TrailGuard AI

Why in News?

Recently, the Similipal Tiger Reserve in Odisha was fitted with 100-150 cameras loaded with TrailGuard an Artificial Intelligence (AI) model.

- **TrailGuard AI** – It is an end-to-end, ***camera-based alert system*** and an effective anti-poaching tool.
- **Developed by** – Nightjar Technologies, a social impact enterprise in Gurgaon, Haryana.
- It is designed for enhancing wildlife conservation and promoting human-wildlife coexistence in remote areas.
- **Deployment along** – *Trails or access points* in areas of interest.
- **Unique Features** – Its ***battery life***, lasts for 6 months to 1 year based on the number of images it sends.
- It transmits human and wildlife activities in remote areas in under *30 seconds.*



- **AI hardware –** It combines durable outdoor hardware, on-the-edge AI algorithms, and real-time transmission capabilities.
- **Real-time Alert system –** It autonomously detects target objects, and transmits real-time alerts that can trigger,
    - Rapid-response to entry by poachers or illegal loggers.
    - Wildlife entering agricultural or pastoral lands.
    - Status of endangered or exotic invasive species.
- **Usage in multiple cases:**
    - Human-wildlife conflict

- Park intrusion monitoring
- Wildlife monitoring
- Illegal logging
- Mine security
- Border security.

*Similipal is the **1st reserve** where TrailGuard has shown success as an '**anti-poaching tool**' but it has takers outside Odisha as well. It has also been implemented in the Kanha Tiger Reserve in Madhya Pradesh and Dudhwa National Park in Uttar Pradesh with 20 and 10 cameras respectively.*

References

1. The Hindu| AI-fit cameras in Similipal Tiger Reserve
2. Nightjar| TrailGuard AI

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