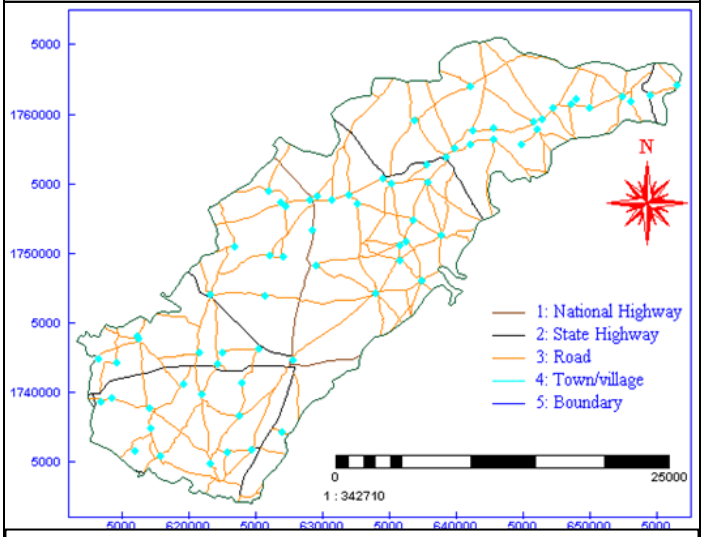
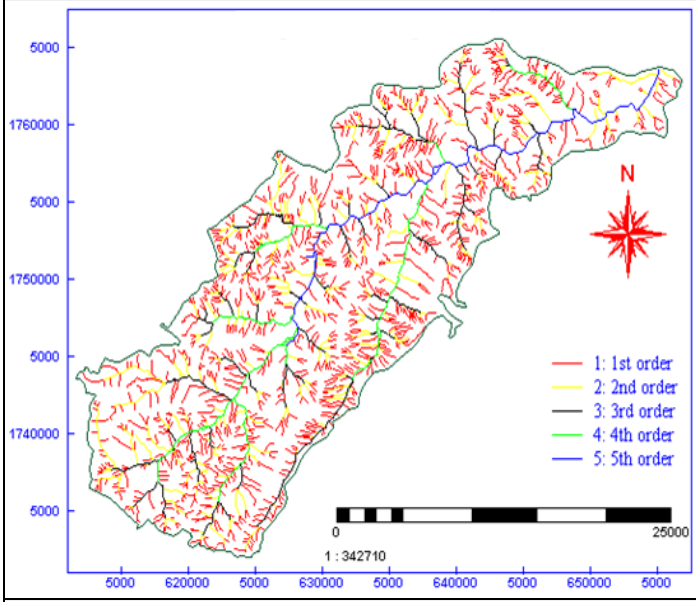
Planning of Water Harvesting Structures using Remote Sensing

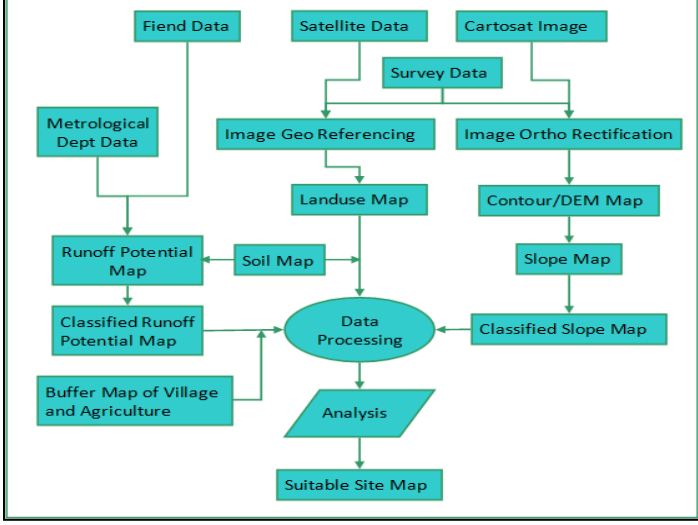
Map Represents the Road Network of Study Area



Map Represents the Drainage Network



Suitable Site Identification for Water Harvesting Structures



Rainwater Harvesting Structures

Water harvesting is the capture, diversion, and storage of water obtained from different freshwater sources for plant irrigation, domestic purposes, industrial purposes, groundwater recharge and other uses. RWH either captures stored rainwater for direct use (irrigation, production, washing, drinking water, etc.) or is recharged into the local ground water and is call artificial recharge.

