

Manual of Quantum GIS for Forestry Applications - Advanced

Version 2.0

(an open source software)



Training and Forest Inventory Division

Forest Survey of India

Ministry of Environment, Forest & Climate Change, Government of India

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Manual of Quantum GIS for Forestry Applications - Advanced
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Preface

There are diverse applications of Remote sensing and GIS in forestry. Use of Remote Sensing and GIS is almost inevitable, when it comes to the monitoring and assessment of forest resources. With the implementation of National Working Plan Code 2014, there is extensive use of GIS in preparation of working plan by the SFDs. In this scenario, it is a need of the hour to develop capacity of the State Forest Departments in using GIS software which are easily available to the users and easy to operate.



Quantum GIS commonly known as QGIS is one such software which is freely downloadable. It is an open source software of GIS applications. QGIS provides excellent capabilities of stable operations and supports numerous vector, raster, database, formats and functionalities. Like other GIS applications, QGIS provides a geographical user interface wherein different layers of spatial data can be displayed and analysed. Many commercial GIS software available in the market are very expensive and cost a huge financial burden on users not only in purchasing licenses but also for their annual maintenance.

Considering numerous uses of GIS in different forestry applications and heavy cost of proprietary software, FSI has included modules on QGIS in its training programmes to develop capacity of the State Forest Departments (SFD) in use of QGIS.

The 'Manual of Quantum GIS for Forestry Applications - Advanced Version 2.0' has been developed by FSI for popularising QGIS in the SFDs for even advanced applications. This manual is a sequel to the previously released Manual of Quantum GIS for Basic Forestry Applications released in the month of May, 2019. The manual contains different chapters describing the basic concepts of QGIS and easy to understand steps illustrated through screen shots of GUIs. The manual will enable users to perform GIS analysis for applications such as NDVI, terrain analysis, change detection, grid based analysis etc.

I acknowledge the sincere efforts done by Dr. Madhu Bist, Project Scientist in preparing this manual. She has developed deep understanding of different functionalities of QGIS software and emerged as an expert of QGIS. Contributions of Shri Sushant Sharma JD (TFID) and Shri Prakash Lakhchaura DDG (TFID) in preparing this manual are acknowledged. Thanks are also due to other officers and staff of FSI who have contributed in preparation of this manual. I hope, the manual will be immensely useful to the SFDs.

August 2, 2019

A handwritten signature in blue ink, appearing to read 'S. Ashutosh', with a horizontal line underneath.

(Dr. Subhash Ashutosh)
Director General, FSI



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