

Real-Time Wildlife Surveillance

and Conservation in
Rajasthan's Tiger Reserves
and National Parks



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Introduction

Effective wildlife conservation hinges on reliable, real-time surveillance systems. Rajasthan Forest Department's ambitious project across Sariska, Ranthambore, Mukundra Tiger Reserves, and Desert National Park leverages Wavesight's industrial wireless transmission solutions to power an integrated software-based surveillance ecosystem.

This includes thermal and optical cameras, wireless communication infrastructure, solar power, and drone integration, combined with applications deployed by the Department of Information Technology & Communication (DOIT&C). The system empowers timely anti-poaching actions, infiltration control, and better wildlife management decisions to protect India's cherished tiger population and other species.

The Challenge

- Monitor expansive, remote tiger reserves and national parks in Rajasthan, covering areas prone to poaching and illegal activities.
- Integrate diverse surveillance technologies, thermal cameras, drones, wireless communication, and solar power, into a seamless, reliable network.
- Enable real-time data transmission and alerts to forest officials for rapid response without reliance on wired infrastructure.
- Ensure the system operates sustainably in challenging environmental conditions with minimal manual intervention.

Solution Overview

- **Technology Deployments:** Wavesight's industrial wireless transmission systems form the backbone infrastructure connecting thermal and optical surveillance cameras, drones, and local control rooms at Sariska Tiger Reserve, Ranthambore Tiger Reserve, Mukundra Tiger Reserve, and Desert National Park.
- **Integrated Surveillance:** The system integrates with Rajasthan's broader wildlife monitoring platforms and applications managed by DOIT&C, facilitating centralized data analytics and management.
- **Solar Power & Rugged Design:** Power autonomy via solar solutions ensures continuous operation in remote zones without grid access. Hardware robustness guarantees reliability in harsh environmental conditions.
- **Partner & Project Award:** Deployment Partner: Raj COMP Info Services Limited (RISL) awarded the project to BECIL, who deployed Wavesight's solution on-site.

Results & Benefits

- Enhanced capability for real-time identification of poaching, infiltration, and wildlife movement patterns through integrated thermal and optical surveillance.
- Substantially improved response times for forest officers backed by live feeds and geo-mapped alerts.
- Sustainable operation in remote, off-grid zones through solar-powered wireless infrastructure.
- Boosted conservation efforts with data-driven decision-making, supporting tiger population management and anti-poaching enforcement.
- Reduction in manual patrolling and increased operational efficiency for forest department resources.

Conclusion

Wavesight's wireless transmission solutions have empowered Rajasthan's Forest Department with advanced, resilient communication infrastructure critical for protecting tiger reserves and national parks.