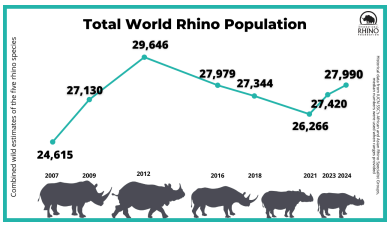
23 September 2024

National and International News

World Rhino Day

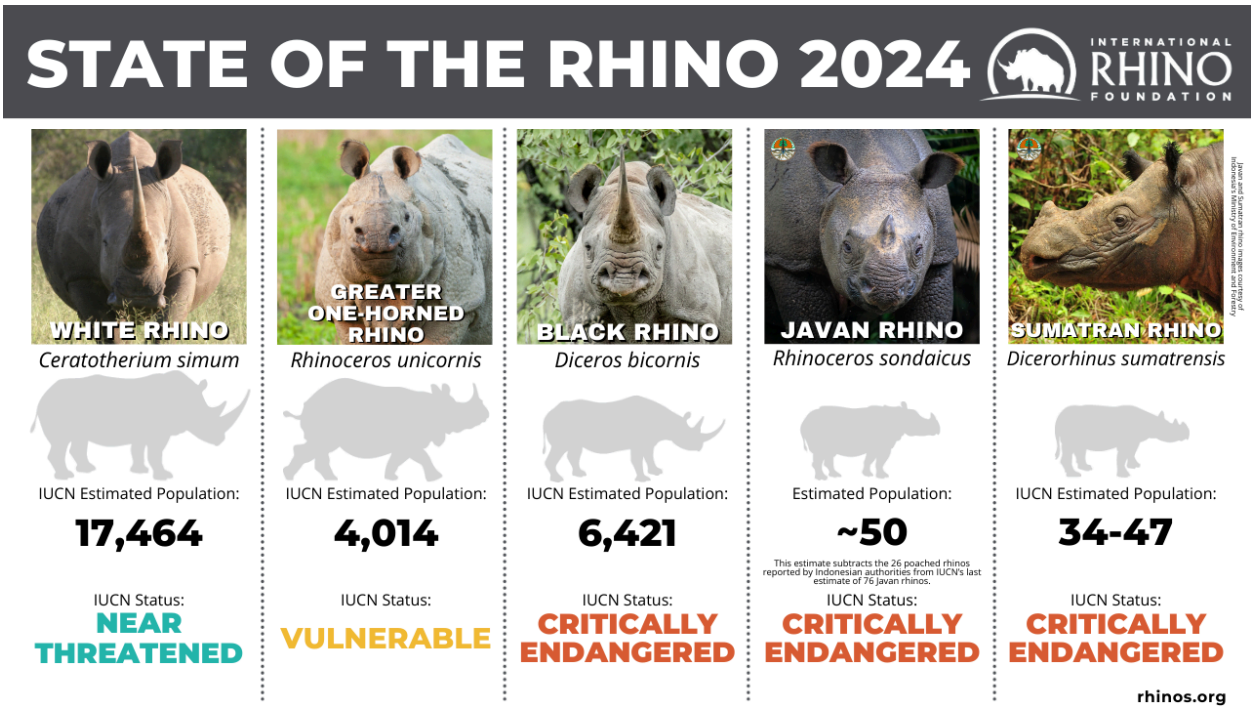


Context:

- Celebrated on **September 22** to raise awareness about rhinoceros conservation.

Key points:

- Species all over the World
  - **White Rhino**
  - **Black Rhino**
  - **Greater One-Horned**
  - **Javan**
  - **Sumatran Rhino**
- With all five species combined, there are just under **28,000 rhinos left in the world.**
- **India and Nepa**l have estimated over 4,014 rhinos, with major populations residing in **Kaziranga National Park**.
- The greatest threats to rhinos are **poaching, habitat loss**, and for some species, isolated small populations unable to reproduce.



