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Current Affairs - 17 October 2025

IN-ROKN EXERCISE



- It is the **Indian Navy (IN)–Republic of Korea Navy (RoKN)** bilateral naval exercise.
- The **inaugural IN–RoKN Exercise** is taking place in South Korea.
- It will be conducted in **two phases—harbour and sea**—to deepen interoperability, enhance coordination, and promote professional exchanges between the two navies.
- As part of the harbour phase, IN and RoKN officials will engage in reciprocal cross-deck visits, sharing of best practices, cross-training sessions, and sport fixtures.
- The Commanding Officer of INS Sahyadri will also call on senior officers of the Republic of Korea Navy, local dignitaries, and representatives from the Indian community in South Korea, reaffirming India's diplomatic goodwill and naval outreach.
- The harbour phase will be followed by the sea phase, wherein, INS Sahyadri and ROKS Gyeongnam will undertake joint exercises.

Key Facts about INS Sahyadri:

- Commissioned in 2012, INS Sahyadri (F49) is the third ship of the **Shivalik Class of Guided Missile Stealth Frigates**.
 - It was designed and **built indigenously by Mazagon Dock Shipbuilders Limited (MDL), Mumbai**.
 - Armed with advanced stealth features, state-of-the-art weapon systems, and cutting-edge sensors, INS Sahyadri can conduct multi-dimensional warfare operations—surface, subsurface, and air—making it a versatile asset for India's blue-water naval ambitions.
 - The frigate is **based at Visakhapatnam, under the Eastern Fleet of the Eastern Naval Command**.
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WHAT IS THE PUBLIC TRUST DOCTRINE?



- It is a **legal principle** establishing that **certain natural and cultural resources are preserved for public use.**
- Rooted in Roman law and developed through English common law, this doctrine **encompasses various public assets such as tidal waters, lakes, rivers, wetlands, and ecosystems.**
- It rests on the principle that **certain resources have such great importance to the people as a whole** that it would be wholly **unjustified to make them a subject of private ownership.**
- The **public is considered the owner** of the resources, and the **government protects and maintains these resources for the public's use.**
- The doctrine enjoins upon the government to safeguard the resources for the enjoyment of the final public instead of to allow their use for personal possession or industrial functions.
- **Three types of restrictions on governmental authority** are often thought to be imposed by the public trust:
 - the **property** subject to the trust must not only be used for a public purpose, but it **must be held available for use by the general public;**
 - the property **may not be sold**, even for a fair cash equivalent;
 - the property must be **maintained for particular types of uses.**

HENLEY PASSPORT INDEX



- It is a popular **ranking of global passports** that measures passport strength by the number of destinations that holders can visit without a prior visa.



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- The index ranks countries based on **statistics provided by the International Air Transport Association (IATA)**.
- It **started in 2006** as the Henley & Partners Visa Restrictions Index (HVRI).
- The index includes 199 different passports and 227 different travel destinations
- **Significance:** The stronger the passport, the more countries its **holders can enter without a prior visa** — a privilege that reflects diplomatic ties, economic influence, and international trust.

Key Highlights of Henley Passport Index:

- Globally, **Singapore leads the 2025 list** with visa-free access to 193 destinations, followed by South Korea (190) and Japan (189).
- Several **European nations**, including Germany, Italy, Spain, Luxembourg, and Switzerland, share the next few ranks with access to around 188–189 countries.
- The **United States** has slipped out of the top 10 for the first time in two decades, ranking 12th this year with access to 180 destinations.
- **Afghanistan sits at the bottom** (106th) offering visa-free access to just 24–26 countries.

CELESTIAL BODY -CHIRON

CELESTIAL BODY -CHIRON



- Chiron is part of a class of **objects called centaurs** (which populate the outer solar system between Jupiter and Neptune), displaying characteristics of **both asteroids and comets**.
- It was discovered in 1977 by astronomer **Charles Kowal**.
- **Features of Celestial body –Chiron**
 - It has a diameter of about **200 kilometers** (125 miles) and takes **about 50 years to complete one orbit around the sun**.
 - **Ring system:** Its observations clearly showed that it is surrounded by **well-defined 4 rings**. The three inner rings are embedded within dust swirling around in a disk-like shape.



