Smart Intelligent Village Project

Prelims – *Current events of national and international importance*

Why in News?

Maharashtra Chief Minister Devendra Fadnavis has recently announced the setting up of India's first "Smart and Intelligent Village" in Nagpur district.

- A Smart Intelligent Village is envisaged as representing a model of rural development that uses ***digital technologies*** to improve everyday living in India's villages.
- **Proposed by -** The Voice of Indian Communication Technology Enterprises (VoICE), a consortium of major Indian players in the telecom sector.
- **Launch -** The pilot project was formally launched on August 24.
- **Model village –** Satnavari fulfilled the criteria identified for introducing smart interventions.
- The village has a pond, agricultural land, schools, anganwadi, and other community spaces where these initiatives can be effectively implemented.
- **Smart interventions**

AGRICULTURE	• Smart agriculture uses IoT sensors to monitor soil and crop conditions in real time. • The use of automated irrigation and AI tools reduce waste and guide crop planning. • A mobile phone application helps in climate-smart agriculture, using natural farming practices and use of digital, verifiable data.
FISHERIES	• Sensors track the water quality in ponds, measuring oxygen, pH, temperature, etc., and alerts are sent to farmers in real time.

USE OF DRONES IN FARMING	• Drones equipped with GPS and sensors spray fertilisers based on soil mapping, ensuring precise application and reducing the use of chemicals and lowering the environmental impact. • Drones equipped with cameras and sprayers also detect pests using imaging and AI, and then apply pesticides precisely.
SAFETY & CONVENIENCE	• Smart streetlights in the village use IoT-enabled LEDs that adjust brightness based on motion, time, or ambient light, which can be controlled remotely through a mobile app.
DRINKING WATER	• An AI-powered system monitors drinking water supply and quality in real time, ensuring the supply of the mandated *volume of 55 litres of water per capita per day.*
HEALTHCARE	• Comprehensive rural healthcare in the village offers on-the-spot testing for more than 120 health parameters, from blood and cardiac checks to **cancer and TB screening**, with results available within minutes in certain cases.
EDUCATION	• Online education in the village uses e-learning platforms over a dedicated Wi-Fi network, with smart classrooms and the use of apps like Zoom for interactive sessions. • Wi-Fi hotspots at the Gram Panchayat offer BharatNet connectivity with speeds *up to 100 Mbps for free.*
SECURITY	• The village has a public protection and emergency system in which security staff can use handheld devices with push-to-talk communication. • Alerts and announcements can be broadcast on loudspeakers, and the system is integrated with communication channels of the police, NDRF, and SDRF to ensure faster emergency responses.
WASTE MANAGEMENT	• A smart waste management system uses IoT-enabled bins and tracking tools to ensure the safe collection and disposal of garbage, and prevent harmful chemicals such as lead, mercury, and cadmium from polluting soil and water.

FIRE CONTROL	• Automatic fire extinguishers have been installed in schools and public areas. • These are shaped like balls and are filled with UL-approved monoammonium phosphate. • (UL is a more-than-a-century-old certification company, and monoammonium phosphate is a popular fire retardant.) • The extinguishers are activated within 10-15 seconds of contact with flames.

References

1. The Indian Express | Smart Intelligent Village Project
2. Times of India | ‘smart intelligent village'

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