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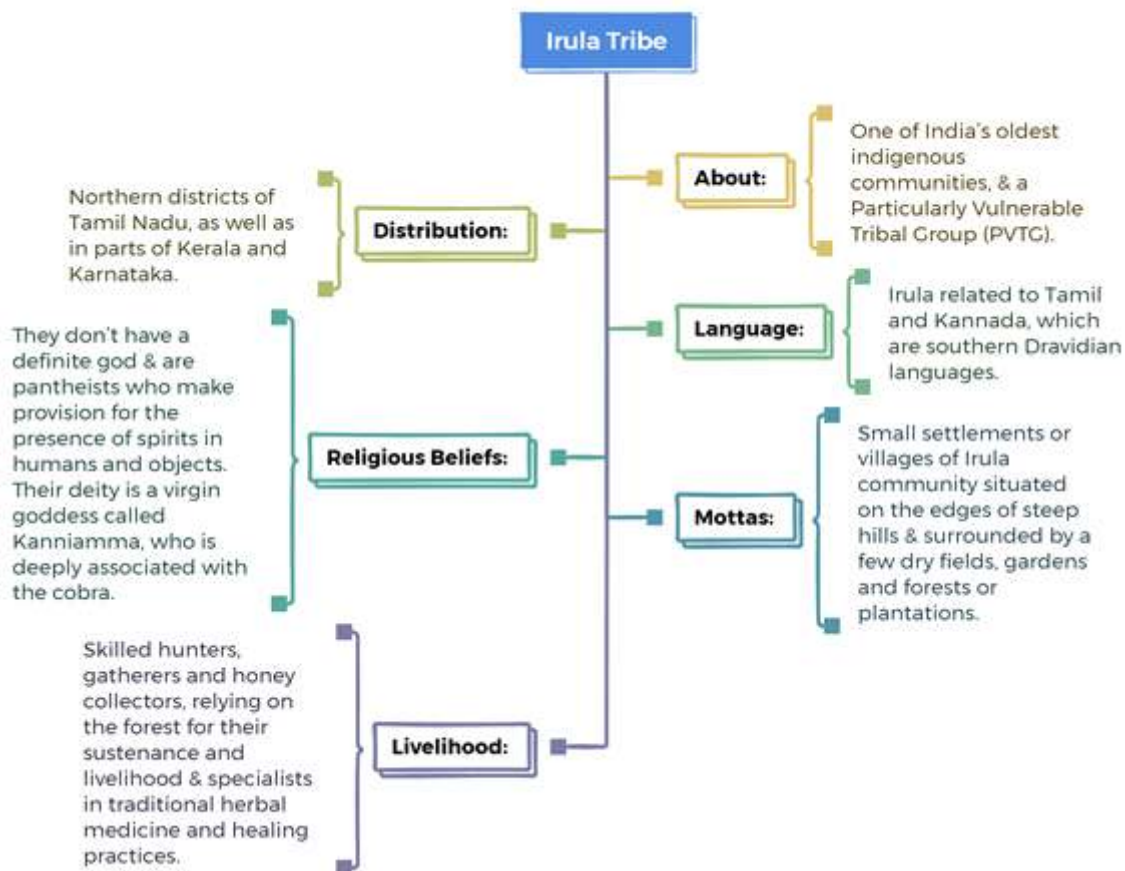
Art and Culture

1. Irula Tribe – Indian Express

Context »

The Irula community plays a crucial role in public health by supplying nearly 80% of the venom used for antidotes in India.

Irula Tribe »



2. Port Blair renamed as Sri Vijaya Puram: How the city got its name – and its connection with imperial Cholas – Indian Express

Context »

Port Blair, the capital city of Andaman and Nicobar Islands, will now be known as 'Sri Vijaya Puram', Union Minister Amit Shah said recently.

Port Blair >>

- **About:** The capital city and the entry point of the Andaman and Nicobar Islands named after Archibald Blair, a naval surveyor and lieutenant in the Bombay Marine.
- **Location:** East coast of the South Andaman Island.
- **Significance:** Hosted the first unfurling of our Tiranga by Netaji Subhash Chandra Bose.
- **Connection with the imperial Cholas and Srivijaya:**
 - **A naval base:** Historically used as a strategic naval base by the 11th-century Chola emperor, Rajendra I to attack Srivijaya, which is in present-day Indonesia.
 - **Thanjavur inscription dated to 1050 CE:** The Cholas referred to the island as Ma-Nakkavaram land (great open/ naked land), which possibly led to the modern name of Nicobar under the British.



