

Hytera H-series Radios Aid the Fight Against Rhino Poaching in South Africa



Introduction

The Pilanesberg Wildlife Trust Anti-Poaching Unit's efforts to protect endangered rhinos in South Africa's Pilanesberg Nature Reserve was being hampered by poor communications. Hytera partner Sentiv donated a Hytera repeater and H-series mobile and portable radios with GPS tracking. This provides full signal coverage across the Reserve to support seamless voice communications, along with GPS tracking and monitoring of vehicles and foot patrols to enhance operational efficiency and safety.

The Background

The 572 sq km Pilanesberg National Park is located north of Rustenburg in the North West Province of South Africa. The Pilanesberg Nature Reserve is a premier wildlife conservation area, but it is suffering from a severe rhino poaching crisis. In recent years, South Africa has accounted for over 70% of global rhino losses due to poaching, with hundreds of animals killed each year for their horns.

Project Name

Pilanesberg Nature Reserve Anti-Rhino Poaching Radio Project

Client Name

Pilanesberg Nature Reserve Anti-Poaching Unit (Pilanesberg Wildlife Trust)
Hytera Partner: Sentiv

Project Start/End Dates

2023 to 2024

Project Location

Pilanesberg, North West Province, South Africa

Industry

Wildlife conservation

Products/Solutions

HM78XG DMR Mobile Radios
HM78X DMR Mobile Radio
HP68XG DMR Portable Radios
HR106X DMR Repeater

The Pilanesberg Wildlife Trust (PWT), a non-profit organisation, is leading the fight to protect endangered species in the reserve, especially rhinos. To support this critical mission, South African telecommunications solutions provider Sentiv partnered with Pilanesberg's Anti-Poaching Unit (APU) by donating state-of-the-art Hytera devices. This radio technology upgrade enables real-time communication and location tracking, directly contributing to Pilanesberg's anti-poaching success.



The Challenge

The Anti-Poaching Unit operates over a large, rugged terrain that requires reliable, responsive communication to coordinate ranger teams, enhance situational awareness, and enable a rapid response to illegal activity reports.

Prior to Sentiv's support, limited communication infrastructure hindered the APU's operational capacity, resulting in delayed responses and increased risks for both rangers and wildlife.

The key challenges include:

- Coordinating real-time responses across remote and rugged areas;
- Ensuring rangers' safety and visibility to the command centre;
- Avoiding patrol coverage gaps, especially in poaching hotspots;
- Improving communication reliability to keep up with sophisticated poaching tactics.

The Solution

Sentiv donated a Hytera HR106X Digital Mobile Radio (DMR) repeater and Hytera H-series DMR devices equipped with GPS tracking as well as a Hytera Smart Dispatch Plus software platform to Pilanesberg's Anti-Poaching Unit. This integrated solution empowers rangers to communicate seamlessly across the reserve, with features tailored to conservation enforcement needs. The digital repeater has increased coverage across the Reserve from 60% to 98%. The rangers are still able to communicate with each other via direct mode in the remaining 2%.

The donation included eight HM78XG mobile radios, one HM78X mobile radio, and twelve HP68XG portable radios. Sentiv also installed solar-powered communication racks, weatherproof outdoor housing for the repeater, network switches at the summit of Pilanesberg mountain, and fitted mobile radios in ranger vehicles.



The Benefits

Enhanced Real-Time Communication and Coordination

With reliable, long-range communication using Hytera H Series devices, rangers are able to maintain constant contact, effectively covering the entire reserve.

GPS Tracking for Ranger and Wildlife Monitoring

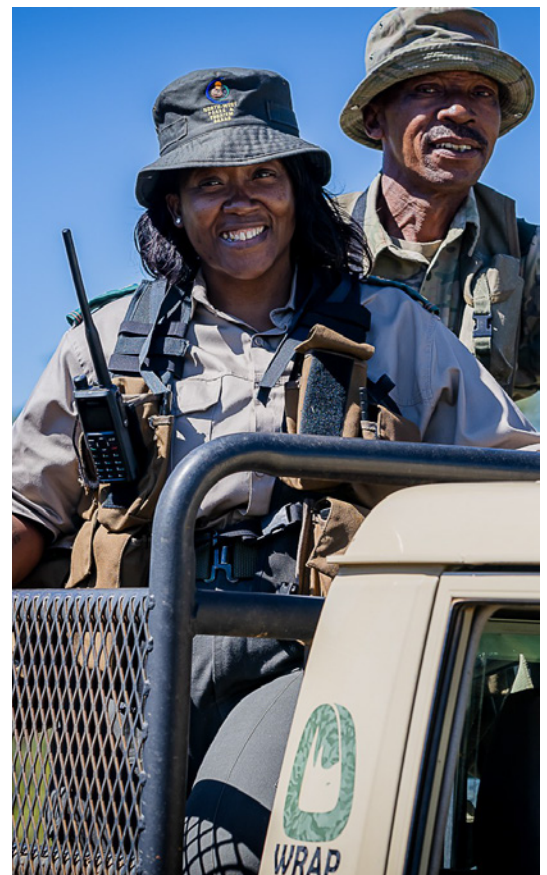
GPS tracking in the radios means rangers are better protected than before as the command centre is able to monitor ranger positions in real-time, optimizing patrol routes and ensuring timely response to threats by dispatching the nearest rangers to suspicious activity locations.

Improved Ranger Safety

GPS location tracking ensures ranger visibility, mitigating risks in emergency situations and enabling help to be directed to the precise location.

Seamless Multi-Agency Collaboration

The radios' interoperability enables cross-agency communication when partnering with law enforcement, boosting the unit's impact in critical situations.



Products

- HM78XG DMR Mobile Radios
- HM78X DMR Mobile Radio
- HP68XG DMR Portable Radios
- HR106X DMR Repeater



HM78XG/HM78X Mobile Radios

These versatile mobile radios are installed in ranger vehicles and provide secure, reliable communication with exceptional audio clarity, even in remote areas.

HP68XG Portable Radios

The compact and lightweight HP68XG devices are ideal for rangers on foot, ensuring easy handling during long patrols. They are built to withstand the harsh conditions of the reserve, including dust, water, and rugged terrain, making them perfect for the demanding tasks of the APU.

Loud, Clear Audio

The radios feature Hytera's latest noise cancellation technology, ensuring loud, clear voice communications, even in windy or noisy environments.

Dual Mode Operation

The radios support both analog and digital modes, ensuring smooth communication with older devices while benefiting from the advanced features of digital technology.

Enhanced Signal Coverage

The HR106X repeater boosts signal coverage across the vast terrain of Pilanesberg, ensuring continuous and reliable communication even in previously hard-to-reach areas.

Remote Monitoring

The repeater includes remote monitoring capabilities, allowing the APU's communication team to identify and address any issues promptly, ensuring uninterrupted operations.

The success of this solution at Pilanesberg demonstrates Hytera's potential in conservation and security settings. Sentiv's support exemplifies how technology can be harnessed to protect endangered wildlife, setting a benchmark for other reserves facing similar challenges in wildlife protection and poaching prevention.

Customer Testimonial

"The support from Sentiv and the Hytera devices has transformed our capabilities in the field. Real-time communication and GPS tracking have strengthened our efforts, allowing us to be more responsive and proactive in protecting our wildlife. This technology is crucial in the fight to save our rhino population."

—Steve Dell, Field Ecologist, Pilanesberg Anti-Poaching Unit



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