

TAIGA

Forest Management Information System

A Unified Digital Forest Twin for Evidence-Backed Conservation

Business Impact

1. Minimize Deforestation - Faster verification enables proactive protection of vulnerable forest zones

2. Image-led Monitoring - Drone-assisted verification and monitoring resulting in faster evidence capture

3. Efficient Management – SLA driven ex-gratia approvals and hotspot monitoring shortens critical response times

4. Enhance Conservation Outcomes – Data-driven biodiversity mapping enables smarter protected-area planning

India is home to some of the world's most iconic wildlife, including tigers, leopards, elephants, and panthers, which draw millions of visitors to its national parks and reserves each year. Yet, behind this natural heritage lies an urgent challenge: protecting forests and wildlife against threats such as illegal poaching, forest fires, encroachment, and deforestation. Many of these challenges go under-reported or untracked due to manual processes. For enforcement agencies, timely and well-documented action is not only important, but it is also the cornerstone of a successful prosecution.

TAIGA transforms day-to-day forest operations into a Digital Forest Twin - where every patrol, plantation, wildlife incident, or citizen service is mapped, verified with geo-evidence, and explained through dashboards. Built for statewide deployment from circles to divisions, ranges, and beats, it combines GIS, remote sensing, drones, and AI/ML to empower decision-making both online and offline. The platform integrates biodiversity records and forest resource assessment into a single geospatial view for better conservation planning.

Solution Highlights

RMSI has extensive expertise in forestry applications, delivering effective decision-support systems for conservation, sustainable development, and carbon credit mechanisms. Key offerings include:

- **Deforestation Watch:** Integrates near real-time deforestation alerts, sending 10×10 m weekly alerts to forest authorities
- **Encroachment Monitoring:** Monitors forest boundaries and fringe villages, reporting and validating encroachments and tracking eviction status with geo-tagged workflows.
- **Wildlife & Ex-Gratia:** Monitors and tracks wildlife recording incidents, manages claims transparently, and tracks rescue operations.
- **PMIS & Nursery:** Creates multi-resource forest inventories, monitors plantation planning and progress, ensuring traceability.
- **GIS, Remote Sensing & Resource Assessment:** A centralized geoportal for visualizing and sharing geospatial data, LULC change detection, biomass, and carbon stock analytics.
- **Biodiversity Monitoring:** Integrates species-level data, habitat tracking, and hotspot analysis for conservation.
- **Patrols, Offence & Fire Watch:** Patrol routes, offence lifecycle, real-time fire alerts.