Geography

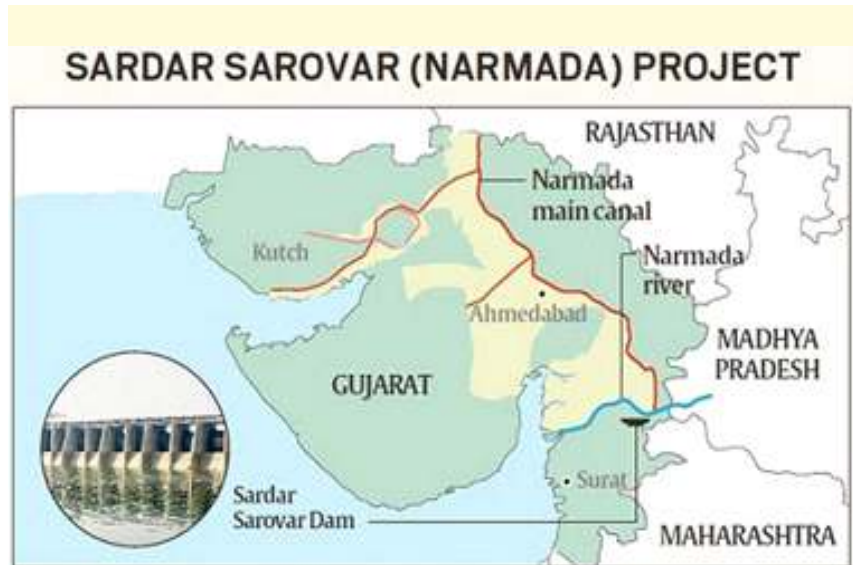
3. Sardar Sarovar Dam about to reach its full capacity – The Hindu

Context >>

Owing to good rainfall in catchment areas in Madhya Pradesh, the water level of Gujarat's Sardar Sarovar Dam went up to 136.43 metres on Saturday, over two metres short of its full reservoir level, officials said.

Sardar Sarovar Dam »

- **About:** A concrete gravity dam built on Narmada at Kevadia in Gujarat's Narmada district named after Sardar Vallabhbhai Patel.
- **Size:** Third highest concrete dam (163 meters) in India, after Bhakra (226 metres) in Himachal Pradesh and Lakhwar (192 meters) in Uttar Pradesh.



- **Size in terms of the volume of concrete involved in gravity dams:** Second largest in the world after the Grand Coule Dam in the USA.
- **River catchment area:** 88,000 sq. km.
- **Spillway discharging capacity:** 87,000 cubic meters a second.
- **Canals:** Has the longest canal network in the world & includes Narmada Main Canal, around 2,500 km of branch canals, 5,500 km of distributaries, and other associated channels.
- **Narmada Main Canal:** 458.3 km long, 1,133 cumecs capacity & is the largest irrigation-lined canal in the world.
- **Power benefits:** Shared among Madhya Pradesh, Maharashtra, and Gujarat in the ratio of 57:27:16.

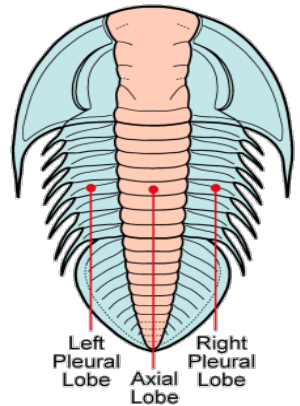
4. Trilobite fossils from upstate New York reveal extra set of legs – The Hindu

Context »

A new study finds that a trilobite species with exceptionally well-preserved fossils from upstate New York has an additional set of legs underneath its head.

Trilobites »

- **About:** A group of extinct marine arthropods.
- **Literal meaning:** Three-part-body in Latin.
- **Appearance:** First appeared around 521 million years ago, after the beginning of the Cambrian period, living through the majority of the Paleozoic Era for nearly 300 million years.
- **Extinction:** Died out at the end of the Permian era, 251 million years ago, killed by the end Permian mass extinction event that removed over 90% of all species on Earth.



- **Features:**
 - Have three-lobed, three-segmented form.
 - Have an external skeleton, called exoskeleton, composed of chitinous material.
 - Periodically shed their exoskeleton to accommodate growth (called molting).
 - First organisms to develop multiple appendages for moving around.
 - Could swim, others burrowed or crawled around on muddy sea floors.

Society

5. NIMI Launches YouTube Channels for ITI Students – PIB

Context »

In a significant move to make vocational education more accessible, the National Instructional Media Institute (NIMI), under the Directorate General of Training (DGT) and Ministry of Skill Development and Entrepreneurship (MSDE), launched a series of YouTube channels recently. This digital initiative will provide high-quality training videos to millions of learners across India's Industrial Training Institute (ITI) skill ecosystem, available in nine languages.

National Instructional Media Institute (NIMI) »

- **Former name:** Central Instructional Media Institute (CIMI)
- **Establishment:** December 1986 by the Government of India as a Subordinate Office under the Directorate General of Employment and Training (DGE&T), Ministry of Labour & Employment.
- **Nature:** An autonomous institute under the Directorate General of Training (DGT), Ministry of Skill Development & Entrepreneurship (MSDE), the Govt. of India.
- **Functions:** Nodal organization for the development of Instructional Media Packages (IMP), including digital content and Question Banks for assessment, for different Vocational courses.

