

18 August, 2023

INDIA STACK

Context: India and Trinidad and Tobago have inked an MoU for sharing the INDIA STACK.

- India Stack consists of open APIs and digital public goods facilitating identity, data, and payment services on a large scale.

Collaboration with Trinidad and Tobago

- India and Trinidad and Tobago signed a Memorandum of Understanding (MoU) on sharing India Stack.
- The collaboration aims to boost digital transformation through capacity building, training programs, sharing best practices, and exchanging experts.

Benefits of India Stack

- India Stack enables rapid digitalization for countries that have lagged behind, transforming economies and governance.
- The offering aligns with the principle of Vasudhaiva Kutumbakam (the world is one family), promoted by PM Modi.

Ecosystem and Innovation

- India Stack's adoption will foster a strong ecosystem involving startups, developers, and system integrators, driving next-generation innovations.

Global Expansion and Acceptance

- India has already signed MoUs with countries like Armenia, Sierra Leone, Suriname, and Antigua & Barbuda for sharing India Stack.
- Countries like Mauritius and Saudi Arabia are in advanced stages of finalizing cooperation agreements.
- Papua New Guinea signed a similar MoU recently, highlighting global interest in the initiative.
- The UPI, a component of India Stack, has been accepted in countries such as France, UAE, Singapore, and Sri Lanka.

Trinidad and Tobago

- **Trinidad and Tobago:** Southernmost Caribbean island country, including main islands and smaller ones.
- **Location:** 11 km from Venezuela's coast, 130 km south of Grenada; shares maritime borders.
- **Historical Journey:** Indigenous settlement, Spanish colony, British rule, independence in 1962, republic in 1976.
- **Economic Status:** 5th highest GDP per capita in the Americas, recognized as high-income by World Bank.
- **Industrial Economy:** Emphasis on petroleum, petrochemicals; wealth sourced from oil and natural gas reserves.

Unmanned Aerial Systems Common Testing Centre

Context: Tamil Nadu will house India's inaugural Unmanned Aerial Systems Common Testing Centre.

- Unmanned Aerial Systems (UAS) encompass aircraft and related gear that operate without human pilots and can fly via remote control or autonomous programming.
- The UAS Common Testing Centre will be situated in the SIPCOT Industrial Park, Vallam Vadagal, near Sriperumbudur in Tamil Nadu.
- This centre falls under the Defence Testing Infrastructure Scheme (DTIS).
- The centre's objective is to enhance Tamil Nadu's role as a key contributor to the nation's self-sufficiency in aerospace and defence.
- Overseeing the establishment of the Tamil Nadu Defence Industrial Corridor (TNDIC), the Tamil Nadu Industrial Development Corporation (TIDCO) is the responsible agency.
- As part of the TNDIC's execution, a supportive ecosystem is being created, including Common Testing Centres tailored for the Aerospace and Defence Industry.

Category	Nano (up to 250 gm)	Micro (>250g to < 2kg)	Mini (>2kg to <25 kg)	Small (>25 kg to <150 kg)	Large (>150 kg)
Unique identification number (UIN)	NO	YES	YES	YES	YES
Unmanned Aircraft Operator Permit (UAOP)	NO	YES	YES	YES	YES
Estimated approval time	NO	2 days	2-7 days	2-7 days	2-7 days
Height (AGL) allowed to fly	50 feet	200 feet	200 feet	200 feet	200 feet
Visual Line-Of-Sight operations	YES	YES	YES	YES	YES
Local police permission	YES	YES	YES	YES	YES
Flight plan and ADC	NO	NO	YES	YES	YES

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Defence Testing Infrastructure Scheme (DTIS):

- **Objective:** Enhance domestic defence and aerospace manufacturing capabilities.
- **Initiated:** Launched in May 2020.
- **Oversight:** Led by the Ministry of Defence (MoD).
- **Duration:** Set for a span of 5 years.
- **Scope:** Aims to establish 6-8 new defense testing infrastructure facilities, critical for aerospace and defense production.
- **Funding:** Follows a financing structure where 75% is provided as government funding through a 'Grant-in-Aid' mechanism, while the remaining 25% is shared by the constituents of the Special Purpose Vehicle (SPV).

Cannabis

Context: The German government passed a draft law allowing recreational cannabis purchase and possession. Adults can have 25g of cannabis and grow up to 3 plants personally.

What is it?

- It's a general phrase encompassing various psychoactive forms of the Cannabis sativa plant.
- Tetrahydrocannabinol (THC) is the primary psychoactive element; similar compounds are known as cannabinoids.
- 'Marijuana,' a Mexican term, often pertains to cannabis leaves and plant matter worldwide.
- Top usage of marijuana is observed in the United States, Canada, Zambia, and Nigeria.
- The impact of marijuana can extend from two to six hours.