Fast Track Immigration Trusted Traveller Programme (FTI-TTP)	**Context:** ● In September 2024, the MHA expanded this initiative to **21 major airports** across India, including key airports in Mumbai, Chennai, Kolkata, Bengaluru, Hyderabad, Cochin, and Ahmedabad. **About:** ● The **Union Ministry of Home Affairs (MHA)** has launched the **Fast-Track Immigration-Trusted Traveller Programme (FTI-TTP)** to enhance the immigration process for Indian nationals and Overseas Citizen of India (OCI) cardholders. ● Initially implemented at **Delhi's Indira Gandhi International (IGI)** Airport in June 2024, the programme aims to provide faster, more efficient, and secure immigration clearances by allowing eligible travelers to use e-gates. ● This allows them to bypass regular immigration queues, providing a smoother travel experience. ● This programme is one of the key initiatives introduced during the first 100 days of the **Modi 3.0 government**, reflecting its focus on technological advancements and infrastructure development in the aviation sector.
Criticality of a Nuclear Reactor	**Context:** ● The third indigenous **700 MWe Pressurised Heavy Water Reactor (PHWR) at Rajasthan Atomic Power Project (RAPP)**, Rawatbhata, achieved criticality on September 19, 2024. **Key points:** ● Criticality is a significant phase indicating the **start of a controlled fission chain reaction,** marking the end of construction and the **start of operational tests.** **Nuclear Reactor:** ● A nuclear reactor is a critical component of a nuclear power plant, where **controlled nuclear fission reactions occur to produce energy.** ● Nuclear reactors operate on the principle of nuclear fission, where **heavy atomic nuclei (commonly uranium-235 or plutonium-239)** split into smaller fragments upon absorbing a neutron. **Nuclear Fission:** ● Nuclear fission is the process by which a heavy atomic nucleus, such as **uranium-235 or plutonium-239**, splits into two smaller nuclei along with the release of a significant amount of energy. ● This process is fundamental to both nuclear power generation and nuclear weapons.
Exercise AIKYA	**Context:**

	• "EXERCISE AIKYA" is a significant **disaster management exercise** organized by the **National Disaster Management Authority (NDMA)** in collaboration with the **Southern Command of the Indian Army** and the Tamil Nadu State Disaster Management Authority (TNSDMA). **About:** • "AIKYA" means "Oneness" in **Tamil**, reflecting the exercise's goal to unify India's disaster management efforts. **Focus Areas:** • Simulated emergency situations to assess roles and responsibilities. • Discussed recent disaster trends and lessons learned from recent operations. • Addressed disasters such as tsunamis, landslides, floods, cyclones, industrial incidents, and forest fires.
Europa Clipper Mission 	**Context:** • NASA's Europa Clipper Mission is scheduled for launch on **October 10, 2024**. **About:** • The mission aims to explore **Jupiter's icy moon Europa for potential signs of habitability.** • Europa is considered one of the most promising locations to find conditions for life beyond Earth. **Key Focus:** • The spacecraft will investigate whether Europa's icy surface hides a subsurface ocean, which may harbour life-supporting conditions. • The mission will use scientific instruments to estimate the **thickness of Europa's ice shell and study its surface for geological activity.** **Launch Details:** • **Launch vehicle:** SpaceX Falcon Heavy from Kennedy Space Center, Florida. • **Distance to cover:** 1.8 billion miles (2.9 billion km). • The spacecraft will arrive at **Jupiter by April 2030.** **Challenges:** • **Intense radiation** around Jupiter is a major challenge. • The spacecraft will face radiation levels equivalent to **millions of chest X-rays during each flyby.** • The mission will follow a **trajectory designed to minimize radiation exposure.** **Duration and Scientific Goals:**

	• The mission will last **4 years and conduct 49 flybys of Europa**. • It will search for organic compounds and study the moon's environment but will not directly search for life.