

UPSC Daily Current Affairs| Prelim Bits 25-02-2025

Tea Horse Road

Why in News?

China's Ambassador to India Xu Feihong recently posted on X about the historic Tea Horse Road.

- It spanned more than 2,000 km, and connected ***China to India*** via Tibet.
- It witnesses the exchanges and interaction between China and India.
- **Origin** - It can be traced to the rule of the Tang dynasty in China (618-907 CE).
- The Tea Horse Road does not refer to a single road but a network of branching paths that ***began in southwest China*** and ended in the Indian subcontinent.
- **Pathways** - The 2 main pathways passed through cities like Dali and Lijiang in Yunnan province, and reached Lhasa in Tibet, before entering the Indian subcontinent.
- They branched into present-day India, Nepal, and Bangladesh.
- These routes were perilous to travel on, passed through difficult terrain, and reached an elevation of up to 10,000 feet.
- Buddhist monk ***Yijing (635-713 CE)*** mention
 - Products like sugar, textiles, and rice noodles being transported from southwestern China to Tibet and India while
 - Horses, leather, Tibetan gold, saffron and other medicine herbs went to China.
- Over time, the trade focused on teas and horses during ***Song dynasty*** (960-1279 CE).
- The main driver for the road is believed to be the ***demand for tea*** among Tibetan nomads.
- In 1912, as the time of the Qing dynasty came to an end, the Horse Tea Road would continue to remain significant.
- Cultural and technological exchanges over 800 years have created unique local architecture, art, landscape, culture and social life.
- These incorporate the quintessence of ***Han, Bai, Tibetan*** and other ethnic groups.
- **Declination** - With the establishment of the People's Republic in 1949, the Tea Horse Road witnessed a gradual decline.



Reference

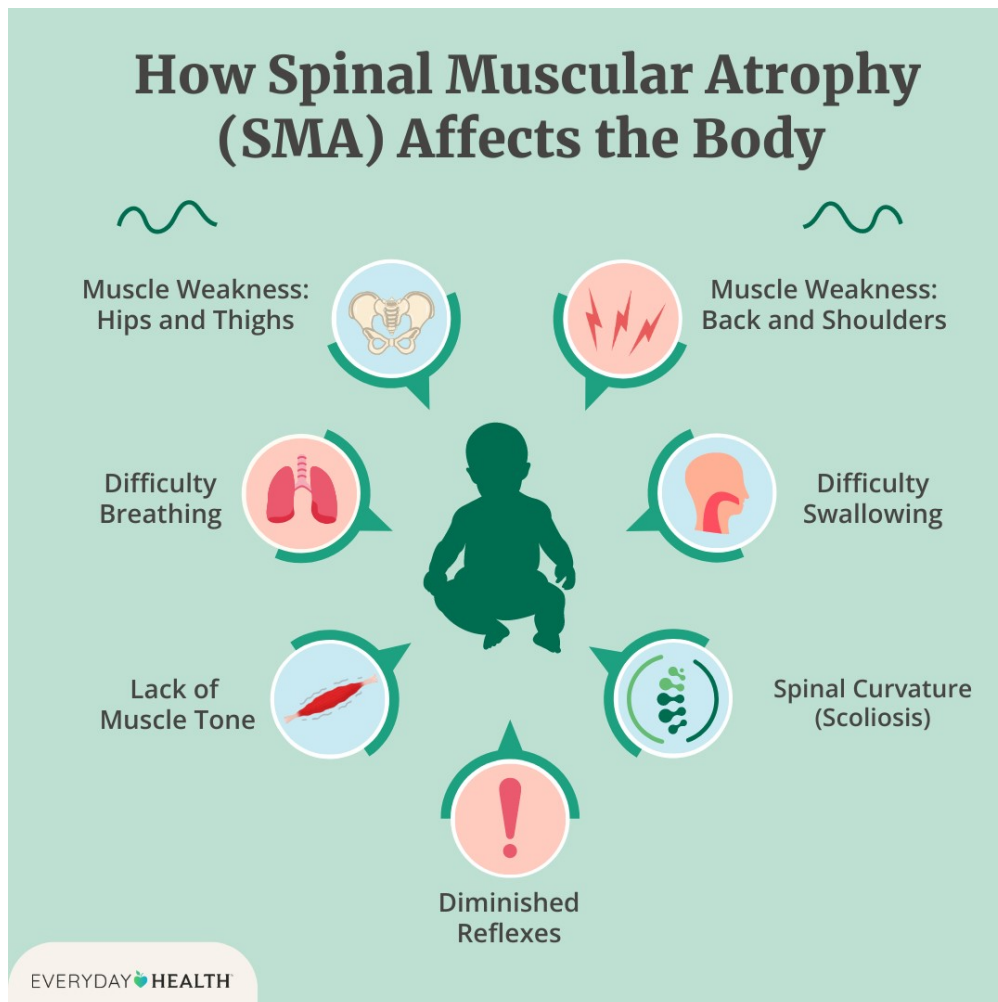
[The Indian Express | Tea Horse Road](#)

Spinal Muscular Atrophy (SMA)

Why in News?

