

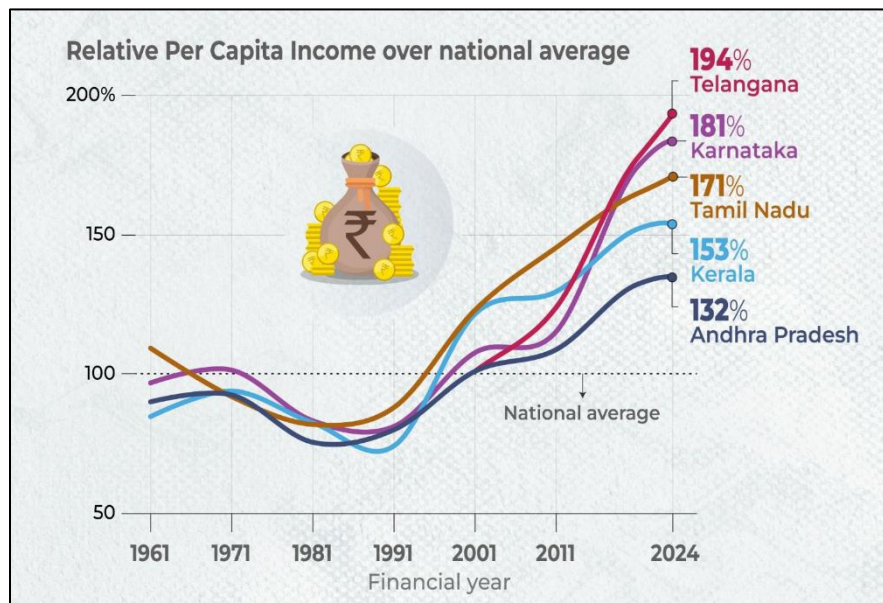
September - 25

TNPSC BITS

- ❖ The 20th Maritime State Development Council (MSDC) was held in Goa with significant advancements in India's maritime sector.
- ❖ Union Cabinet approved the plan to setup a new Indian Institute for Immersive Creators (IIIC) on the lines of IITs, IIMs.
- ❖ Indian Navy's lieutenant Commodore Roopa A and Lieutenant Commodore Dilna K, would embark on the 'extraordinary expedition' as part of the second Navika Sagar Parikrama onboard the INSV Tarini soon.
- ❖ The Sharjah Investment Forum (SIF) 2024 has unveiled World's First AI-Powered Trade Licence Service.
- ❖ The Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti, has organized the International WASH (Water, Sanitation, and Hygiene) Conference 2024 in New Delhi.
- ❖ China and Nepal are holding 10-day joint exercises 'Mt Everest Friendship 2024' in China's Chongqing city.

NATIONAL

States Contribution in GDP



- ❖ Southern states have outperformed northern states in GDP contribution and per capita income.

- ❖ Karnataka, Andhra Pradesh, Telangana, Kerala, and Tamil Nadu collectively contribute 30 per cent of the country's GDP.
- ❖ Maharashtra continues to be the largest contributor to India's GDP, although its share has dropped to 13.3 per cent from over 15 per cent previously.
- ❖ Maharashtra's per capita income has risen to 150.7 per cent of the national average as of March 2024.
- ❖ Uttar Pradesh's share dropped from 14 per cent in 1960-61 to 9.5 per cent.
- ❖ Bihar, the third-most populous state, contributes just 4.3 per cent.
- ❖ West Bengal, once a top contributor with 10.5 per cent of GDP in 1960-61 now accounts for only 5.6 per cent.

