Digital Elevation map that I created for Chakai, to other participants in the workshop

Taking the learning from the workshop forward, now my aim is to create these contour maps for Chakai which will help view variables in agricultural practices across seasons and suggest interventions for agriculture, soil and water management. This will to aid the research on seasonality of food systems under the ongoing TIGR2ESS project, in Chakai.