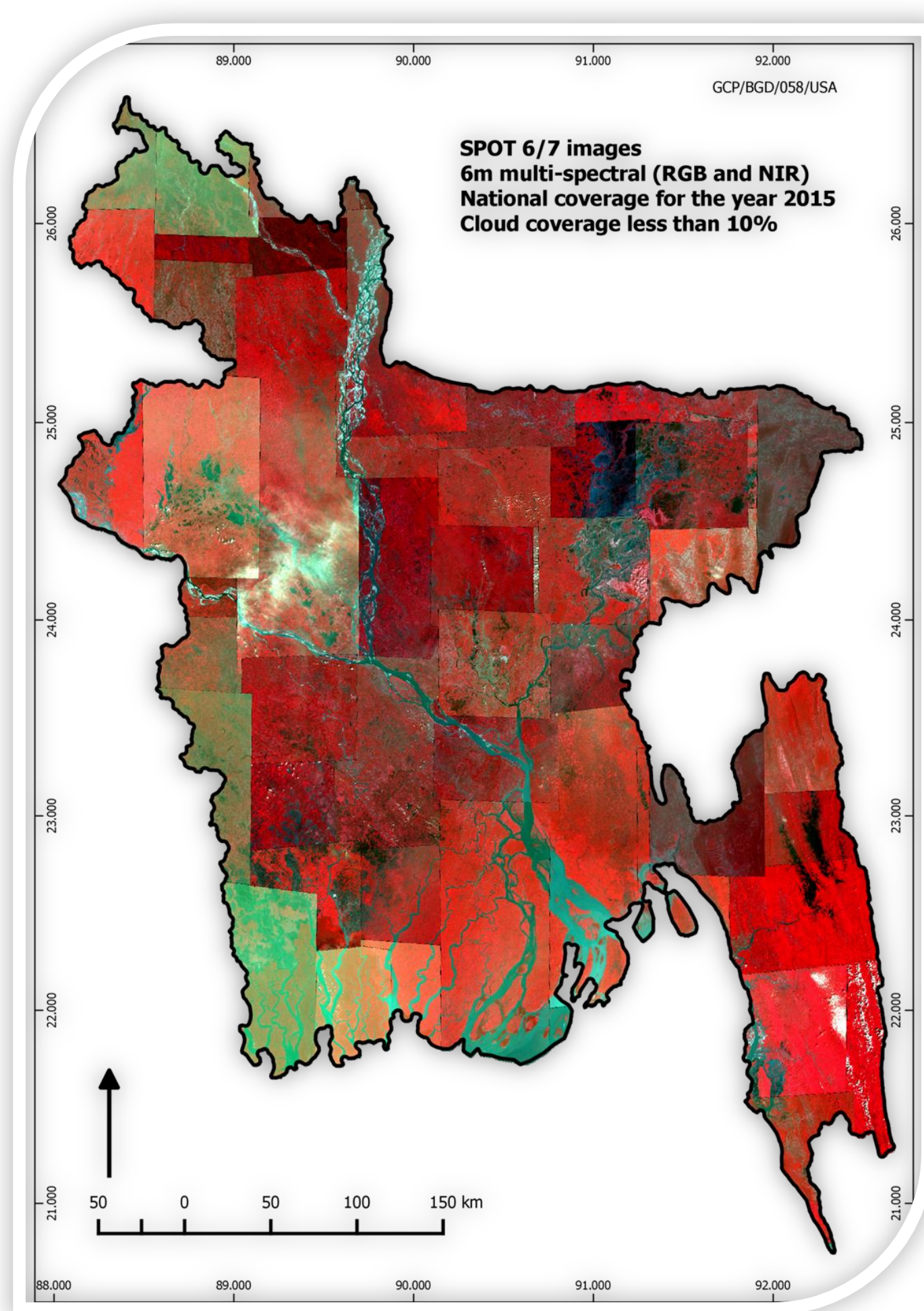




Remote sensing

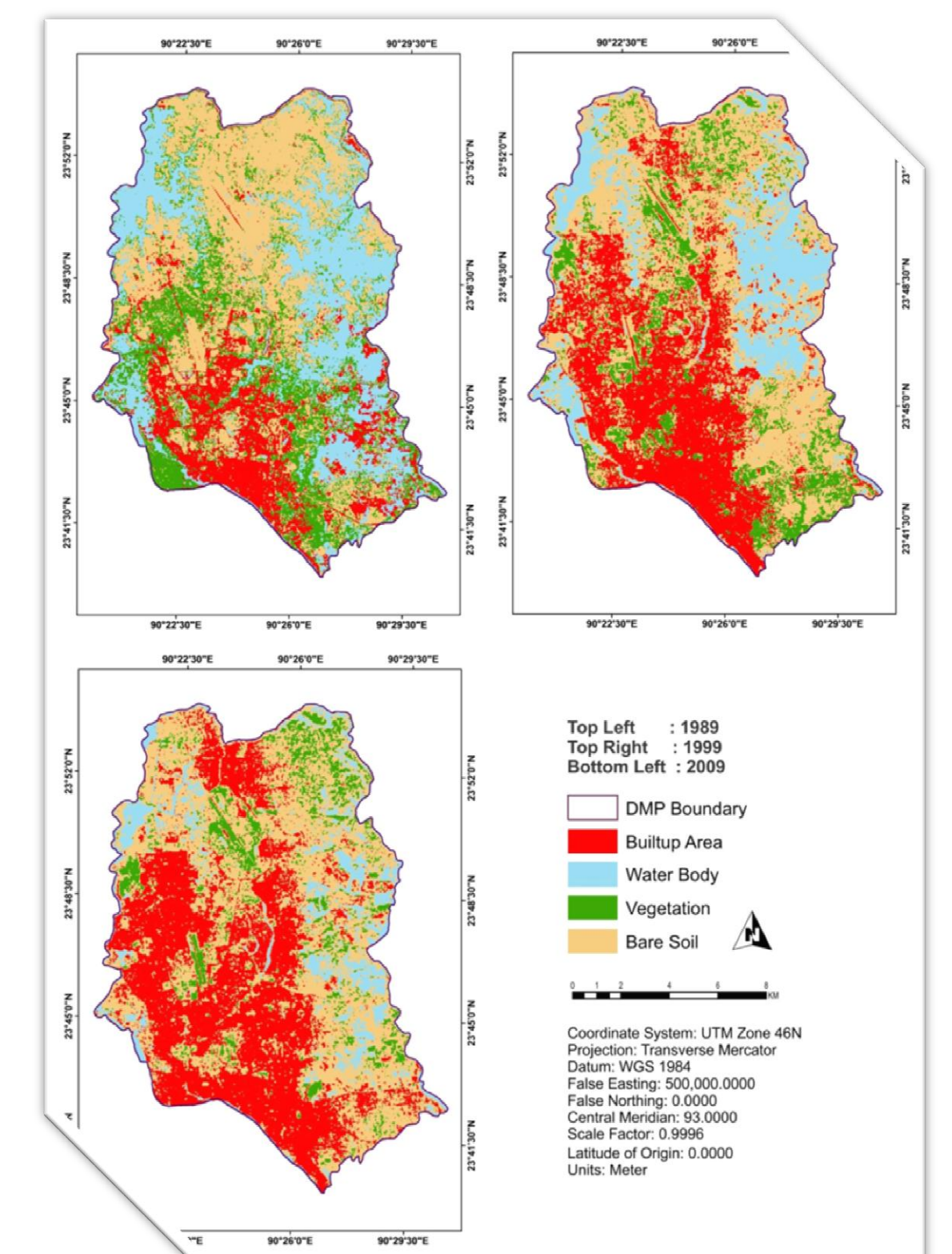
For the Bangladesh Forest Inventory And land cover monitoring



Why use remote sensing?

Assessment and monitoring of land cover dynamics are essential for the sustainable management of natural resources, environmental protection, biodiversity conservation and developing sustainable livelihoods for Bangladesh. The use of remote sensing data in this regard plays an important role through:

- full coverage of the area in relatively short time
- less costs due to reduced sampling intensity
- visual documentation of the situation and the changes
- generation of map data
- accessibility of information from "difficult to access" areas
- more harmonized information assessment
- retrospective assessment of changes.



