Drainage Network Characterisation With Hydroelectric Projects Of Pathanamthitta District

We the Team Soil Conservation, Thiruvalla are Officials of Soil Survey & Soil Conservation Department of Kerala State, includes two members, Mr.Nizam Abdul Rahman & Mr Aneesh.G. We are very glad, enthusiastic and proud for participating in this Map India Project.

We prepared the map showing the Drainage network characterization spotted with hydroelectric projects of Pathanamthitta District in Kerala. Out of 44 rivers in Kerala, Pathanamthitta district has 3 main river basins as Manimala, Pamba and Achankovil drained by the respective rivers . 7 dams namely Kakki, Moozhiyar, Pamba, Maniyar, Anathodu, Kochu pamba, Kakkadu & Perunthenaruvi and 4 Hydro electric Power projects were constructed in this .This Drainage map with the major infrastructure for effective use of water resources are very useful for the natural resource managers and Watershed planners for sustainable development and budgeting of the resources

**Map preparation Procedure :** We have downloaded two *Cartodem version -3R1* file from Bhuvan site for Pathanamthitta District and re-project the dem file in QGIS. Using q.gis deskop with grass software the reprojected dem is merged and resampled. Then the file is masked to the required boundary area of Pathanamthitta district. The file is then processed with fill sink options in GRASS GIS for filling the depressions in the DEM. The filled DEM is further processed for channel network and drainage characateristaion to derive the drainage systems and the drainage basins within the boundary of Pathanamthitta district. Through open street map services in Open layers plugin in QGIS we draw places, roads, dams, Power stations, and then further catagorize drains and rivers under the boundary of the Pathanamthitta district. After the database preparation , map is Composed through mapcomposition option in QGIS with layout size fixed as A3 sheet and necessary map attributes were also shown framescale as 1:2,80,000.

We submitted our drawing before the Project Team Management of IITB - ISRO- AICTE Mapathone through Moodle Account and looking forward for cooperation with the Project Team .

Team Soil Conservation, Thiruvalla.