



AI-Based Fire Detection System

Why in News?

Recently, The [Pench Tiger Reserve \(PTR\)](#) has launched an advanced [Artificial Intelligence-based system](#) for early detection of [forest fires](#).

Key Points

- The new system features a **high-resolution camera** with a visual range of 15 km, effectively covering more than 350 sq km of the reserve.
- The AI-powered platform, known as **Pantera**, leverages both the **camera feed and satellite-based data** to provide **real-time alerts of forest fires within three minutes**.
 - The system also receives **weather data related to temperature, precipitation, wind, etc**, and analysing data with past fires, the system forecasts the probable future fires in the short term, which **helps in planning fire control**.

Pench Tiger Reserve (PTR)

- PTR is the **joint pride of both Madhya Pradesh and Maharashtra**.
- The Reserve is located in the **southern reaches of the Satpura hills in the Seoni and Chhindwara districts in Madhya Pradesh**, and continues in **Nagpur district in Maharashtra** as a separate Sanctuary.
 - It was declared a [National Park](#) by the Government of Maharashtra in 1975 and the identity of a [tiger reserve](#) was granted to it in the year 1992.
 - However, PTR **Madhya Pradesh was granted the same status in 1992-1993**. It is one of the **major Protected Areas of Satpura-Maikal ranges of the Central Highlands**.
- It is among the sites notified as [Important Bird Areas \(IBA\) of India](#).
 - The IBA is a programme of Birdlife International which aims to **identify, monitor and protect a global network of IBAs for conservation** of the world's birds and associated diversity.