A two-and-a-half-year-old girl has shown no signs of a genetic disorder, known as spinal muscular atrophy (SMA), becoming the first person in the world to be treated for the disease while in the womb.

- SMA is a debilitating **genetic condition** which affects motor neurons that control movement, and leads to progressive muscle weakening.
- **Caused by** - Mutations in the survival motor neuron gene (SMN1) which causes a deficiency of a protein crucial for the survival of motor neurons in the spinal cord.
- This prevents muscles from receiving signals from the brain, causing them to waste away.



• Types of SMA

- **Type I** - Usually diagnosed before age 3
- **Type II** - Begins to affect children between 6-18 months old
- **Type III** - Also called ***Kugelberg-Welander syndrome*** or juvenile SMA, begins to affect kids as early as 18 months of age or as late as adolescence
- **Type IV** - The adult form of SMA, symptoms usually begin after age 35.
- In its most severe form, SMA-1, motor skills decline rapidly and patients usually only live two to three years.
- **Prognosis** - About one in every 10,000 births have some form of the condition making it a leading genetic cause of death in infants and children.
- **Recent application in Treatment** - For the treatment, scientists used an oral drug called risdiplam, which is given to patients to slow the progression of SMA.
- **Risdiplam** is typically given to a patient soon after birth.
- The mother, who was 32 weeks pregnant, took Risdiplam daily for 6 weeks.
- The baby started taking the drug from roughly one week old, and will probably continue to take it for the rest of her life.
- The scientists found that the girl had higher levels of the SMN protein in her bloodstream, compared to those usually born with the condition.
- The girl seemed to have lower levels of nerve damage, and even after 30 months had normal muscle development with no sign of atrophy.

Reference

National Dhanwantari Ayurveda Awards

Why in News?

National Dhanwantari Ayurveda Awards conferred to three distinguished practitioners for their contributions to the field of traditional Indian medicine.

- **National Dhanwantari Ayurveda Awards** – It is given to
 - Celebrate excellence in Ayurveda,
 - Acknowledging practitioners who have excelled in research, practice, and education,
 - To those who have played a pivotal role in elevating Ayurveda's stature both nationally and globally.
- **Instituted by** – Ministry of Ayush.

In 2016, the Government of India's Ministry of Ayush declared the birth anniversary of Dhanvantari as National Ayurveda Day.

- **Components of the Awards** – Each recipient of the National Dhanwantari Ayurveda Awards received
 - **Citation** – Recognizing their exceptional contributions and dedication to Ayurveda.
 - **Trophy** – Featuring the Statue of Lord Dhanwantari, symbolizing the divine healer.
 - **Cash Prize** – A monetary award of Rs. 5 Lakh to support further advancements in their field.
- **Significance** – Acknowledge the dedication and innovative contributions of Ayurveda stalwarts.
- Encourage upcoming practitioners and researchers to pursue excellence in traditional medicine.
- Emphasize the integration of time-honored Ayurvedic practices with modern healthcare systems, ensuring that ancient wisdom continues to evolve and meet contemporary challenges.
- Strengthen India's role as a global leader in ***holistic healthcare*** by showcasing the rich legacy and ongoing innovation in Ayurveda.
- **Award recipients, 2025**
 - **Vaidya Tara Chand Sharma** – Renowned Nadi Vaidya and accomplished author.
 - **Vaidya Maya Ram Uniyal** – Distinguished scholar of Dravyaguna Vigyana from Uttar Pradesh.
 - **Vaidya Sameer Govind Jamadagni** – Founder of the Vishwa Vyakhyanmala national conference and Vishwa Ayurveda Prabodhin.

In October 2016, on Ayurveda Day, the first All India Institute of Ayurveda was inaugurated by PM Narendra Modi in New Delhi.

