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Economy

Fintech SRO: RBI Released Final Guidelines

Context: The Reserve Bank of India (RBI) has finalized the guidelines for establishing a self-regulatory organization (SRO) for the burgeoning fintech industry in 2023. These SROs aim to provide regulatory oversight and representation for various fintech entities beyond traditional banks.



Functions of the SRO

- ❖ The RBI has outlined key responsibilities for the SRO, including representing the fintech sector, ensuring data security, adhering to development principles, resolving disputes, enforcing compliance among members, and maintaining independence from external influences.
- ❖ Additionally, the SRO is tasked with managing risks that could negatively impact users, such as fraud, mis-selling, and unauthorized transactions.

Coverage

- ❖ The SRO is designed to encompass a wide array of fintech activities, including digital loans, peer-to-peer (P2P) services, and account aggregators.
- ❖ These SROs encourage participation from both regulated and largely unregulated fintech companies, aiming to ensure comprehensive oversight and inclusion of diverse industry players.

Environment

'Critically Endangered' label for Mangroves in South India and Sri Lanka

Context: Coastal mangroves in Tamil Nadu, Sri Lanka, and the Maldives have been recently classified as "critically endangered" by the International Union for Conservation of Nature (IUCN).

- ❖ This alarming designation, based on the IUCN's first global assessment of mangrove ecosystems, indicates significant conservation challenges that need to be addressed.



Importance of Mangrove Ecosystems

- ❖ Mangroves play a crucial role in preserving biodiversity, providing essential goods and services to local communities, and mitigating climate change impacts.
- ❖ These habitats are vital for coastal protection, fisheries, and maintaining water quality.
- ❖ The loss of mangrove areas negatively affects both the environment and the livelihoods of people who rely on them.

Science & Technology

OSIRIS-APEX Safely Navigates Close Sun Approach

Context: The OSIRIS-APEX mission, originally known as OSIRIS-REx, has evolved from its initial goal of collecting samples from the asteroid Bennu. The spacecraft is now embarking on an extended mission to visit the asteroid Apophis.



First Perihelion Pass and Spacecraft Adaptations

- ❖ OSIRIS-APEX follows an elliptical orbit around the sun, reaching its closest point, or perihelion, every nine months. The spacecraft made its first perihelion pass on January 2, 2024.
- ❖ To withstand intense solar radiation, mission engineers adjusted the spacecraft's configuration. They angled one solar panel to shield the most sensitive sensors while the other continued to harness sunlight for power.

About Asteroid Bennu

- ❖ Asteroid Bennu, discovered in 1999, is a carbonaceous body approximately 500 meters in diameter and near Earth's orbit. Named after an ancient Egyptian deity associated with the Sun and creation,
- ❖ Bennu orbits the Sun every 1.2 years and approaches Earth closely every 6 years. NASA's OSIRIS-REx mission, launched in 2016, collected samples from Bennu in 2020.

- ❖ The probability of Bennu impacting Earth in the late 22nd century is estimated at about 1 in 2,700.

Exploring the Potential of Personalized Cancer Vaccines

Context: Cancer vaccines represent a form of immunotherapy. Unlike preventive vaccines, these are used to treat cancer by enabling the immune system to identify and destroy cancer cells.

- ❖ Recent advancements have focused on using DNA sequencing and artificial intelligence to develop personalized vaccines.



Access to Vaccines

- ❖ At present, most cancer vaccines are accessible only through clinical trials.

For instance, the Cancer Vaccine Launch Pad in England connects patients with suitable vaccine studies. This initiative aims to significantly increase participation in vaccine trials.

Patient Experience in Trials

- ❖ Genetically tailored vaccines are created using the cancer cells of patients, such as Elliot Pfebve, who enrolled in a study after being diagnosed with colorectal cancer. Initial stages involve surgery and treatment, followed by vaccinations.
- ❖ Although it is too early to definitively determine the effectiveness of these vaccines, initial positive responses indicate their potential to become a standard part of cancer treatment in the future.



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