UPSC Daily Current Affairs| One Liners 17-05-2025

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History, Art and Culture

Sikkim's Integration into India (1975)

Sikkim officially became a state of India on May 16, 1975

• **Capital** - Gangtok.

• **Protectorate Status -** Sikkim was an Indian protectorate following a 1950 treaty, after periods of influence from neighbors and British rule.

• **Growing Tensions -** The 1970s saw rising demands for democratic reforms within the Sikkimese kingdom.

• **Crucial Referendum -** In 1975, a referendum resulted in a large majority voting for a merger with India.

• **Parliamentary Action -** The Indian Parliament subsequently passed a constitutional amendment to facilitate the integration.

• **Statehood Achieved -** In May 1975, Sikkim officially became the 22nd state of the Indian Union.

• **End of Monarchy -** This marked the end of the Chogyal monarchy and Sikkim's full integration into India, a topic of ongoing discussion.

International Relations and Issues

International Day of Light

Annually on May 16th, the International Day of Light, established by UNESCO in 2017.

• **Aims** - Recognizes light's vital role across science, culture, and development.

• **Laser's Legacy -** The date marks the first successful laser operation in 1960, highlighting how scientific breakthroughs in light technology benefit society.

• **Theme 2025 -** This year's theme, "Light, Innovation, Society," emphasizes how light-based innovations enhance our lives and drive progress in diverse fields.

• **Global Significance -** The day raises awareness about light's importance in areas like healthcare, communication, art, and sustainable energy, fostering global scientific collaboration.

• **Driving Innovation -** It underscores light's crucial role in education and inspires future advancements in optics and photonics.

• **Connecting Worlds -** Today's observance celebrates light's power and its profound impact on our understanding and societal progress worldwide.

International Atomic Energy Agency (IAEA)

Following media reports of a potential incident at Pakistan's Kirana Hills amid India's Operation Sindoor, the IAEA confirmed no radiation leak occurred from any Pakistani nuclear facility.

• **About IAEA** - Is the UN's global nuclear watchdog, headquartered in Vienna, promoting the safe, secure, and peaceful use of nuclear technology ("Atoms for Peace and Development").

• **Establishment** - In 1956 and came into force in 1957, established post-WWII to prevent nuclear proliferation and foster peaceful nuclear cooperation among its 178 member states (as of 2025).

• **Key Functions** - Core roles include nuclear safeguards verification, managing nuclear emergencies via its IEC, capacity building for peaceful uses, setting safety standards, and facilitating international R&D.

• **Monitoring Role** - The agency regularly monitors and reports on nuclear activities to the UN General Assembly and Security Council, ensuring transparency and international oversight.

• **Reassurance** - The IAEA's confirmation provides reassurance regarding the safety and security of nuclear facilities in the region following recent geopolitical tensions.

Economy

Coal Gasification Push with New Agreements

The Coal Ministry has signed Coal Gasification Plant Development and Production Agreements (CGPDPA) with Jindal Steel, New Era Cleantech, and Greta Energy under the Coal Gasification Financial Incentive Scheme.

• **Coal Gasification -** This thermo-chemical process converts coal into synthesis gas (syngas), a mixture of CO, H_2, CO_2, CH_4, and H_2O, through high-temperature reactions with limited oxygen and steam.

• **Gasification Process -** It involves coal preparation (crushing), reaction in a high-temperature gasifier with steam and oxygen, chemical breakdown into syngas, and subsequent gas cleaning.

• **Financial Incentive Scheme:** -Launched on January 24, 2024, with an outlay of ₹8,500 crore, the scheme aims to achieve 100 million tonnes of coal gasification by 2030, promoting public and private sector involvement.

• **Syngas -** Offers cleaner energy, easier transport, and serves as a feedstock for producing vital chemicals like methanol, ammonia, and hydrogen, alongside power generation.

• **Strategic Importance -** Coal gasification reduces import dependency, utilizes India's vast coal reserves (378.21 billion tonnes in 2023), and supports the nation's clean coal transition and energy security objectives.

Pass-Through Certificates: Investing in Loan Pools

Pass-Through Certificates (PTCs) stand out as an innovative instrument in structured finance. They effectively tackle liquidity issues while providing investors with diversified exposure to a collection of underlying assets.

• **Innovative Tool** - Pass-Through Certificates (PTCs) are debt instruments enabling investors to earn from pooled loans (home, auto, etc.), addressing liquidity and offering diversified exposure.

• **PTC Mechanics** - Lenders sell loan pools to a Special Purpose Vehicle (SPV) or Trust, which issues PTCs. Investors receive repayments from the underlying borrowers' EMIs distributed by the SPV.

• **Securitization Process**: This conversion of illiquid loans into marketable PTC securities is known as securitization, creating investment opportunities.

• **Short-Term Tenure & Returns** - PTCs typically have a 6-12 month tenure, appealing to investors seeking higher returns than traditional fixed income with shorter capital lock-in.

• **Regulation & Transparency** - Governed by RBI and SEBI, PTCs offer a regulated and transparent investment avenue with investor protection and adherence to securitization norms.