Reference

[PIB | National Dhanwantari Ayurveda Awards](#)

Solar Coronal Holes

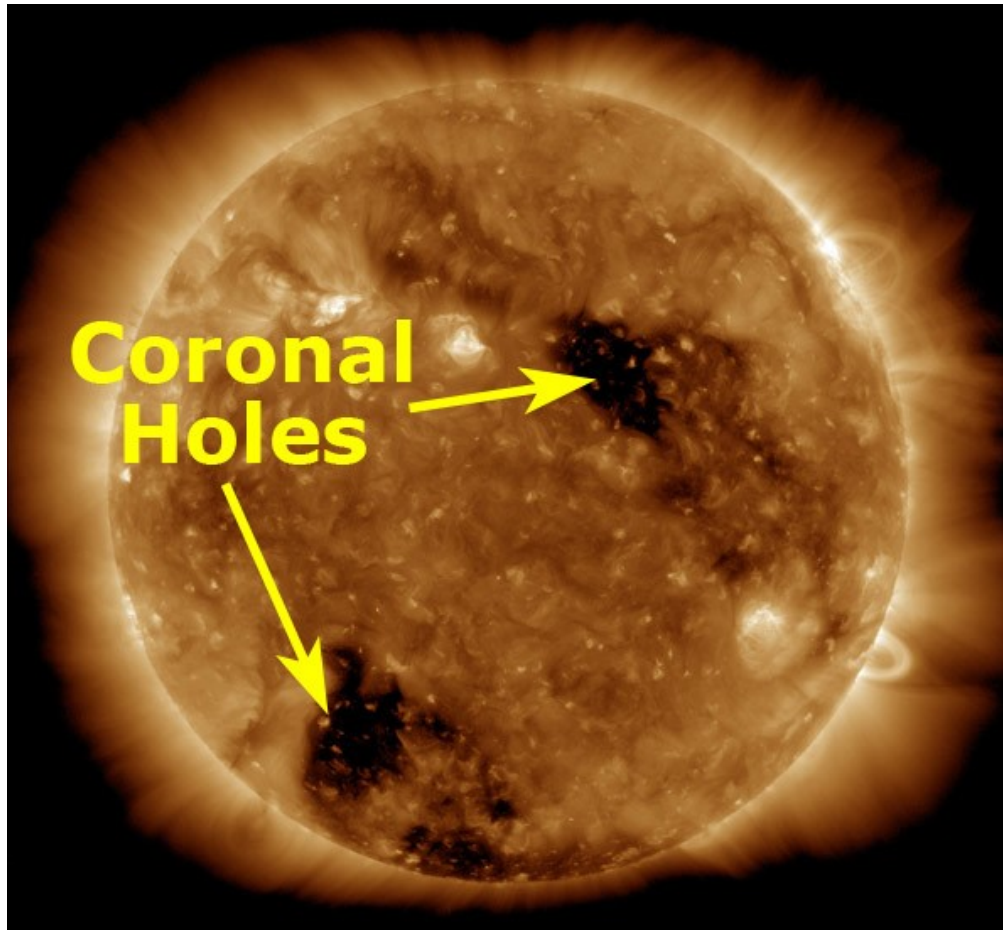
Why in News?

Astronomers from the Indian Institute of Astrophysics (IIA) recently accurately characterised the latitude dependence of temperature and magnetic field strengths within the coronal holes.

Coronal holes

- Coronal holes are large, dark areas on the sun that are cooler and less dense than the surrounding plasma.
- They are regions of open magnetic fields that allow solar wind to escape into space.
- These phenomena are intense sources of fast solar wind, streams of charged particles escaping the sun at high speeds.
- **First discovered in** - 1970s by X-ray satellites.
- These holes may appear at any time of the solar cycle but they are most common during the declining phase of the cycle.

Solar and Heliosphere Observatory (SOHO), a joint project between NASA and the European Space Agency (ESA) is a spacecraft that orbits the Sun, studying the Sun's interior, atmosphere, and solar wind.



Key findings of the study

- **Uniform Temperature** - There is no significant variation in the temperature structure of coronal holes across different latitudes.
- **Magnetic field structure** - The strength of the magnetic field structure within coronal holes *varies with latitude*, increasing from the solar equator to the poles.
- These results suggest that coronal holes likely ***originate from the deep solar interior*** and may form from the superposition of *Alfven wave perturbations*, respectively.
- Understanding the thermal structure, estimate the depths of origin of coronal holes, while radiative flux and energy estimations help quantify the thermal energy input into interplanetary space.
- **Significance of the Findings** - Improved monsoon predictions which benefit agriculture and disaster management.
- Deepen the knowledge of how solar phenomena influence Earth's weather systems.

Reference

[India Today |New Findings of Coronal Holes](#)

Ravi Shankar Vyas

- **Born** - Feb 25, 1884, in Gujarat.
- **Role** - 1921 Participated in Indian National Movement demonstrating his commitment by relinquishing his rights to his ancestral property.
- **Associated** - With Mahatma Gandhi & Sardar Patel.
- **Participated in** - Quit India Movement in 1942.

Adopt a Heritage 2.0 Programme.