Economy

6. NSE co-location case: How Sebi found violations in 2019 but saw no evidence in 2024 – Indian Express

Context »

Five years after the Securities and Exchange Board of India (SEBI) came down heavily on the National Stock Exchange (NSE) for alleged lapses in high-frequency trading offered through its co-location (colo) facility, directing the exchange to disgorge Rs 624.89 crore and prohibiting seven top officials from associating with a listed company or a market intermediary for a period of five years, the market regulator has disposed of the charges and let them off the hook.

National Stock Exchange

- **About:** One of the two main stock exchanges in India, with the other being the Bombay Stock Exchange (BSE).
- **Significance:**
 - A prominent and technologically advanced stock exchange which plays a crucial role in India's financial markets.
 - India's largest financial market and the fourth largest market by trading volume.
 - First exchange in India to provide modern, fully automated electronic trading.

Co-location Trading

- **Start:** Started by NSE in 2009 to be given to members of the exchange.
- **About:** Allows a member to set up his server in a specifically earmarked data centre within the NSE's exchange premises for a certain price.
- **Significance:** Allows members wishing to gain access to the entirety of buy and sell orders sent because of the reduced time taken for order execution.
- **Legality:** Stock exchanges across the world allow the practice to flourish as a paid service. The SEBI allowed exchanges to offer co-location in 2008.

7. ONDC launches Saarthi reference app for businesses to create multilingual buyer apps – The Hindu

Context »

Open Network for Digital Commerce (ONDC) on Wednesday (September 11, 2024) launched Saarthi, a reference application designed to assist businesses in creating their own customised buyer-side apps, co-developed with Bhashini.

Saarathi App»

- **About:** A reference application designed to assist businesses in creating their own customised buyer-side apps which supports network participants in building buyer apps with multilingual features.
- **Languages:** Supports Hindi, English, Marathi, Bangla and Tamil, with plans to scale up to all 22 languages provided by Bhashini.
- **Features:** Real-time translation, transliteration, and voice recognition allow businesses to expand market reach, enabling companies to tap into new regions and increase customer acquisition.

Bhashini »

- **About:** India's Artificial Intelligence (AI)-led language translation platform that seeks to enable easy access to the internet and digital services in Indian languages, including voice-based access, and help the creation of content in Indian languages.
- **Aim:** To make AI and Natural Language Processing (NLP) resources available in the public domain to be used by Indian MSMEs, startups and individual innovators.
- **Significance:** It will help developers to offer all Indians easy access to the internet and digital services in their native languages.
- **A separate 'Bhasadaan' section:** It allows individuals to contribute to multiple crowdsourcing initiatives and is also accessible via respective Android and iOS apps.

Environment

8. National Green Tribunal seeks report from Central Pollution Control Board on generation, treatment of e-waste - The Hindu

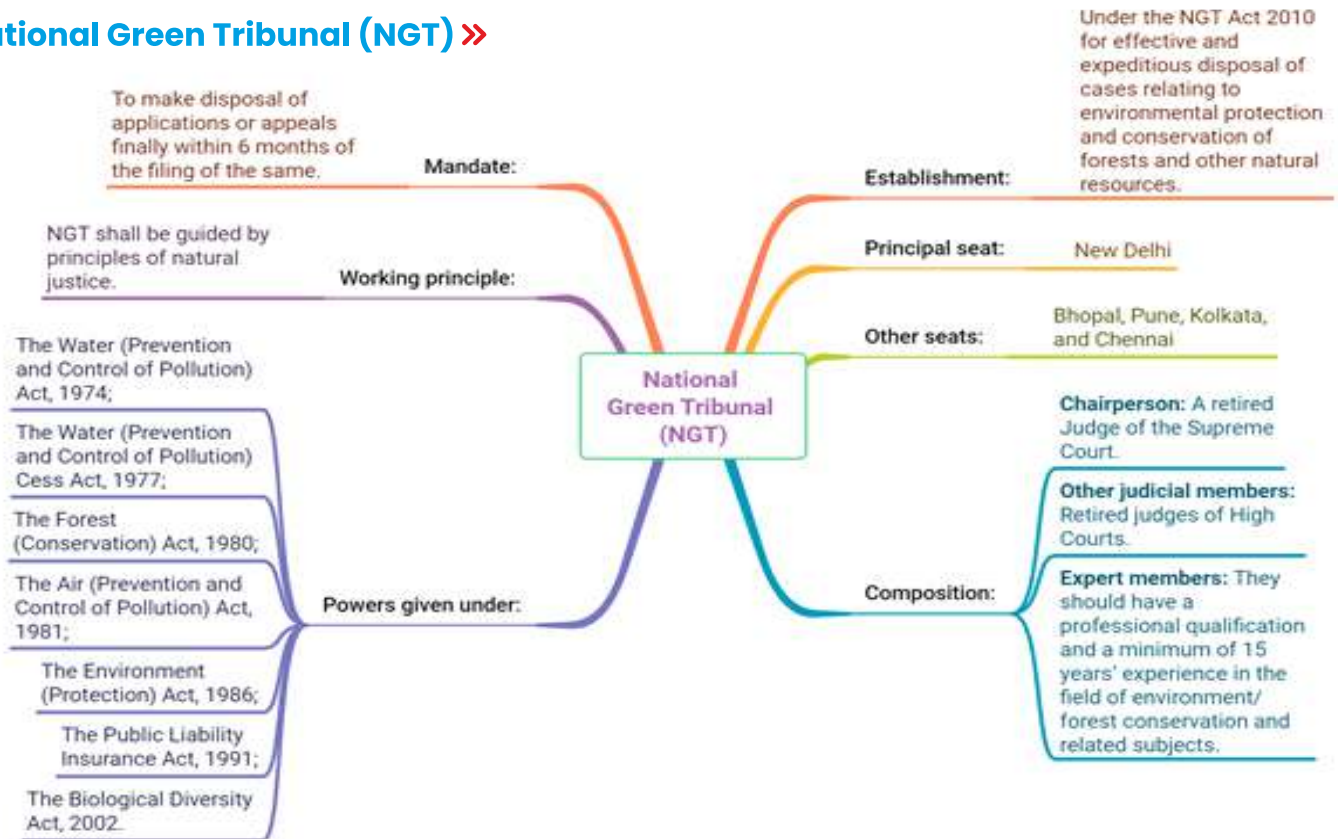
Context »