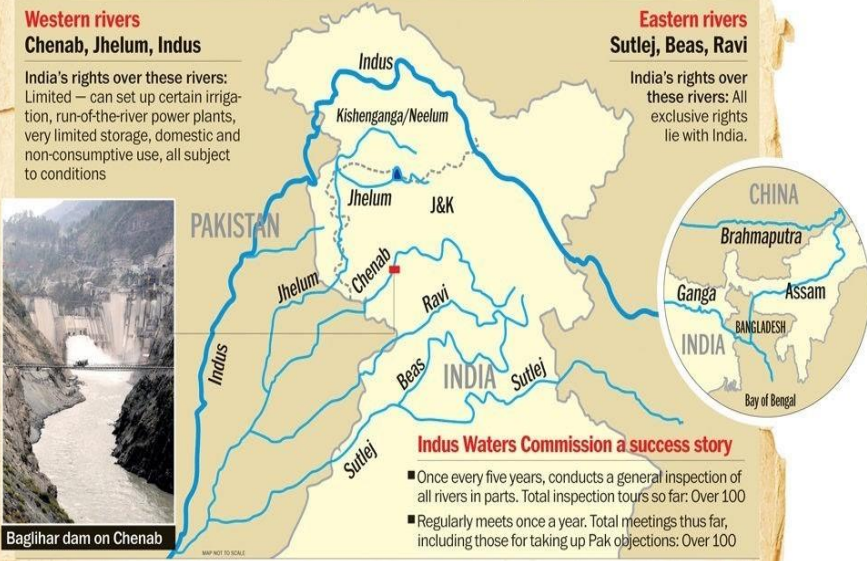
Modification of the Indus Waters Treaty

The Indus Waters Treaty (IWT)

<ul style="list-style-type: none"> ■ The distribution of waters of the Indus and its tributaries between India and Pakistan is governed by the Indus Water Treaty (IWT). 	<ul style="list-style-type: none"> ■ Was signed on Sept 19, 1960, between India, Pakistan and a representative of World Bank after eight years of negotiations. 	<ul style="list-style-type: none"> ■ Partition of India cut across the Indus river basin, which has the Indus river, plus five of its main tributaries.
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Western rivers
Chenab, Jhelum, Indus

India's rights over these rivers: Limited – can set up certain irrigation, run-of-the-river power plants, very limited storage, domestic and non-consumptive use, all subject to conditions



Eastern rivers
Sutlej, Beas, Ravi

India's rights over these rivers: All exclusive rights lie with India.

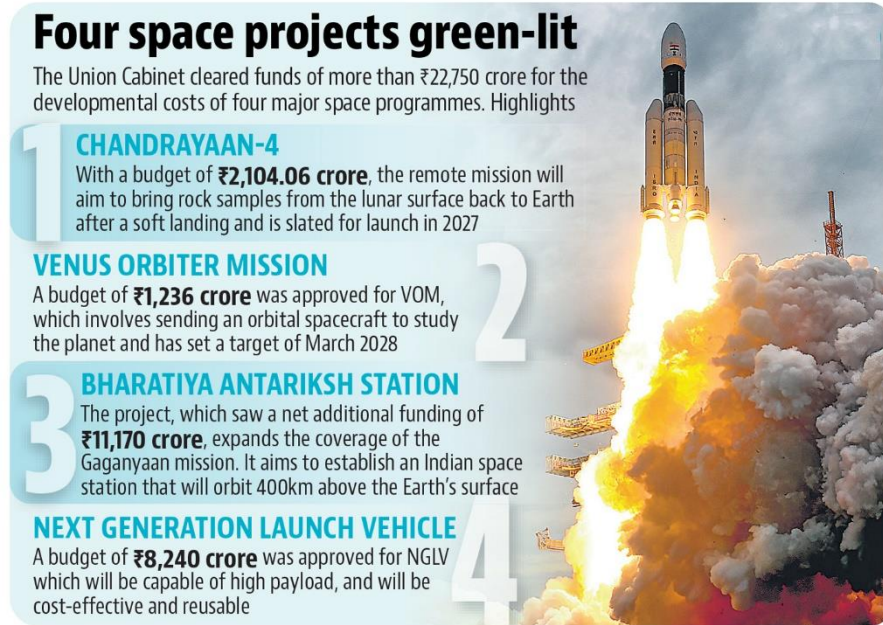
Indus Waters Commission a success story

- Once every five years, conducts a general inspection of all rivers in parts. Total inspection tours so far: Over 100
- Regularly meets once a year. Total meetings thus far, including those for taking up Pak objections: Over 100

