Environment & Ecology · GS - III

Examine the role of technology in improving wildlife conservation and reducing human-wildlife conflict in India.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 22/10/2026	GS - III	Environment & Ecology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Sensor-Based Monitoring, Tadoba Andhari Tiger Reserve, Project Tiger, Habitat Management, Water Scarcity, Human-Wildlife Conflict, Real-Time Monitoring, Climate Resilience, Sustainable Conservation.

Model Answer

Introduction

Wildlife conservation increasingly requires technological solutions to address habitat degradation, water scarcity and human-wildlife conflict. Sensor-based waterhole management at Maharashtra's Tadoba Andhari Tiger Reserve illustrates the potential of technology in habitat management.

Main Body

Technology can strengthen conservation through:

1. Real-time monitoring: Sensors help track water levels and identify shortages.
2. Automated management: Automatic refilling can improve water availability during harsh summers and reduce manual intervention.

3. Conflict mitigation: Reliable water sources within suitable habitats may reduce the need for wildlife to move towards human settlements.
4. Improved decision-making: Remote sensing, camera traps, GPS tracking and data analytics can assist wildlife monitoring and habitat planning.

However, technology has limitations. Systems require maintenance, reliable power and adequate funding. Poorly located artificial water sources may alter animal movement or create ecological imbalances. Therefore, interventions must be guided by scientific assessments.

Conclusion

Technology should complement habitat restoration, anti-poaching measures and community participation. An integrated, science-based approach can improve conservation outcomes while promoting coexistence between humans and wildlife.

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