With the complaints that many states were not complying with the E-Waste (Management) Rules, the National Green Tribunal has directed the Central Pollution Control Board to file a fresh status report in generation and treatment of electronic waste by all the states.

Central Pollution Control Board (CPCB) »

Central Pollution Control Board (CPCB)		
About:	A statutory body constituted in September, 1974, under the Water (Prevention and Control of Pollution) Act, 1974.	
Powers:	Powers and functions entrusted under the Air (Prevention and Control of Pollution) Act, 1981.	
Functions:	to promote cleanliness of streams and wells in different areas of the States by prevention, control and abatement of water pollution.	
	to improve the quality of air and to prevent, control, or abate air pollution in the country	
	to advise the Central Government on matters related to control and abatement of air and water pollution.	
	develops Standards for:	National ambient air quality
		Water Quality Criteria from different sources
		Emission or Discharge of Environmental Pollutants from various Industries (Issued under Environment Protection Rules, 1986)
		Treatment and Disposal of Bio-Medical Waste by Incineration
		Emissions, Noise limits for Diesel Engines
Emissions and Noise Limit of LPG and CNG Generator Sets		
formulates the Minimal National Standards (MINAS) specific for various categories of industries with regards to their effluent discharge (water pollutants), emissions (air pollutants), noise levels, and solid waste.		

National Green Tribunal (NGT) »



9. Bio-decomposer to be sprayed over farms to prevent bad air – The Hindu

Context »

The Delhi government has started preparations to spray bio-decomposer, billed as an alternative to stubble burning, free of cost over 5,000 acres of farmland in the national capital, Environment Minister said recently.

Bio-decomposer »

- **About:** A microbial liquid spray which, when sprayed onto paddy stubble, breaks it down in a way that can be easily absorbed into the soil, whereby farmers then have no need to burn the stubble.
- **Development:** By the Indian Agricultural Research Institute (IARI).
- **Usage:** Used by Punjab, Haryana, Uttar Pradesh and NCT of Delhi.
- **Advantages:**
 - Farmers won't need to burn their paddy stubble, which will reduce pollution & increase soil fertility.
 - Enriches the soil with Organic Carbon (OC), nutrients and soil biological and physical properties.
 - An efficient and effective, cheaper, doable and practical technique to stop stubble burning.

10. Assam cascade frog test for Himachal stream water flow impact – The Hindu

Context »

Researchers studied the *Amolops formosus*, commonly known as the Assam cascade or hill stream frog, in two streams – the Chauras and the Kanda – in the Chauras and Chhogtali beats of the Churdhar Wildlife Sanctuary in Himachal Pradesh's Sirmour district to acquire information about the correlation of different water parameters with the abundance and density of the population of a species.

Churdhar Wildlife Sanctuary »

- **About:** A reserve on the foothills of Himalayas situated at the top of the Churdhar Peak.
- **Location:** In the middle of alpine trees and green grassy pastures in the state of Himachal Pradesh.
- **Flora:** Wild Himalayan Cherry, Aloe Vera (Dhrit Kumari) and *Amaranthus spinosus* (Chulai) along with oak and deodar.
- **Fauna:** Musk Deer, Barking Deer, Himalayan Black Bear, Leopards and Langur.

National Parks & Sanctuaries of Uttarakhand



Assam cascade frog »

- **Distribution:** Himalayan belt in India and high-flowing and gradient streams of northern Bangladesh, Bhutan and Nepal.
- **Significance:** An indicator species for the long-term monitoring of the condition of hilly streams.
- **Genus:** *Amolops*
- **Other Names:** Assam sucker frog, beautiful stream frog, Assam cascade frog or hill stream frog.
- **IUCN status:** Least Concern

11. New Dung Beetle Species Discovered In Meghalaya – Indian Express

Context »

In a groundbreaking discovery, researchers have identified a previously unknown dung beetle species, *Onitis bordati*, in the Nongkhylllem Wildlife Sanctuary in Meghalaya.