- ❖ India has again sent a formal notice to Pakistan, for the “review and modification” of the treaty.
- ❖ The treaty between India and Pakistan was signed on September 19, 1960, for the use of water available in the Indus and its tributaries.
- ❖ It was signed in Karachi by then Prime Minister Jawaharlal Nehru and then Pakistan President Mohammed Ayub Khan.
- ❖ This was held after nine years of negotiations arranged by the World Bank.

- ❖ India enjoys the “unrestricted use” of the three “Eastern Rivers [Beas, Ravi, Sutlej] and Pakistan got control of the three “Western Rivers” [Indus, Chenab, Jhelum].

Funds for space missions



Four space projects green-lit

The Union Cabinet cleared funds of more than ₹22,750 crore for the developmental costs of four major space programmes. Highlights

- 1 CHANDRAYAAN-4**
With a budget of **₹2,104.06 crore**, the remote mission will aim to bring rock samples from the lunar surface back to Earth after a soft landing and is slated for launch in 2027
- 2 VENUS ORBITER MISSION**
A budget of **₹1,236 crore** was approved for VOM, which involves sending an orbital spacecraft to study the planet and has set a target of March 2028
- 3 BHARATIYA ANTARIKSH STATION**
The project, which saw a net additional funding of **₹11,170 crore**, expands the coverage of the Gaganyaan mission. It aims to establish an Indian space station that will orbit 400km above the Earth's surface
- 4 NEXT GENERATION LAUNCH VEHICLE**
A budget of **₹8,240 crore** was approved for NGLV which will be capable of high payload, and will be cost-effective and reusable

- ❖ The Union Cabinet approved the following four important space ISRO in the near future:
 - India’s lunar mission Chandrayaan-4;
 - The development of Venus Orbiter Mission (VOM);
 - Bharatiya Anatriksh Station (BAS) and
 - The development of Next Generation Launch Vehicle (NGLV).
- ❖ In total, the Cabinet has cleared funds of more than ₹22,750 crore for the developmental costs of these four programmes.
- ❖ India’s first scientific mission to Venus, which aims to enable scientists to better understand the Venusian atmosphere, and geology.

Bio-RIDE Scheme

- ❖ The Union Cabinet has approved the Biotechnology Research Innovation and Entrepreneurship Development (Bio-RIDE) scheme.
- ❖ It aims to accelerate research, enhance product development, and bridge the gap between academic research and industrial applications.

- ❖ It will offer grants and incentives for cutting-edge research and development in areas such as synthetic biology, bio-pharmaceuticals, bio-energy, and bio-plastics.
- ❖ Bio-RIDE combines two existing schemes with a new component called, 'Bio-manufacturing and Bio-foundry'.
- ❖ They are
 - Biotechnology Research and Development (R&D) and
 - Industrial and Entrepreneurship Development (I&ED).

Bio-RIDE Scheme	COMPONENTS
<p>Budget: Rs 9197 crore (2021-22 to 2025-26)</p> <p>Purpose: Support advanced biotech R&D</p>	<p>a) Biotechnology Research and Development (R&D)</p> <p>b) Industrial & Entrepreneurship Development (I&ED)</p> <p>c) Biomanufacturing and Biofoundry</p> <p>Objectives: Promote bio-entrepreneurship, innovation, industry-academia collaboration, sustainable biomanufacturing, research funding, and human resource development</p>

INTERNATIONAL

Elimination of Leprosy - Jordan

SYMPTOMS

- Skin patch with loss of sensation.
- No pain or itching
- Thickened/red skin patch
- Lack of growth of hair on the patches
- Inability to close eyes completely
- Numbness in hands, arms and legs
- Muscle weakness
- Dryness on palm of hand

WHAT IS LEPROSY

Leprosy is a disease caused by the bacteria *Mycobacterium leprae*, which affects the skin and the peripheral nervous system.

