Combining
Tradition and Technology:

Tracking Rhinos in Zimbabwe's Lowveld

Monitoring rhinos by tracking individuals across their habitats is a top priority for conservationists managing rhino populations. Knowing where rhinos are, which other animals they are with, and recognising usual behaviour and territory patterns is key.

Camera traps are also used strategically at middens (areas of rhino dung). Both black and white rhinos maintain middens, sometimes both using the same site. Before defecating, rhinos will normally smell the midden to gather information about the other rhinos that have used it. With a camera trap placed in the right spot, a midden provides a good opportunity to get full face and ears photos while a rhino is having an investigative sniff.

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Centre: *Ensuring teams have the right kit for ground patrols is key. Thanks to the Anna Merz Rhino Trust, we were able to provide 12 sets of new uniforms for LRT's Rhino Monitors.*

Not only does this help keep rhinos safe, it also provides information that informs which management decisions are required to keep populations healthy and growing. For the Lowveld Rhino Trust (LRT), in the South-east Lowveld of Zimbabwe, rhino monitoring is the foundation of their work to conserve rhinos.

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The Lowveld region, home to more than 87% of the country's rhino population, is a semi-arid area, characterised by a mix of savannah grasslands, woodlands, and thorny bushveld. With undulating terrain and rocky outcrops, it provides extensive habitat for black and white rhinos. However, successful rhino monitoring across large areas requires significant effort and a combination of approaches.

LRT's teams work tirelessly to track and identify rhinos, using a combination of traditional techniques, innovative technology, and aerial support to maintain an up-to-date picture of the population. Traditional methods like spoor tracking remain foundational, with experienced trackers following individual rhinos by analysing footprints and other subtle signs left in the environment, in order to get close enough for a sighting to confirm its identify. Despite the huge area (Bubye Valley Conservancy is 3,200km^2), dense bush and challenging terrain, this method continues to be one of the most successful.

Complementing their on-the-ground efforts, LRT also carry out aerial surveys during their bi-annual rhino management operations, capturing high-resolution photographs from helicopters and fixed-wing aircraft. Covering large sections of area relatively quickly, this aerial support helps confirm rhino identifications and acts as a mini-snapshot audit of sorts.

In addition to the traditional methods of ground patrols and eyes in the sky, LRT has embraced technology to enhance their monitoring capabilities. LRT is investigating a form of LoRaWan (Long Range Wide Area Network) technology, working to develop GPS devices to track rhinos through horn implants. This system shows potential be a major tool for the future, but still requires trialing and research-and-development to adapt devices that will reliability last two years in the horns of wild rhinos, and give regular GPS position fixes via a secure system of base stations, connected to a server. The latest generation of these devices, equipped with spiral-shaped antenna for compactness, is designed to last over two years before needing to be replaced.

Combining traditional techniques with modern advancements, LRT has developed incredible in-depth knowledge about individual rhinos and the dynamics of the black and white rhino populations living in the Lowveld. This comprehensive understanding allows the team to develop conservation strategies and plan interventions tailored to the unique needs of the rhinos living in this habitat. And their work is paying off.

With more than 24 black rhino births recorded in 2024 and some of these to first time breeders as young as only five years old, monitoring has confirmed that the population is showing healthy biological indicators. After having suffered some of the most intense poaching losses back in 2019 this population is now back to realising strong growth.