What has been done?

Several land cover/use maps, at different levels, are developed. There are several government, autonomous as well as private or trustee organizations engaged in land cover mapping by making use of remote sensing and ancillary data. But due to differences in organizational purposes, methodologies, boundaries, definitions, classification systems, varying means and capacities, the different land cover maps are not comparable and consistent in time and space.

What are the problems?

Many of the legends used for forest and land cover mapping are not available or the classes are not appropriately described. Accuracy assessment is not performed in most cases. Organizational differences are highly manifested not only in the end products but also in the processes involved. In consequence, use of the different forest and land cover maps and their integration into one system is limited. Lack of consistency between the maps affect the robustness of the national system.

What should be done?

- A standardized and harmonized national classification system
- A system for assessing and monitoring forest and land cover
- To address the needs for measuring, reporting and verifying for REDD+ and to prepare the greenhouse gas inventory in a consistent way.

Project activities

Land cover classification system development

- Engagement of national experts
- Technical trainings and workshops on GIS, RS, data analysis, statistics etc.
- Data collection and translation of existing legends
- Additional field data collection for upgrading the national legends
- Use of open source software to ensure the sustainability of the process
- Develop a common and functional classification system

Preparation of the land cover and forest maps

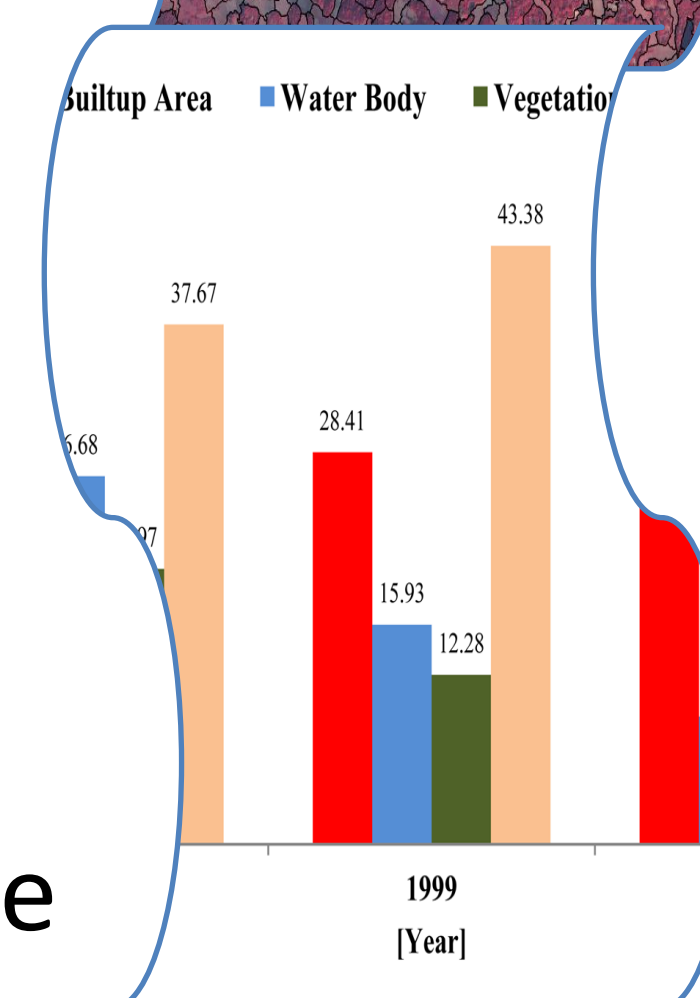
- High resolution SPOT 6/7 images for the whole country for the year 2015
- Image processing conducted for further analysis
- Segmentation using object based image analysis approach, will be employed to divide the image into several homogenous regions that will be assigned to specific classes later
- Dissemination of information and documentation through a web-based portal



- Field data collection
- Land cover classification



- Satellite image acquisition
- Image processing and analysis



- Land cover class assignment
- Generation of statistics and report

The system is to serve as a dynamic source of information for several different applications and objectives. Such a key-legend applicable to maps, prepared under different modalities, will facilitate the process of comparison, the production of statistics and time-series data. This will also set the basis for the development of a national reference system.