TRANSMISSION

Via droplets, from the nose and mouth, during close and frequent contacts with untreated cases

Within two days of starting the medicine, there is no risk of the disease spreading.

INCUBATION PERIOD

Usually 3-5 years

Anyone noticing possible symptoms in themselves should contact the nearest skin clinic in a government hospital without delay.

Taking proper treatment can curtail developing the disease which causes disfiguring deformities of limbs, face and blindness.

- ❖ Jordan becomes the first country in the world to eliminate leprosy, receiving the official verification from the World Health Organisation (WHO).



- ❖ For this, a country must demonstrate that the prevalence of leprosy has fallen below 1 case per 10,000 population.
- ❖ It also must have effective systems are in place to detect, treat, and prevent the disease from spreading.
- ❖ Leprosy, also known as Hansen's disease, is a chronic infectious disease caused by *Mycobacterium leprae*.
- ❖ The disease affects the skin, the peripheral nerves, mucosal surfaces of the upper respiratory tract and the eyes.

SCIENCE AND TECHNOLOGY

Next Generation Launch Vehicle

The Future of Space Travel

Next Generation Launch Vehicle (NGLV)

New Re-usable **Low-cost launch vehicle for Bharat**

.....

3X the present payload capability at 1.5X cost & also have reusability

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Total fund approved is **₹8240 Crore**

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Enable national & commercial missions like Human spaceflight missions to **Bharatiya Antariksh Station**