Environment

National Endangered Species Day

National Endangered Species Day, is celebrated every year on May 16th, highlights the urgent need for species and habitat protection.

• **Established in -** 2006 by the U.S.-based Endangered Species Coalition,

• **Aims -** To raise public awareness about threats to biodiversity and celebrates conservation successes under the 2025 theme: "celebrate saving species."

• **Indian Context -** India, a biodiversity hotspot, faces numerous endangered species, including Bengal Tigers, Asiatic Lions, and Great Indian Bustards, emphasizing the local relevance of this global day.

• **Conservation Framework -** India employs the Wildlife Protection Act (1972), project-based conservation (e.g., Project Tiger), and a vast protected area network to safeguard its vulnerable wildlife.

• **Key Efforts -** Initiatives encompass habitat conservation, anti-poaching measures, community involvement, research by WII, captive breeding programs like Project Cheetah, and international collaborations.

• **Future Focus -** With a ₹450 crore allocation for wildlife in 2025-26, National Endangered Species Day underscores the continuous commitment needed to protect India's natural heritage for future generations.

Yak Genome Breakthrough for India

Indian scientists at ICAR-NRC on Yak have successfully assembled the first chromosome-level genome of the Indian yak (*Bos grunniens*).

• **Himalayan yak** - Has a long-haired bovine known as the 'ship of the Himalayas', belongs to the Bovini tribe and is vital for high-altitude transport and livelihoods.

• **Habitat and Adaptation** - Native to the Tibetan Plateau and comfortable above 14,000 feet, yaks in India thrive in the cold climates of the northern and northeastern states, tolerating temperatures as low as -40°C with their thick coats and specialized physiology for digesting poor forage.

• **Economic and Cultural Significance** - Yaks are the lifeline of nomadic communities, providing milk, meat, wool, fuel, and transport, underpinning Himalayan economies and traditional transhumance rearing practices.

• **Genetic Resource** - This cold-resilient species offers valuable genetic traits for climate-smart livestock breeding and disease resistance, crucial for future agricultural sustainability.

• **Conservation Impact** - The genome assembly will significantly enhance yak breeding programs and conservation efforts for this ecologically and economically important high-altitude livestock.

Denmark Launches World's First Commercial E-Methanol Plant

On May 13, 2025, Denmark inaugurated the world's first commercial-scale e-methanol plant in Kasso, a significant step in green shipping fuels.

• **Joint Venture** - Developed by European Energy and Mitsui, the facility will annually produce 42,000 metric tons of e-methanol using renewable energy and captured CO_2.

• **Driving Green Shipping** - This initiative directly addresses the shipping industry's pressure to decarbonize, supporting the IMO's 2050 carbon neutrality target with a viable low-emission alternative for major customer Maersk.

• **Plant aims** - To scale e-methanol production for maritime transport, accelerate the shift from fossil fuels, and provide sustainable methanol for other industries like plastics.

• **Global Significance** - E-methanol offers a scalable solution to drastically cut shipping emissions (nearly 3% of global CO_2), with potential for decarbonizing other heavy industries.

• **Future Outlook** - European Energy plans global expansion of similar plants, with cost parity projected around 2035, indicating long-term commercial viability for green methanol.

Security

Exercise Raahat: Boosting Disaster Response in Assam

A recent large-scale joint (Humanitarian assistance and disaster relief) HADR simulation, Exercise Raahat, was conducted in Assam by the Indian Army & National Disaster Response Force (NDRF) to enhance disaster preparedness amid rising climate-induced events.

• **Exercise aimed** - To bolster civil-military cooperation, evaluate multi-agency coordination, demonstrate operational readiness, and simulate real-time responses to floods and landslides.

• **Features -** Held in Assam's Doom Dooma and Tinsukia districts, the live drills involved civilian evacuation, medical airlifts, relief camp setup, communication restoration, and multi-agency participation.

• **Background -** The inaugural Exercise Raahat occurred in Rajasthan (2016), focusing on earthquake response.

• **Exercise reinforces** - India's disaster risk reduction commitment (Sendai Framework), enhances the preparedness of vulnerable northeastern states, showcases rapid inter-agency response capabilities, and promotes community resilience.

• **Overall Impact -** This exercise marks a crucial step in strengthening India's disaster response mechanisms and fostering vital synergy between civil and military entities.

Science

National Dengue Day

India marks National Dengue Day annually on May 16th (today, May 16th, 2025), initiated in 2010 by the Health Ministry to combat this major public health threat.

• **Theme 2025 -** The focus this year is "Act Early, Stop Dengue: Clean Environment, Healthy Life," emphasizing prompt action and environmental responsibility to curb mosquito breeding.

• **Significance -** The day educates about dengue's causes, symptoms, and complications, promoting early medical help and community involvement in prevention.

• **Prevention is Key -** Eliminating stagnant water, using repellents and nets, wearing protective clothing, and maintaining clean surroundings are vital in controlling the Aedes mosquito vector.

• **Government Initiatives -** Public health efforts include fogging and anti-larval measures, alongside community engagement for effective dengue control.

• **Global Context -** While India observes this day nationally, a movement advocates for a World Dengue Day to foster international collaboration against this global burden.

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