- **Initiated by** - Bisleri International & Archaeological Survey of India (ASI)
- **Focus** - On core objective is water conservation at historical sites.
- **Alignment** - This project is in line with India's broader goals for environmental restoration and sustainability.
- **Initial Phase** - Will concentrate on reviving four historically significant water bodies
 - Chand Baori (Abhaneri, Rajasthan)
 - Baori at Neemrana (Rajasthan)
 - Padma and Rani Talabs at Ranthambore Fort (Rajasthan)
 - Budha Budhi Pond at Kalinjar Fort (Uttar Pradesh)

Geography

Dukono Eruption

- **Located in** - Halmahera Island in North Maluku, Indonesia.
- **Nature of Volcano** - Active
- **Indonesia** - Has 130 active volcanoes, Situated on the Ring of Fire, faces frequent eruptions & earthquakes.
- **Active volcanoes** - Mount Merapi and Kelut, both located on Java Island of Indonesia.
- **Pacific Ring of Fire**: This 40,000km zone, with tectonic plate interactions, causes 90% of global earthquakes.

Zagros Mountains

- **Located In** - Iraq was pulled into the Earth.
- **Highest Peak** - Mount Dena.
- **Ancient city** - Susa.
- **Formation of Mountain** - Tectonic in Origin formed during Miocene and Pliocene orogenic episodes.
- This resulted in Arabian Plate's subduction under the Eurasian Plate, creating a 1,500km natural barrier.
- **Geographic Extension** - Stretching from Turkey to Iran, ending at the Strait of Hormuz.

Polity & Governance

Principal Secretary to the PM

Shaktikanta Das recently appointed as Principal Secretary to the PM.

- **Former post** - Governor of RBI.
- **Administrative head of** - Prime Minister's Office (PMO).
- **Functions** - Briefing notes for discussions with foreign dignitaries, ensuring inter-ministerial coordination, and managing key communications for the PM.
- **Advisory Role** - Assisting the Prime Minister on various domestic and foreign policy matters.

International Relations and Issues

India to Host 12th Regional 3R & Circular Economy Conference in Jaipur.

- **Nodal Agency**- Ministry of Housing & Urban Affairs
- **Launched by** - United Nations Centre for Regional Development in 2009.
- **Theme**- Realizing Circular Societies Towards Achieving Sustainable Development Goals & Carbon Neutrality in Asia-Pacific”.
- **Aim** - Provide strategic policy inputs to Asia-Pacific governments for 3R and circularity, while sharing best practices.
- **Features** - India's achievements in the 3R and circular economy, featuring exhibitions from key ministries and missions.
- The conference will include an international '3R trade and technology exhibition' with participants from Indian and Japanese businesses.
- The event will conclude with the 'Jaipur Declaration,' aimed at promoting a resource efficient circular economy in the Asia-Pacific region.

Economy

Compendium of Datasets and Registries in India 2024

- **Nodal Ministry**- Ministry of Statistics
- **Data Centralization** - Consolidation of 270 datasets from 40 Ministries.
- **Objective** - Offering a single access point for diverse sectors like agriculture, health, and education, aiding informed decisions.
- **Metadata Standardization**- Detailing with collection methods, update frequency & sharing policies, ensures data reliability and user trust.
- **Legal and Regulatory Framework**- Each dataset has a legal and regulatory framework.
- Outlines rules for data collection and dissemination.
- Crucial for stakeholders to understand regulations for responsible data use.

Environment

Soliga Tribe-Guardians of the BRT Tiger Reserve

- **Soliga meaning** - "Children of bamboo”.
- **Reside** - In Karnataka's Biligiri Rangana & Male Mahadeshwara Hills.
- **Population Found** - Karnataka & Tamil Nadu.
- **Language spoken**- Sholaga, Kannada & Tamil.
- **Unique Rights & Habitat** - They are the India's 1st tribe granted official rights within a tiger reserve to Own, manage, and use forest resources.
- **Role** - Conservation of Biligiri Rangaswamy Temple Tiger Reserve.
- **Livelihood** - Engage in shifting cultivation and forest product collection, with honey being a vital food source.

Prakriti 2025

- **Inauguration** - Union Minister for Power, Shri Manohar Lal.
- **Location** - New Delhi.
- **Focus** - Carbon markets and transformational climate initiatives.
- **Goal** - Promoting resilience, awareness, knowledge, and resources.

Security

Sagar Kavach' security exercise

- **Location**- West Bengal coastline.
- **Objective** - Exercise aimed to improve Standard Operating Procedures and enhance inter-agency coordination for India's eastern maritime border.
- **Functions** - Scenarios involving hijacked fishing boats and barges.
- Tested response to illegal transportation of goods along the coastline.
- Focused on detection and disposal of improvised explosive devices on critical infrastructure.



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