Forestry at Scale

Remote Monitoring Powered by Satellite IoT

Modern Forestry Operations Are More Connected Than Ever

Forestry organizations are increasingly managing vast, distributed environments where operational visibility is critical for sustainability, wildfire response, equipment management and environmental monitoring.

But many forestry operations extend far beyond reliable terrestrial coverage.

Satellite IoT helps extend operational visibility into remote forests, rugged terrain and infrastructure-limited environments where traditional connectivity may be inconsistent or unavailable.

Did you know?

According to the UN Economic Commission for Europe[1], digital forestry technologies, including satellite monitoring, IoT, and remote sensing, are becoming essential for wildfire detection, forest health monitoring, and sustainable resource management.

Why Forestry Requires Satellite-Enabled Visibility

Forestry operations face unique operational challenges:

- Remote and difficult-to-access terrain
- Limited communications infrastructure
- Large geographic operating areas
- Wildfire risk and environmental monitoring needs
- Mobile assets and distributed equipment

Satellite IoT helps organizations maintain visibility across these environments without relying entirely terrestrial infrastructure.

Satellite IoT Supports:

- Remote environmental monitoring
- Wildfire detection and alerting
- Fleet and equipment tracking
- Worker safety and lone worker visibility
- Infrastructure and asset monitoring

Earlier Detection. Faster Response.

Wildfire risk continues increasing globally, placing greater pressure on forestry organizations to improve situational awareness and early detection capabilities.

IoT-enabled environmental monitoring systems can help provide:

- Real-time environmental data
- Smoke and temperature monitoring
- Faster anomaly detection
- Improved operational awareness across remote regions

Did you know?

Research published in *ScienceDirect* found that low-cost IoT wildfire detection nodes were capable of detecting fires within 1–5 minutes[2] after ignition under testing conditions.

Did you know?

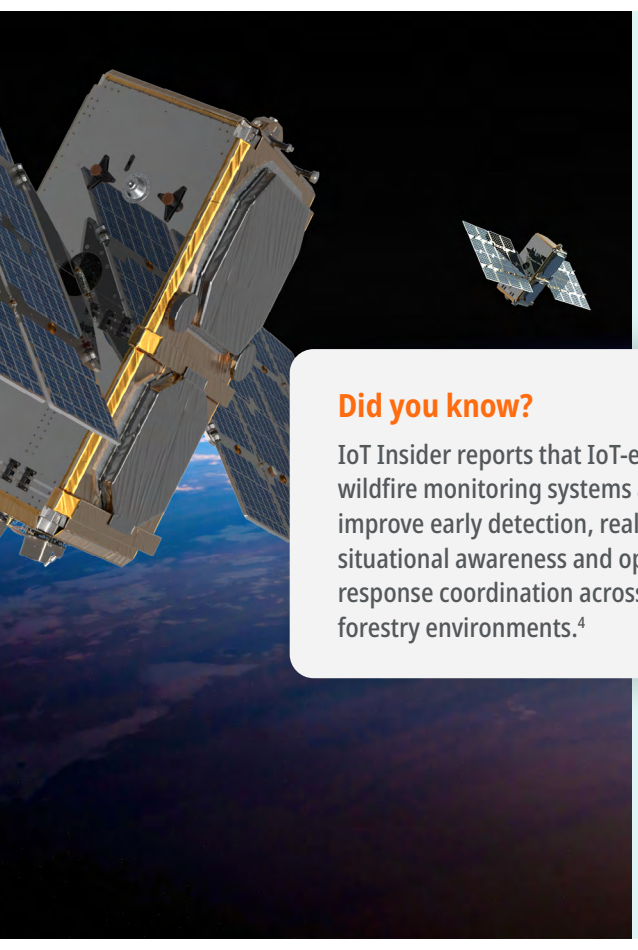
The U.S. Forest Service responds to approximately 73,000 wildfires annually, burning roughly 7 million acres each year.[3]

Low-Power Monitoring for Large-Scale Deployments

Forestry monitoring systems often need to operate for years in remote environments with minimal maintenance.

Low-power satellite IoT architectures help support:

- Long-life battery deployments
- Solar-powered remote sensors
- Reduced field maintenance requirements
- Lower operational costs
- Scalable monitoring across large forests and remote infrastructure



Did you know?

IoT Insider reports that IoT-enabled wildfire monitoring systems are helping improve early detection, real-time situational awareness and operational response coordination across forestry environments.[4]

Operational Visibility Beyond Cellular Coverage

Satellite IoT helps forestry organizations maintain visibility where terrestrial infrastructure alone may not be practical.

Because satellite connectivity operates independently of local towers and backhaul infrastructure, organizations can support:

- Monitoring in disconnected regions
- Remote operational continuity
- Environmental telemetry across vast geographic areas
- Greater resiliency during infrastructure disruption

Smarter Forestry Starts with Connected Visibility

As forestry operations continue scaling digital monitoring and environmental management initiatives, reliable connectivity is becoming foundational to operational awareness.

Satellite IoT helps forestry organizations:

- Extend visibility into remote environments
- Improve monitoring continuity
- Reduce operational blind spots
- Support scalable environmental intelligence

From wildfire detection to remote asset monitoring, satellite IoT is helping forestry organizations operate with greater visibility, resiliency and efficiency at scale.

Learn more about how Globalstar hardware and connectivity can support forestry management at scale.

1. https://unece.org/managing-forest-resources-sustainably
2. https://www.sciencedirect.com/science/article/pii/S2542660524001896
3. https://www.fs.usda.gov/science-technology/managing-fire
4. https://www.iotinsider.com/iot-insights/how-iot-can-revolutionise-forest-monitoring-and-wildfire-detection/