Nongkhylllem Wildlife Sanctuary »

- **Location:** In the Eastern Himalayan Global bio-diversity hot spot in Meghalaya.
- **Topography:** Has undulating plains, low hills, which are part of the Archaean Meghalaya Plateau.
- **Broken and rugged area:** It is because of continuous erosion by the rivers Umtrew, Umran, Umling, Umtasor and other smaller streams.
- **Umtrew:** Main river of the area which marks the western boundary of the Reserve Forest and the Sanctuary.
- **Fauna:** Clouded Leopard, Elephants and Himalayan Black Bear.
- **Flora:** Shorea robusta, Tectona grandis, Terminalia myriocarpa, Gmelina arborea etc.



Onitis bordati »

- **About:** A dung beetle species belonging to the genus *Onitis*.
- **Appearance:** Males have distinctive long, slender and curved forelegs & have teeth or spines.
- **Distribution:** Previously only found in Vietnam and Thailand.
- **Ecological Significance:** Significant for seed dispersal, nutrient cycling, and pest control, and plant growth.
- **Threats:** Habitat destruction and climate change.



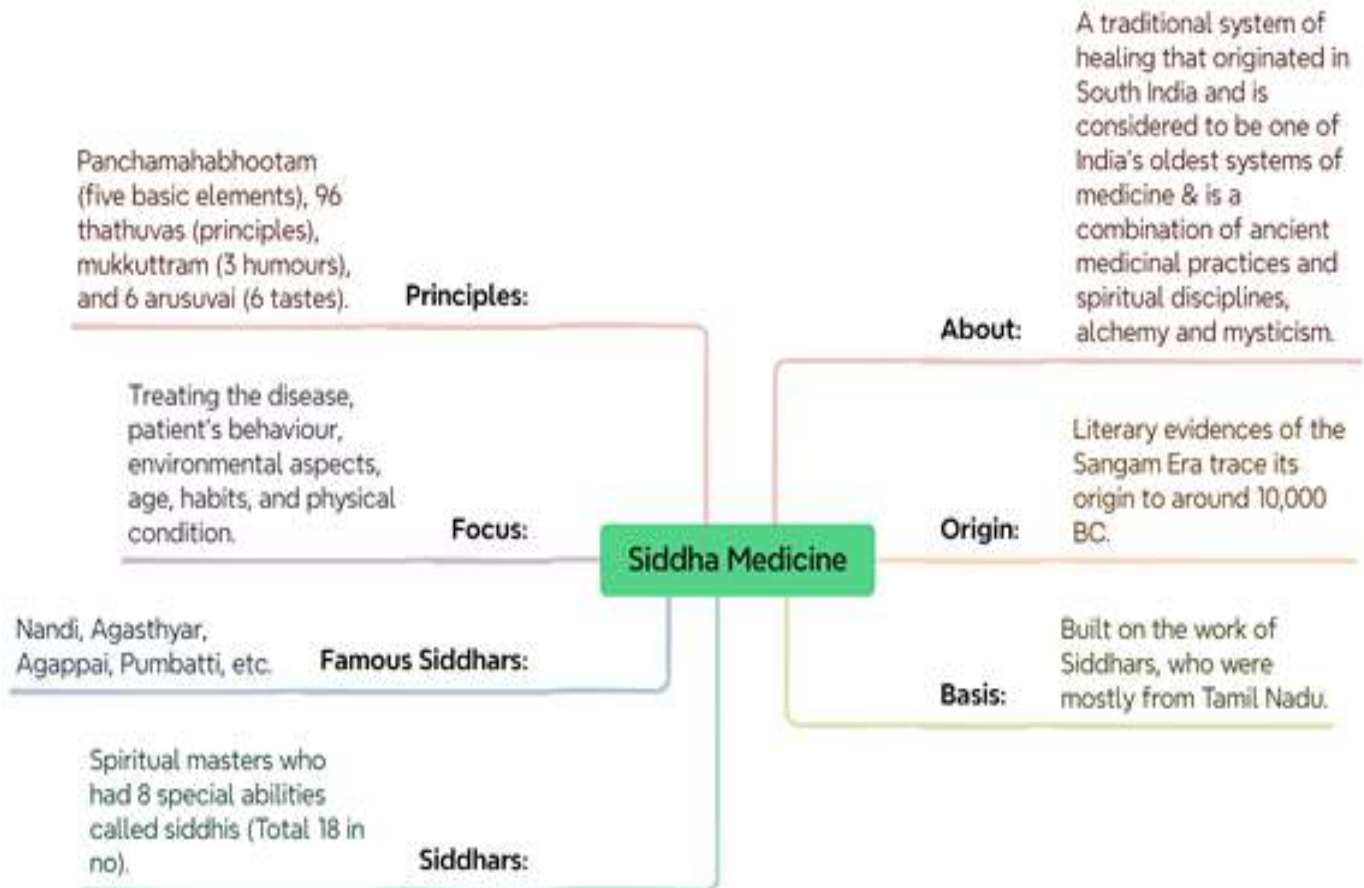
Sci. and Tech.

