GNSS based Forestry Monitoring

Solution Scope

Offers latest data, technology and tools that empower people everywhere to better protect forests.
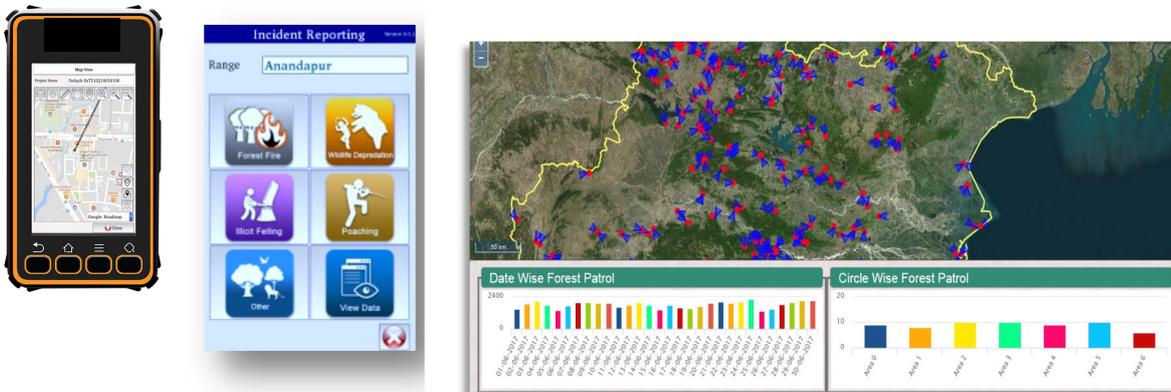
Uses GNSS as the main data validation technology

Apps and GeoClouds to transparently monitor the forests from anywhere anytime

Forestry in India-National Green Mission

- Increased forest/tree cover on 5 m ha of forest/non-forest lands and improved quality of forest cover on another 5 m ha (a total of 10 m ha)
- Improved ecosystem services including biodiversity, hydrological services and carbon sequestration as a result of treatment of 10 m ha
- Increased forest-based livelihood income of about 3 million households living in and around the forests
- Enhanced annual CO_2 sequestration by 50 to 60 million tonnes in the year 2020

Vara's latest data, technology and tools that empower people everywhere to better protect forests

Problem Statements

1. ***The biggest challenge to IT penetration is high cost.***
Vars's Team took up the challenge to build from scratch High Accuracy Rugged GNSS Receivers SXtreo equipped with MultiGNSS and GAGAN SBAS support at a fraction of cost of peers.

2. ***No data is better than poor quality data***
Vara's Team addressed the problem with inbuilt GNSS based data validation to ensure that any and every data collected is validated through accurate positioning and pictures.

3. ***The only way to manage a forest holistically is to ensure continuous data flow from all operational activities***
Vara's Team took up the challenge to build an all encompassing App that runs on open source mobile platform and captures all facets of forestry operations.

4. ***Impaired transparency and restricted access to data sources are the main impediments in quicker decision making***
Vara's Team took up the challenge to build a low cost GIS cloud based web application that can democratize the data access and present the same to all stakeholders 24X7 in highly effective geo-visualizations.

The Outcome

A complete forestry management suite which utilizes the latest advancement of GNSS technologies and mobile/cloud GIS to revolutionize the mission objectives and forestry goals through its unique low cost & sustainable approach.