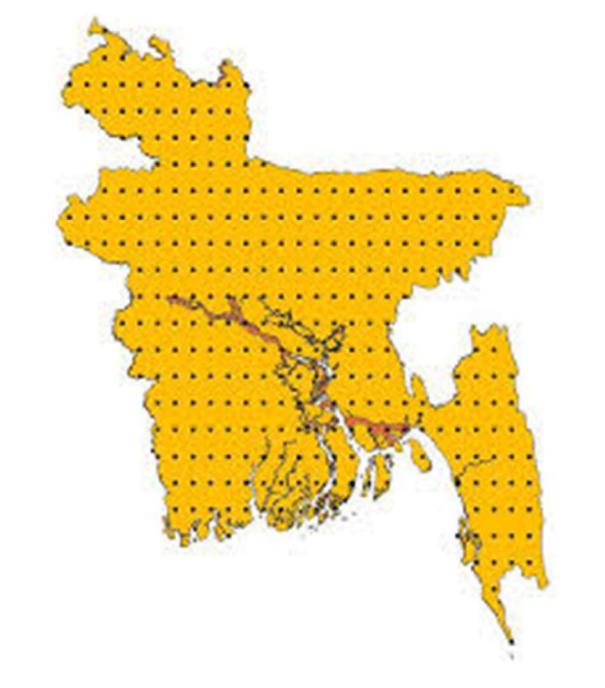# Data Collection

For the Bangladesh Forest Inventory

The process of data collection involves gathering information on targeted variables to inform research, create knowledge and improve decision making.

Data collection for National Forest Monitoring

The implementation of a national forest inventory is an intensive data collection process both physically and administratively. Good design, appropriate planning and robust archiving processes are essential in ensuring subsequent data processing and analysis is carried out effectively.

Types of data collection

Data collection for forest monitoring includes:

- Establishment and assessment of permanent sample sites
- Physical measurement of forest biomass (such as wood density for allometric equation development),
- Assessment of soil characteristics
- observations of geophysical land features and land use information
- Field validation and accuracy assessments for remote sensing data
- Interviews with local people and target groups as well as data entry and storage

Sampling and Stratification in survey design

Because it is not possible to assess all tree and forest resources, the inventory process measures a limited number of sample sites that are representative of the greater land area.

Stratification of the various forest areas is decided upon before the inventory is initiated to ensure forest measurements reflect their relative significance. For example, sample intensity is highest in the Hill Forest, Coastal Forest and Sundarbans, and less intense in urban or agricultural areas.

Plot Design

The size frequency of sample plots has implications for both the accuracy and cost of implementation: many large plots will increase accuracy but the cost may be unrealistic. Similarly, a particular plot shape (circular, square, rectangle) may be more suited to particular depending on the type of vegetation. Ensuring the right balance of accuracy and efficiency is key to a well designed NFI.

Mobile Data Collection

The use of mobile data collection tools will be used to collect field data. Mobile devices such as tablets and hand held data loggers are favoured over traditional paper based survey as they eliminate they need for data entry (from paper to computer) and thereby reduce the potential for data entry errors.

Open Foris

Field data is collected using Open Foris Collect software; a fast, intuitive and flexible data collection tool for field-based surveys. The software allows users to design field forms that can be operated from any android device.

Participatory Forest Monitoring

Participatory forest monitoring ensures adequate collaboration from different stakeholders – particularly those less commonly considered in forestry decision making - such as communities and private industry. Participatory processes may include mapping exercises, field measurements, species identification or socio-economic information on the use of forest areas and products.