12. Siddha Drugs Combination – The Hindu

Context »

A combination of 'Siddha' drugs can reduce anaemia among adolescent girls, according to a recent study.

Siddha Medicine »

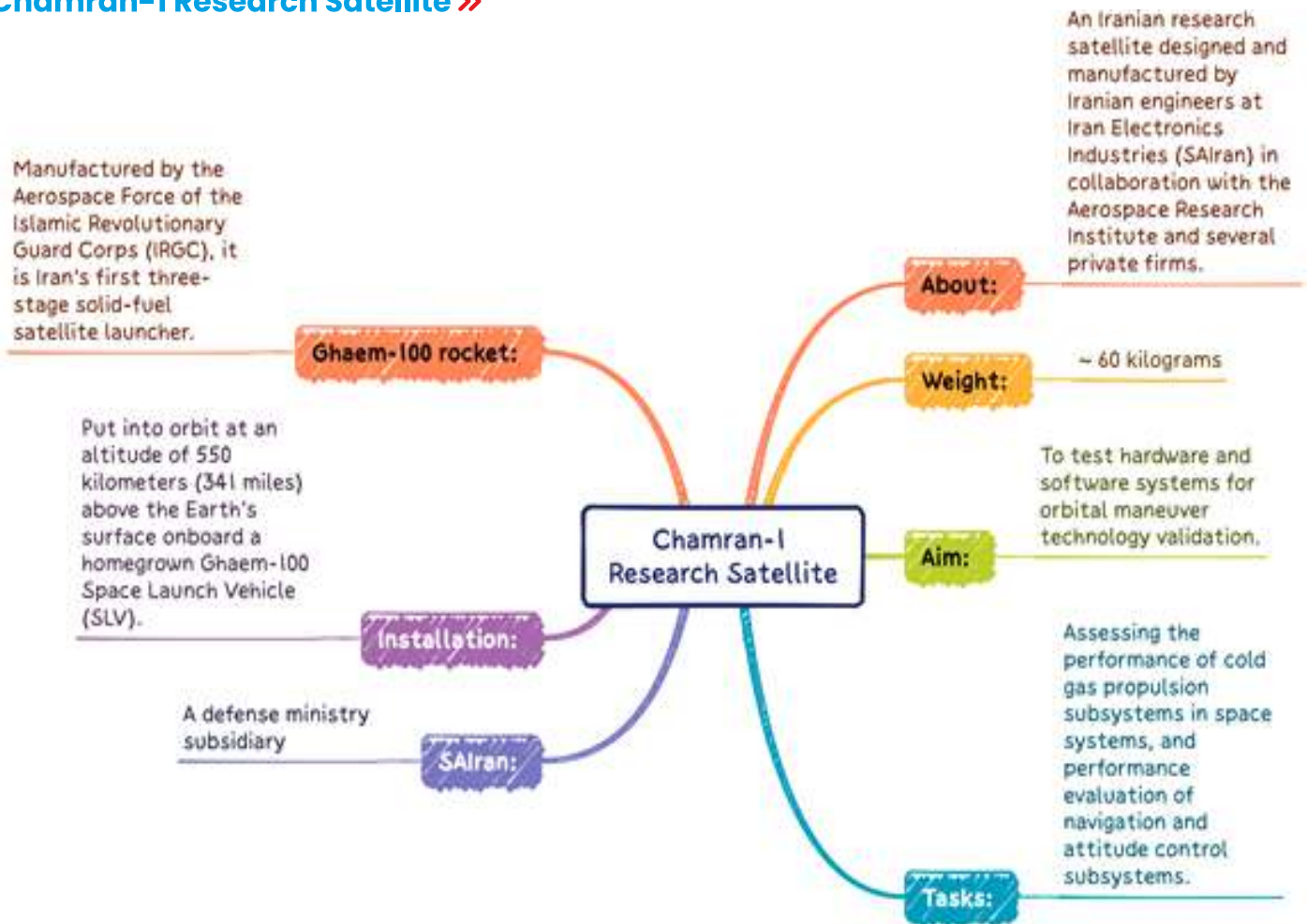


13. Iran launches a new research satellite – Indian Express

Context »

Iran recently successfully launched its research satellite, Chamran-1, into space.