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- These rings are likely composed **mainly of water ice mixed** with small amounts of rocky material, like those of Saturn.
- **Composition:** It mainly consists of rock, water ice and complex organic compounds.
- Chiron exhibits occasional **comet-like activity** – ejecting gas and dust into space.
- A method called **stellar occultation** was used by a team including Brazilian, French and Spanish researchers to observe the rings.

SCHEME FOR INNOVATION AND TECHNOLOGY ASSOCIATION WITH AADHAAR



- It was launched to **strengthen India's digital identity ecosystem** and combat emerging security threats such as **deepfakes, spoofing and presentation attacks**.
- It aims to bring together **startups, academic institutions and industry players** to co-develop secure, scalable and globally benchmarked solutions that **enhance Aadhaar authentication**.
- SITAA will particularly focus on **advanced biometric technologies**, authentication frameworks, artificial intelligence, and data privacy.
- The **SITAA pilot phase** will roll out three targeted challenges designed to address critical areas of Aadhaar authentication security:
 - **Face Liveness Detection: Startups** are invited to develop **software development kits (SDKs)** for passive and active face liveness detection.
 - **Solutions** must prevent spoofing through photos, videos, masks, morphs, deepfakes, and adversarial inputs.
 - **Presentation Attack Detection (PAD): Academic and research institutions** can submit proposals for advanced PAD solutions that leverage



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AI/ML to detect a wide range of attacks, including print, replay, masks, morphs, and deepfakes.

- **Solutions** must be privacy-compliant, scalable, and capable of real-time or near-real-time detection.
 - **Contactless Fingerprint Authentication:** It focuses on **developing SDKs for fingerprint authentication** using **standard smartphone cameras** or low-cost imaging devices.
 - The solutions must ensure **high-quality image capture**, spoof detection, and compatibility with Aadhaar’s authentication ecosystem.
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ENGAGING THE TALIBAN, CAUTIOUSLY: INDIA’S AFGHANISTAN STRATEGY

Afghanistan’s Foreign Minister Amir Khan Muttaqi’s eight-day visit to New Delhi marks the highest-level Taliban engagement with India since the group seized power in 2021.

During the visit, India announced plans to re-establish its Embassy in Kabul, which has operated as a “technical mission” since June 2022 to oversee humanitarian aid and development projects.

India’s ‘Engagement Without Recognition’ Policy Toward the Taliban Government

- Under international law, the acts of recognising a government and establishing diplomatic relations are separate processes.
 - Recognition implies acceptance of a government’s legitimacy and lawful authority (de jure).
 - Diplomatic engagement, however, allows communication with a de facto authority without conferring formal legitimacy.
- If India were to officially recognise the Taliban-led Islamic Emirate, it would effectively validate the violent overthrow of the elected Afghan government in 2021 as a legitimate transition — a politically sensitive stance.



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- India had done something similar once before, in the 1980s, when it became the only country to recognise the Soviet-backed Democratic Republic of Afghanistan established after the 1978 coup.
- However, under the **Vienna Conventions on Diplomatic (1961) and Consular Relations (1963)**, nations are permitted to maintain or establish diplomatic contact with a de facto regime without extending formal recognition.
 - These conventions only codify the functions and rights of diplomatic missions, not the legitimacy of governments.

Managing the Afghan Embassy in New Delhi: A Diplomatic Compromise

- Following the Taliban's return to power, the Afghan Embassy in New Delhi became a focal point of the **legitimacy tussle between the former Republic's diplomats and the Taliban authorities**.
- Throughout 2023, both sides reached a practical compromise that allowed the Embassy to function without resolving the question of formal representation.
- The MEA informed Parliament in December 2023 that the Afghan Embassy "continues to function", with remaining diplomats maintaining essential operations even after some officials departed.
- By October 2025, Afghan Foreign Minister Amir Khan Muttaqi confirmed that "even those from the former government now work with us," signalling de facto coordination between the Taliban and existing Afghan diplomats in India.