Legality in India

- Marijuana is illegal according to the Narcotic Drugs and Psychotropic Substances Act, 1985 (NDPS Act).
- India adopted the Single Convention on Narcotic Drugs (SCND) 1961 in 1985, classifying it with drugs like heroin.
- While bhang sale is permitted, some states like Assam, Gujarat, Maharashtra, and Karnataka banned it (Gujarat later decriminalized it in 2017).
- Nationwide, sale and production of cannabis resin and flowers are banned; states can regulate cannabis leaves and seeds.
- Bhang, made from plant leaves, isn't specified in the NDPS Act.
- A special provision allows cannabis plant cultivation for industrial or horticultural purposes.

Penalties according to NDPS Act, 1985

- The Act considers consuming narcotic drugs and psychotropic substances an offense.
- Using substances like morphine, cocaine, diacetyl-morphine, or other specified drugs can result in rigorous imprisonment for up to one year, a fine up to twenty thousand rupees, or both.
- For narcotic or psychotropic substances not listed, punishment includes imprisonment up to six months, a fine up to ten thousand rupees, or both.

Noteworthy Judgments

- **Arjun Singh vs State of Haryana:** Chandigarh High Court ruled that bhang, though derived from the cannabis plant, is distinct from cannabis (hemp) under NDPS Act. Eating cannabis may not necessarily be unlawful.
- **2019 - Delhi High Court:** The court considered the petition by Great Legalisation Movement India Trust, questioning the cannabis ban in the NDPS Act. Alleged that the restrictions are arbitrary, unscientific, and unreasonable.

NEWS IN BETWEEN THE LINES

Kalka-Shimla Railway



About the Kalka-Shimla Railway:

UNESCO World Heritage Site: The Kalka-Shimla Railway was designated as a UNESCO World Heritage Site in 2008 for its historical, cultural and engineering significance.

Location: It is located in the northern Indian state of Himachal Pradesh, connecting the towns of Kalka and Shimla.

Construction: Built during the British colonial era, the railway was constructed between 1898 and 1903 to provide a transport link to Shimla, which was the summer capital of British India.

Narrow-Gauge Line: The railway features a narrow-gauge track, which is 2 feet 6 inches (762 mm) wide. This narrower gauge was chosen due to the challenging mountainous terrain.

Stations and Tunnels: The route boasts 20 stations, 103 tunnels, and around 912 curves, showcasing the engineering marvel of the time.

Elevation Gain: The railway climbs from an elevation of 2,152 feet at Kalka to 4,656 feet at Shimla, making it a remarkable feat of engineering for the time.

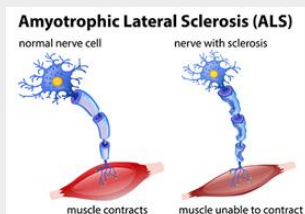
Challenges: The route faces challenges due to its mountainous terrain, including landslides, floods and other natural disruptions.

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Amyotrophic Lateral Sclerosis



What is Amyotrophic Lateral Sclerosis?

Amyotrophic Lateral Sclerosis (ALS), also known as Lou Gehrig's disease, is a progressive neurodegenerative disorder affecting motor neurons in the brain and spinal cord.

Motor Neuron Impact: ALS targets motor neurons, controlling voluntary actions like walking, talking, and swallowing.

Muscle Atrophy: Degeneration of motor neurons leads to muscle wasting as affected muscles lose their ability to function.

Communication Challenges: Progression may hinder movement and speech, necessitating alternative methods like blinking for communication.

Respiratory Complications: Breathing muscles' deterioration increases respiratory difficulties and risk of failure.

ALS Awareness Day: June 21st marks International ALS Awareness Day, promoting understanding and support.

Xenotransplantation



What is Xenotransplantation?

Xenotransplantation refers to the medical practice of transplanting organs, tissues, or cells from one species, typically animals, into another species, usually humans.

Organ Shortage Crisis: Xenotransplantation is explored as a potential solution to the critical shortage of human organs available for transplantation.

Advances in Genetic Modification: Genetic modification of animals allows for the creation of organs that are more compatible with human immune systems.

Animal Organ Suitability: Pigs are commonly used due to their physiological and genetic similarities to humans.

Immune System Compatibility: Research focuses on modifying animal organs to reduce the risk of immune system rejection in human recipients.

Ethical Considerations: Xenotransplantation raises ethical concerns about human-animal interaction, potential transmission of diseases and animal welfare.