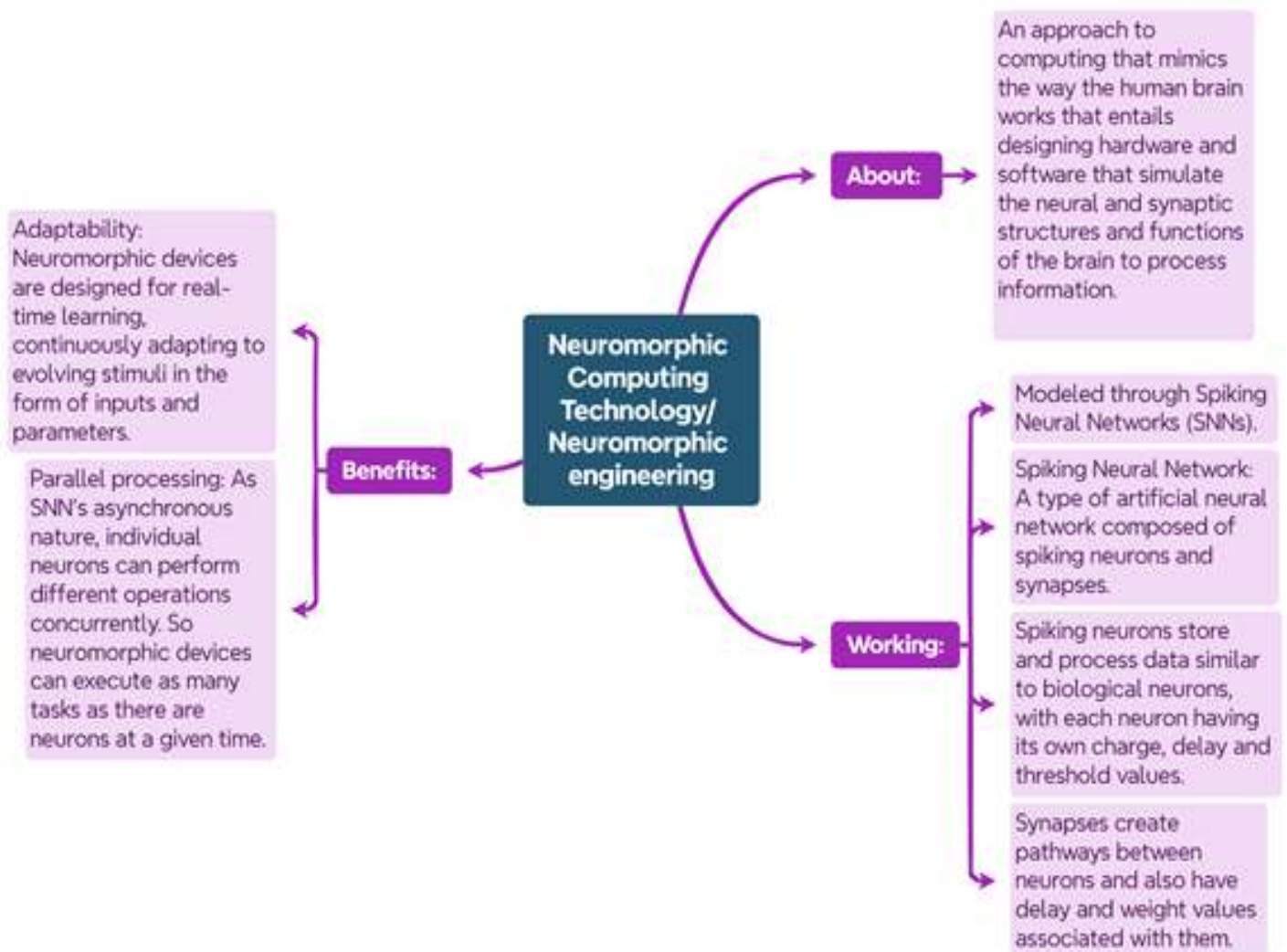
Chamran-1 Research Satellite »



14. IISc scientists develop brain-inspired analog computing platform capable of storing, processing data – The Hindu

Context »

Researchers at the Indian Institute of Science (IISc) have developed a brain-inspired analog computing platform capable of storing and processing data in an astonishing 16,500 conductance states within a molecular film.



15. OpenAI unveils o1, a new AI model trained for 'reasoning' – Indian Express

Context »

OpenAI has released a new AI model called o1 that is capable of solving complex problems faster than a human can, owing to its reasoning capabilities that are better than other AI models previously developed by the Microsoft-backed firm.

OpenAI o1 »

OpenAI o1

About: A new Large Language Model (LLM) trained with reinforcement learning to perform complex reasoning.

Features:

Thinks before it answers—it can produce a long internal chain of thought before responding to the user.

Can reason through complex tasks and solve harder problems than previous models in science, coding and math.

Can demonstrate tangible improvements in generating code and tackling complex, multistep challenges with greater proficiency than its predecessors.