It can be defined as the system of collection and concentration of rain water and its run off and its productive use for:-

- Irrigation of annual crops pastures and trees.
- Domestic and livestock consumption.
- Groundwater recharge.

Need of Water Harvesting Structures

- Major parts of our country have been facing continuous failure of monsoon and consequent deficit of rainfall over the last few years.
- Also, due to the ever increasing population in India, the use of ground water has increased drastically leading to constant depletion of ground water level causing the wells and tube wells to dry up.
- In some places, excessive heat waves during summer create a situation similar to drought.
- It is imperative to take adequate measures to meet the drinking water needs of the people in the country besides irrigation and domestic needs.

Scope of Work

Identification of suitable location of the water harvesting structure.

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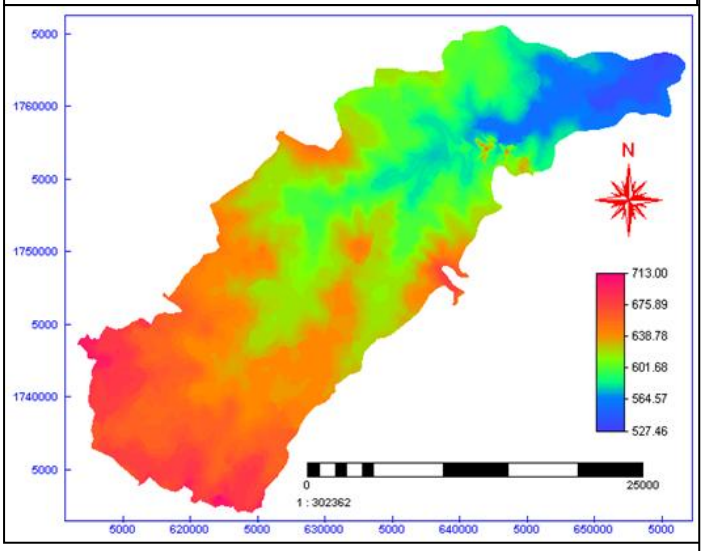
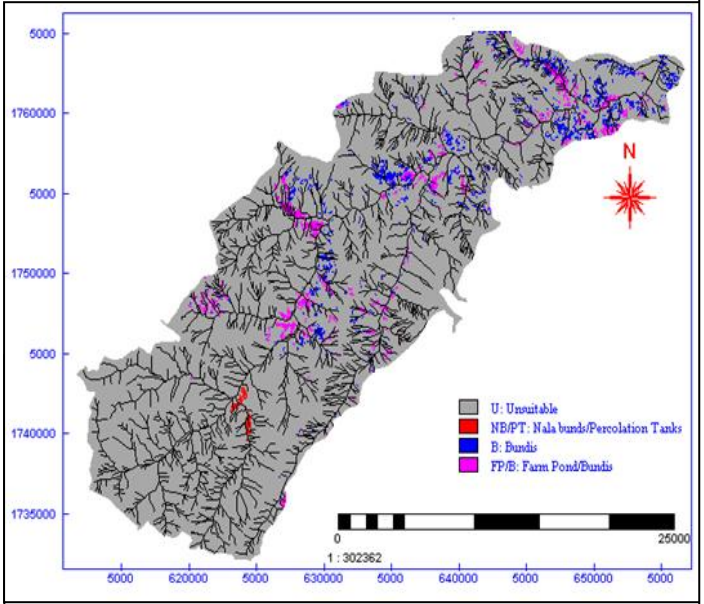
Map represents the Digital Elevation Model



Map Represents the Suitable Location of Structures



Types of Water Harvesting Structure

- Check Dam- Medium slope, low permissibility is required. The available area should be more than 25 hectares. Preferably check dams should be constructed at lower order streams (third order).
- Farm Pounds- Flat topography and low soil permissibility is required.
- Percolation Tanks And Nala Bunds – Flat topography and pervious strata are required. The available area should be more than 50 hectares.
- Bundis – Medium permeable soil and adequate area are required for bundis and preferably it should be nearer to agricultural land.

Outcome of Rainwater Harvesting Structures

- Improvement in groundwater & crop production
- Reduction in runoff
- Ground water quality improvements because its purest form of water free from salt.

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