



Case study Bangladesh

An integrated national forest monitoring system for sustainable forest management and conservation in Bangladesh

Supporting long-term planning, implementation and monitoring of multi-objective forest-related activities

Context

Bangladesh is highly vulnerable to the impacts of climate change. To support and improve decision-making on climate change mitigation and adaptation, access to robust data and information is key. The role of the forest sector and the availability of comprehensive forest-related data are supporting long-term planning, implementation and monitoring of forest-related activities that serve multiple purposes.

Previously, forest data and information were scattered across different forest administrative offices managed by the Forest Department (FD) under the Ministry of Environment, Forest and Climate Change (MoEFCC). There was inadequate documentation and archiving, data were incomplete and there were inconsistencies in data produced by different entities. To address these issues, the Bangladesh Forest Information System (BFIS) was launched in December 2018 by the FD. BFIS is the first forest information system in the country to assess, monitor, document, plan and implement forest management and conservation activities at national scale. It is an integrated and comprehensive system where all forest-related information is organized into categories to enable searches and visualization of information.

Actors and stakeholders

The Resources Information Management System (RIMS) unit of the FD under the MoEFCC is responsible for BFIS maintenance and updates. It is hosted in the Data Centre of the Bangladesh Computer Council. The BFIS platform was developed with technical input from FAO and financial support from the United States Agency for International Development (USAID) and the UN-REDD Bangladesh National Programme.

Replicability and upscaling

Administrative protocols allow FD managers to share data as appropriate. A user manual has been developed for system operation and maintenance as well as guide end users in understanding the functionalities of BFIS modules. In line with the Right to Information Act, a data-sharing policy has been formulated to provide data under FD terms and conditions. All BFIS documents are referenced and archived, and the information is well documented.



© FAO/Mondal Falgoonee Kuma

Objectives

- » Provide access to the most current, consistent, documented and reliable information on forest resources through a single web-based platform, taking into account the latest international standards for data documentation and information and communications technology (ICT) development.
- » Facilitate data-sharing, accessibility and management of forest-related data from a centralized and integrated web-based platform.
- » Use the data for planning, implementing and monitoring multi-objective forest management and conservation activities, such as natural resources management, biodiversity monitoring, greenhouse gas accounting, commercial purposes, and climate change mitigation.
- » Facilitate monitoring of the impacts of activities to achieve various national targets, including the Sustainable Development Goals (SDGs) related to the forest and land sector, the country's 7th Five Year Plan, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), the Country Investment Plan (CIP), and the Bangladesh Nationally Determined Contributions (NDCs), as well as other local and field-level activities.
- » Support digitalization in Bangladesh by enhancing the utilization of innovative digital technologies.

Challenges

Challenges to the sustainability of the platform include financial sustainability and lack of information technology (IT) professionals and other skilled personnel with strong technical capacities for the coordination and management of information systems in the FD.

Testimony

Mr Md Amir Hosain Chowdhury, Chief Conservator of Forests, Bangladesh Forest Department has stated that:

“ The Bangladesh Forest Information System (BFIS) will contribute to preserving and maintaining all scattered information in one place, therefore the Forest Department has a key role in contributing towards the goal of digital Bangladesh. The Government of Bangladesh fund will be managed for BFIS maintenance. The BFIS modules will be enriched and updated on a regular basis so that all stakeholders will benefit through BFIS. ”



Related resources

Chakma, A., Chakma, P. & Henry, M. 2018. Proceedings of Bangladesh Forest Information System launching. 18 December 2018. Rome, FAO, and Dhaka, Bangladesh Forest Department. (also available at: <http://bfis.bforest.gov.bd/library/proceedings-of-bangladesh-forest-information-system-launching/>)

Sarker, N. & Henry, M. 2017. Proceedings of the training on the Bangladesh Forest Information System (BFIS). 6–9 June 2017, Rome, FAO, and Dhaka, Bangladesh Forest Department. (also available at: <http://bfis.bforest.gov.bd/library/proceedings-of-the-training-on-the-bangladesh-forest-information-system-bfis/>)

Impact

- » Seven modules have been developed and organized into four categories: (1) development activities; (2) management and conservation; (3) forest assessment; and (4) knowledge management. The modules have user-friendly interfaces and allow users to manage and access forest-related data and databases, maps and reports that were not previously available in digital format. More modules are under development.
- » A rich collection of university theses, survey data, manuals and technical reports from different projects and institutions involved in the forestry sector are digitally available from central databases.
- » Enhanced ability of officials to manage databases related to forest cover assessment is resulting in improved data collection, processing and analysis for future use and planning. A total of 259 people, including 70 women, have been trained under the UN-REDD Bangladesh National Programme; and technical capacities strengthened on a number of topics, including GIS, forest statistics and modelling, development of allometric equations, activity data and emission factors for REDD+ forest reference levels, etc.

Success factors

- » **Country ownership and responsibility:** The Resources Information Management System of the Forest Department is responsible for managing and updating the BFIS and its modules. Currently, the FD is developing the Site-Specific Planning and Plantation modules, and several other modules are underway.
- » **Institutionalization of BFIS:** A Service Level Agreement has been signed between the FD and the Bangladesh Computer Council, ensuring the sustainable management and maintenance of the BFIS. The BFIS platform has also been integrated with the FD website.
- » **Integration and consistency with existing information sources:** All the reports related to forest resources inventory, assessment and monitoring are available in BFIS. The BFIS GeoPortal module is compatible with the ISO standard Land Cover Classification System for producing consistent and comparable land cover data. The GeoPortal is also interoperable with GeoNode, which is an open source geospatial content management system for interacting and sharing geospatial data. An ArcGIS (geographic information system) plugin has been developed to upload large data files in the GeoPortal, as well as other data formats such as GeoDB.
- » **Well-defined data and information-sharing policy:** A data-sharing policy has been approved by the MoEFCC.
- » **Participatory discussion process:** Feedback on the development of the BFIS has been collected from various stakeholders (academicians, sector specialists, FD, end users, etc.) and used to improve the platform and its functionalities.
- » **Feasibility, including cost efficiency:** Long-term funding is required to ensure the sustainability of BFIS. Some modules, such as the Site-Specific Plans, are currently being developed with World Bank funding under the Sustainable Forest and Livelihood (SUFAL) project.