Introducing Participatory GIS

Two day workshop as part of the Swachhta Pakhwada

Learning Programme

Foundation for Ecological Research, Advocacy and Learning

10th and 11th November
FERAL Campus Morattandi

Goal

Goals: To equip agencies and individuals engaged in water, sanitation and health, make use of modern open source tools for data gathering, processing and visualisation within a participatory framework.

Objectives

1. To improve the use of spatially explicit information by development agencies.
2. To demonstrate a model for distributed data collection which can be used in a wide range of applications

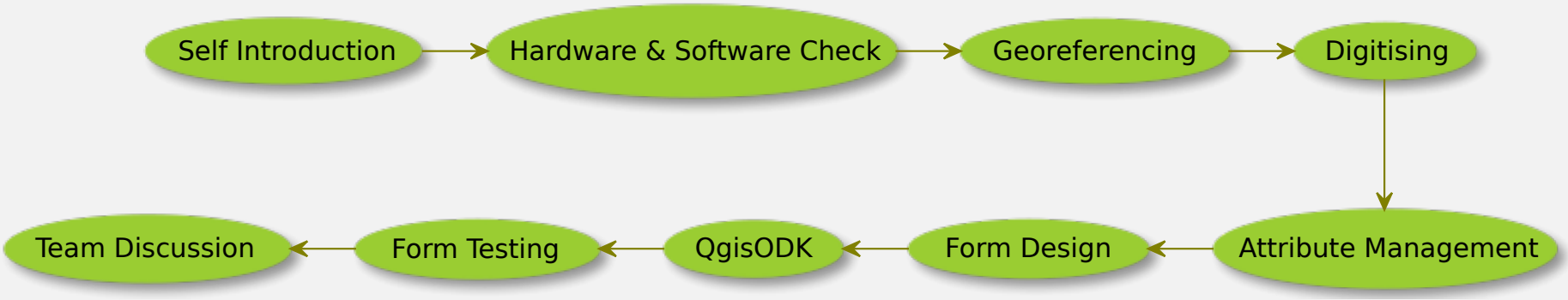
What we will do

We will map a few streets of Morattandi and see if and how we can use the data that has been collected to quantify the scale of the problem of solid and liquid waste management, drinking water supply and progress made to reduce open defecation.

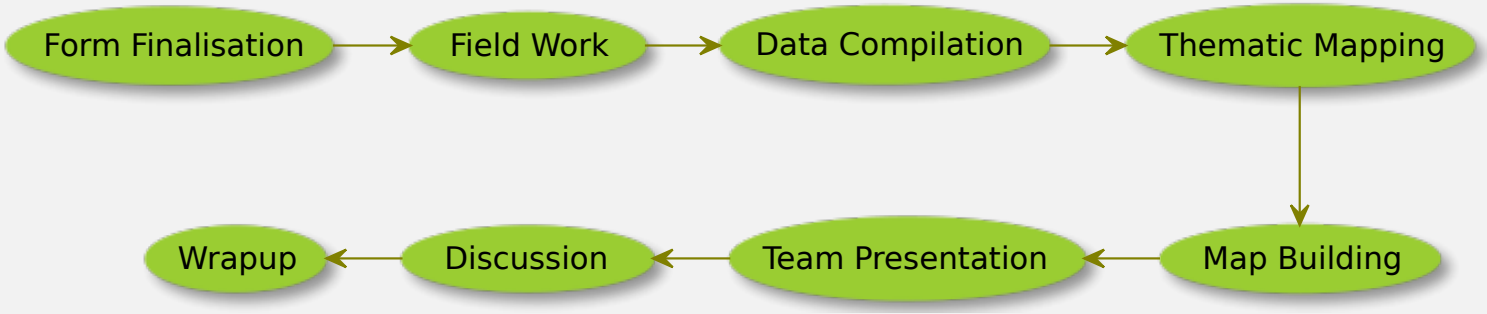
Topics covered:

- Geo-referencing a cadastral map.
- Digitising.
- Designing a survey using QgisODK.
- Using ODK-Collect to gather geo-tagged data (images and text).
- Creating thematic layer from field data.
- Map composition.

Day 1


Self Introduction
Hardware & Software Check
Georeferencing
Digitising
Attribute Management
Form Design
QgisODK
Form Testing
Team Discussion

Day 2


Form Finalisation
Field Work
Data Compilation
Thematic Mapping
Map Building
Team Presentation
Discussion
Wrapup

What is participatory GIS?

- Participatory methods imply the engagement of the community, or respondents in the
  - Collection
  - Analysis and
  - Interpretation of data for decision making.
- Participatory GIS became popular because communities usually have a mental map of their surroundings which can easily be transferred to a physical map. Doing so allows the integration of local knowledge and practices with other geo-referenced information.

The use of technologies

- The exponential development of communication technologies has made participatory mapping commonplace. A number of agencies use crowd-sourcing for mapping, for example, OpenStreet Maps or even Google.
- Sharing data and information has become easier.
- Collecting geo-tagged information has become easier.
- Collecting environmental data has become easier.

The Challenge

Can development and research communities use technologies such as these as a means of assisting communities in the management of their environment and resources and as a means of empowerment?

A note on citizen sensing

Widespread access to geo-location services, photography and telemetry has opened up a wide range of applications for citizen sensing.

- Environmental monitoring.
- Monitoring of land-use change.
- Tracking habitat degradation.
- Reporting of encroachments, violations.....

This can be coupled with small, inexpensive sensors to track a range of environmental and hydro-meteorological parameters to build a voluntary network for citizen sensing. Coupling this with technologies such as UAV (drones) can provide high resolution data on land use and topography.

Lets Start

Any questions or clarifications? If not, lets begin.