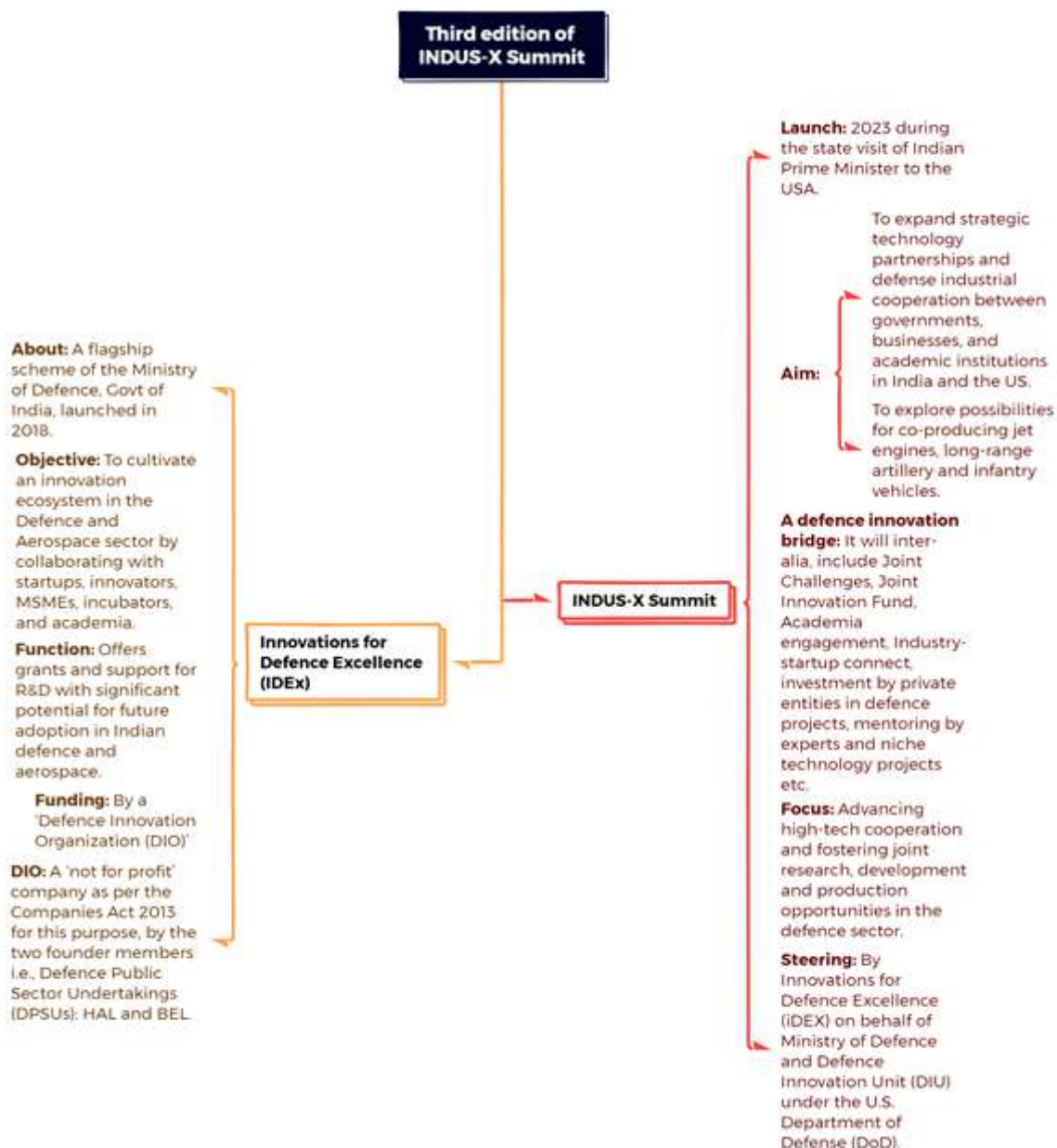
Currently, it can neither browse the internet nor process files and images. It also lacks factual information about recent world events.

Defence

16. Third edition of INDUS-X Summit concludes in California – PIB

Context »

The third edition of the INDUS-X Summit concluded in the United States, marking a progress in the advancement of a joint defence innovation ecosystem in India and the USA.



17. Storm Shadow Missile – The Hindu

Context »

The United Kingdom has reportedly given clearance for Ukraine to use Storm Shadow cruise missiles to target Russian territories. This move could escalate the ongoing conflict between the two nations.

Storm Shadow Missile »

- **About:** A low-observable, long-range air-launched cruise missile jointly developed by the United Kingdom and France.
- **Aim:** To strike high-value stationary assets such as airbases, radar installations, communications hubs, and port facilities.
- **Induction:** Used by the air forces of Egypt, India, Italy, Greece, Saudi Arabia, Qatar and the United Arab Emirates (UAE).
- **Range:** ~ 500 km.
- **Weight:** ~1,300 kilos (armed with conventional explosives).
- **Length:** ~ five metres long
- **Wingspan:** 3 metres.
- **Launch capabilities:** Can be launched from aircraft, nearly at the speed of sound while hugging the terrain before descending and detonating its high-explosive warhead.
- **Stealth capabilities:** Uses inertial navigation, GPS, and terrain referencing to fly low, which stops it from being seen.

SCALP/Storm Shadow missiles

Long-range cruise missiles



Launched from:
Tornado fighter jet,
Eurofighter Typhoon,
Rafale, Mirage 2000

Maker: MBDA
Developed by Britain and France

Navigation: Inertial, GPS, terrain mapping

Speed: 800 kph

Range: 250 - 400 km

Each missile has a 450-kg warhead that penetrates hardened targets (like bunkers)

Length: 5.10 m

Diameter: 0.63 m

Weight: 1,300 kg

18. Indian Army Contingent Departs For India-Oman Joint Military Exercise Al Najah V – Pib

Context »

The Indian Army contingent departed recently for the 5th edition of India-Oman Joint Military Exercise AL NAJAH.