Future Outlook: Continued progress in xenotransplantation research may lead to the development of more effective methods and protocols for successful animal-to-human transplants.

Indian National Trust for Art and Cultural Heritage



Recently, the Mangaluru chapter of INTACH organized a Heritage Walk in the Old Port area to celebrate World Heritage Day.

About the Indian National Trust for Art and Cultural Heritage:

INTACH is an autonomous Indian non-profit society founded in 1984 to safeguard and preserve Indian culture and heritage.

Vision: INTACH's goal is to lead heritage awareness and conservation efforts in India.

Headquarters: New Delhi

Broad Mission: INTACH strives to safeguard and promote heritage through various aspects, including architecture, nature, traditions, education, crafts, and more.

Divisions: INTACH functions through diverse divisions including Architectural, Natural, and Material Heritage, Intangible Cultural Heritage, Heritage Education, Crafts, Community Cell, Chapters, INTACH Heritage Academy, Heritage Tourism, Listing Cell, Library and Archives.

Conservation Efforts: The organization actively engages in projects to conserve historical sites, buildings, artifacts and intangible cultural heritage.

WHO Global Centre for Traditional Medicine



Recently, World Health Organisation (WHO) Director-General Tedros Adhanom Ghebreyesus called on nations globally to tap into the potential of traditional medicine.

About the WHO Global Centre for Traditional Medicine:

The Global Centre for Traditional Medicine is headquartered in Jamnagar, Gujarat, India.

Purpose: The centre's primary goal is to advance and promote traditional medicine on a global scale.

Facilitation of Collaboration: It acts as a hub for fostering collaboration among countries and experts in the field of traditional medicine.

Global Initiatives: It supports initiatives to integrate traditional medicine into national health systems, contributing to holistic healthcare approaches.

Collaborative Projects: Through partnerships and collaborations, the centre works to address health challenges using a combination of modern and traditional approaches.

Global Health Strategy: The centre's efforts align with WHO's broader global health strategy, which includes recognizing the value of traditional medicine in healthcare systems.

Global Summit: The Global Centre for Traditional Medicine hosted the first global summit on traditional medicine during the G-20 Health Ministers' meeting.

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Places in News Lake Titicaca	Recently, the water levels in Lake Titicaca have experienced historic lows due to the impact of climate change. Political Boundaries: Positioned between Peru (west) and Bolivia (east), Lake Titicaca spans across both countries. Geographical Location: Nestled in the Andes Mountains of South America, showcasing its remarkable high-altitude setting. Size: Lake Titicaca holds the distinction of being the largest freshwater lake in South America. Altitude Record: Recognized as the world's highest navigable body of water at an elevation of 3,800 meters above sea level. Freshwater Superiority: Holds the distinction of being the largest freshwater lake in the continent of South America. UNESCO Recognition: Included in UNESCO's World Heritage tentative list since 2005, acknowledging its cultural and natural significance. 
Famous Personality Dr. V.S. Arunachalam	Recently, Dr. V.S. Arunachalam, the former Scientific Advisor to the Defence Minister and ex-Chairman of DRDO, passed away at 87. About Dr. V.S. Arunachalam: Defence Research Pioneer: Renowned scientist and engineer, noted for significant contributions to defence research and development. Leadership Roles: Served as Scientific Advisor to Defence Minister and Chairman of DRDO. Strategic Programs: Led key initiatives like Integrated Missiles Development Programme, encompassing projects like Agni, Prithvi, Akash, and Nag. Aircraft Innovation: Spearheaded Light Combat Aircraft (LCA) development, pivotal for India's aviation advancements. Technology Expertise: Extended work to Airborne Early Warning and Control System, showcasing advanced technology skills. Prestigious Recognition: Honored with Padma Vibhushan, a top civilian award in India. Lifetime Achievement: Received DRDO's Lifetime Achievement Award (2015) for remarkable research and tech contributions. Institution Builder: Established Bengaluru's CSTEP for promoting intellectual growth and policy formulation. 

POINTS TO PONDER

- ❖ **What is "Navroz" and when is it celebrated in India?** - Parsi New Year, celebrated in August
- ❖ **In 1951, which institution became India's first IIT and who was the inaugurator?** - IIT Kharagpur; Inaugurated by Jawaharlal Nehru
- ❖ **On which day did the U.S. ratify the 19th amendment, granting women the right to vote, and which state's approval enabled it?** - August 18; Tennessee
- ❖ **Which planet has two moons discovered by Asaph Hall on August 12 and 18, 1977?** - Mars
- ❖ **Who is known as the "father of operant conditioning" and contributed to experimental psychology?** - B.F. Skinner

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