Conclusion

- India's renewed engagement with the Taliban is driven by **security pragmatism, Pakistan's diminishing influence, and economic opportunity**.
 - By carefully balancing outreach without formal recognition, New Delhi aims to **protect its strategic interests** while retaining flexibility in Afghanistan's uncertain geopolitical environment.
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ENSURE SAFEGUARDS FOR INDIA'S CARBON MARKET

- The **contemporary development paradigm**, inherited from the Industrial Revolution, has propelled economic growth at an unprecedented pace but at a severe ecological cost.
- While some propose **degrowth** as a corrective, this approach is **neither just nor feasible** for developing nations that continue to struggle with poverty, hunger, and underdevelopment.
- The challenge, therefore, lies not in halting growth, but in **decoupling it from environmental degradation**.
- Within this context, **carbon credit systems** and **sustainable technologies** have emerged as potential tools for reconciling growth with ecological balance.

Decoupling Growth from Environmental Harm

- Economic growth and environmental protection have long been viewed as **opposing forces**.
- However, the need to **achieve both** simultaneously is increasingly urgent, especially for the **Global South**.
- Developing nations such as India cannot afford degrowth; instead, they must **pursue sustainable growth** that uplifts livelihoods while mitigating environmental harm.
- This can be achieved through **clean technologies, renewable energy, and sustainable agricultural practices**.
- **India's rapid expansion in solar energy** and micro-irrigation offers **tangible evidence that green innovation and economic progress can coexist**.
- These **examples illustrate the concept of green growth**, a model in which technological and policy interventions drive both environmental protection and inclusive prosperity.

Carbon Credits: Promise and Pitfalls

- **Promise**
 - Among the various mechanisms designed to facilitate this transition, **carbon credits** have gained prominence.



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- A **carbon credit** represents a verified reduction or removal of greenhouse gas emissions, tradable in markets to offset emissions elsewhere.
- In theory, **this allows firms, especially in industrialised countries, to finance low-carbon activities in developing regions**, rewarding sustainable practices such as renewable energy generation, reforestation, and agroforestry.
- India's **Carbon Credit Trading Scheme (CCTS)** embodies this ambition, establishing benchmarks for emission intensity and creating a national registry and trading platform.
- By including voluntary offsets and methodologies for low-emission practices such as biochar and sustainable rice cultivation, **India seeks to position itself as a leader in equitable carbon trading.**
- **Pitfalls**
 - The **global experience with carbon markets** exposes a **critical paradox**: projects meant to empower local communities often end up marginalising them.
 - Despite the high potential of agriculture-based carbon projects, **only a fraction in India have successfully registered or issued credits.**
 - Studies, such as those by CIMMYT, **attribute this gap to poor farmer engagement**, limited training, and weak institutional support, particularly among **smallholders and marginalised caste groups.**
 - This pattern underscores a **persistent structural issue**: carbon markets risk reproducing inequalities if not designed with local realities and justice at their core.

Conclusion

- For developing nations like India, the path forward lies in **equitable decarbonisation**, achieving growth and poverty reduction while upholding community rights and environmental integrity.
 - **Carbon credits and markets, though powerful tools, are not inherently just**; they become so only when grounded in fairness, participation, and transparency.
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CENTRAL BANK DIGITAL CURRENCY (CBDC)

- CBDC is the legal tender issued by a central bank in a digital form.
 - E.g., CBDC of India is the **digital form of the Indian rupee**, issued and regulated by the **RBI**.
 - It represents **sovereign currency** in an electronic form and is backed by the full faith and credit of the government, just like physical cash.
 - **Types of CBDC in India**
 - **Retail CBDC (e₹-R)**
 - Meant for use by the public, including individuals and businesses.
 - Functions as a digital alternative to cash for everyday transactions.
 - Pilot launched in December 2022 in select cities.
 - **Wholesale CBDC (e₹-W)**
 - Designed for financial institutions to settle interbank transfers and securities transactions efficiently.
 - Aims to improve the speed, transparency, and cost-effectiveness of large-value payments.
 - Pilot project to use digital rupee in the wholesale market for secondary trade in government securities (G-secs) was launched in November 2022.
 - **Objectives**
 - To reduce dependence on physical cash and printing costs.
 - To enhance payment efficiency and financial inclusion.
 - To support cross-border payments and improve monetary policy transmission.
 - To provide a secure, sovereign alternative to private cryptocurrencies and stablecoins.
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