

IFMT

Integrated Forest Management Toolbox

IFMT is a forest management planning tool, developed to assist officers in India's state forest departments to develop working plans in accordance to the NWPC 2014.



Over the years, Indian forestry has evolved in its approach to forest management, moving away from sustainable utilization of timber to ensuring environmental stability, biodiversity monitoring (and management), protecting ecosystem services and sustained delivery of socio-economic benefits. These objectives are laid out in the National Working Plan Code (NWPC), 2014. The NWPC also promotes major technological as well as analytical advances in forest data collection and analysis, including GIS and remote sensing. The NWPC also includes factoring the socio economic conditions of the nearby settlements in preparing the working plans.

While such an approach towards management of forests is highly desirable, there is considerable need to build the capacities of the staff involved in the preparation of the plans. Besides investing on building the capacities on conceptual understanding and skills, the integration of technology into various activities involved in preparing the plans and guiding implementation and planning is very much necessary.

The Integrated Forest Management Toolbox (IFMT) is a forest management planning tool, developed to assist officers in India's state forest departments to develop working plans in accordance to the NWPC 2014. It aims to bridge the knowledge gap and addresses the requirements of NWPC by supporting forest officials with required data and tools for planning and preparation of working plans for sustainable management of forest resources.

Tools of IFMT

- *Forest Resources Observatory (FRO)* - A repository of data from publicly available open data sources that can provide certain mandatory spatial layers as required by NWPC.
- *Forest Data Kit (FDK)* - A mobile android application that provides a digital platform for collection of field data. The data is further analysed and processed to create geo- spatial layers for visualization.
- *Composite Landscape Assessment and Restoration Tool (CLART)* - An android application that brings together publicly available information onto a mobile device and enables identification, planning and designing of soil and water conservation measures, based on recharge potentiality, land use land cover and slope of an area.
- *Species Distribution Model (SDM)* – Tool for planning revegetation working circle and Non-Timber Forest Produce (NTFP) working circle as per the local agro- climatic and edaphic factors. It assists in finding areas suitable for specified plant species and locating biodiversity hot-spots for conservation working circles.



How IFMT works

IFMT consists of a suite of tools for collecting/ collating geo-spatial and ground level data and identifying potential forest management activities based on flow of ecosystem services, thereby assisting in finalizing working plan prescriptions. The tools were developed to meet the requirements of NWPC.

The Forest Data Kit has been customised for each division by adding lists of local floral species and administrative units. Primary ecological data from plots and socio-economic data from forest fringe villages is collected through this customised tool and analysed along with the secondary data from the India Observatory (Data Platform).

Following this, reports and maps are generated as per the recommendations of NWPC 2014. These reports and maps form the basis of the prescriptions of working plans. CLART and SDM further provide support for planning revegetation and soil and water conservation measures.

Outreach and way forward

IFMT is being implemented in developing 'working plans' of 12 forest divisions in collaboration with the State Forest Departments of Rajasthan, Bihar, Telangana, Kerala and Himachal Pradesh. Automation of IFMT is nearing completion. Users would be able to: customize and download Forest Data Kit, clean the collected data and download analysed data, spatial layers, report and maps. IFMT will also be modified to assist in the preparation of Management Plans for Protected Areas.

IFMT will be further enriched with other datasets and tools like: biomass estimation, assessment of carbon sequestration potential, invasive species, fire proneness etc., to facilitate the preparation of working plans as per the NWPC 2014.



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