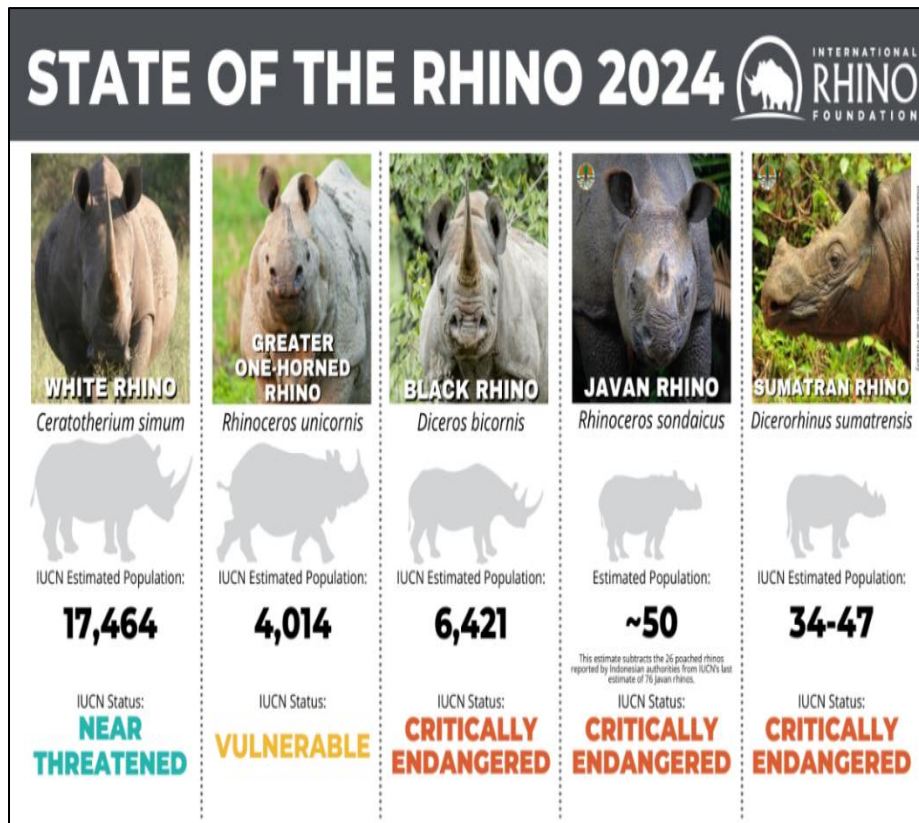


- ❖ The NGLV is designed to enhance payload capacity threefold compared to the current LVM3.
- ❖ Its cost will be only 1.5 times more.
- ❖ The vehicle will incorporate reusability features, ensuring more affordable access to space and the integration of modular green propulsion systems.

- ❖ The NGLV is engineered to support a maximum payload of 30 tonnes to Low Earth Orbit (LEO) and will include a reusable first stage.
- ❖ Currently, India has achieved self-reliance in launching satellites up to 10 tonnes to LEO and 4 tonnes to Geo-Synchronous Transfer Orbit (GTO) through operational vehicles like PSLV, GSLV, LVM3, and SSLV.

REPORTS AND INDICES

State of Rhino Report 2024



- ❖ The 2024 State of Rhino Report was recently released by the International Rhino Foundation.
- ❖ Currently, fewer than 28,000 rhinos remain worldwide across all five species.
- ❖ The Greater One-Horned Rhino population has steadily grown from fewer than 100 animals a century ago to around 4,014 today.
- ❖ It increased by 20% over the last decade.
- ❖ They are found in the Indo-Nepal Terai, northern West Bengal, and Assam.
- ❖ In India, the Greater One-Horned Rhino population stood at 3,262 at the end of 2021.

- ❖ Over 90% of them are in Kaziranga National Park.
- ❖ Rhino's poaching in Africa increased by 4% from 2022 to 2023.
- ❖ At least 586 African rhinos poached in 2023-one every 15 hours.

PERSONALITIES, AWARDS, AND EVENTS

India's First Astronaut to ISS

- ❖ Indian astronaut group captain Shubhanshu Shukla is set to make history as the pilot of the Axiom-4 (Ax-4) mission.
- ❖ This will mark India's first human presence on the International Space Station (ISS).
- ❖ This will be the 2nd travel after Wing Commander Rakesh Sharma's 1984 mission with the Soviet Union.
- ❖ The Axiom-4 mission is a result of a bilateral initiative between India and US.

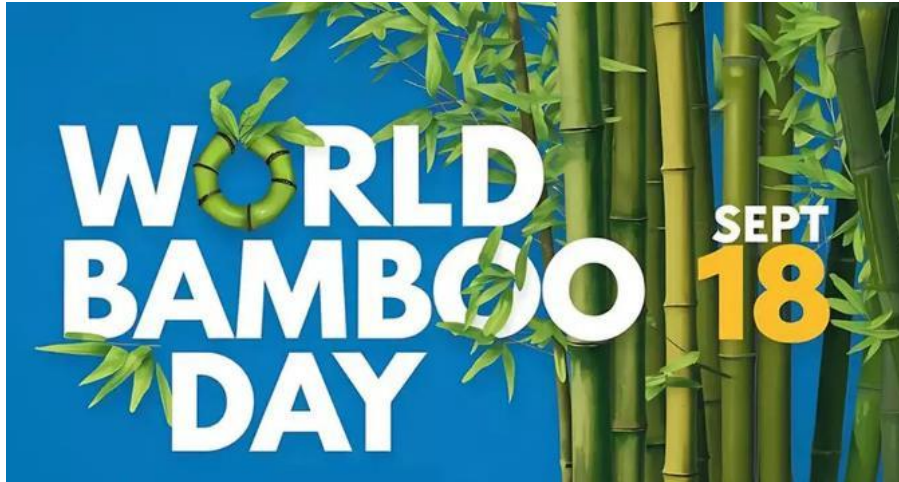


IMPORTANT DAYS

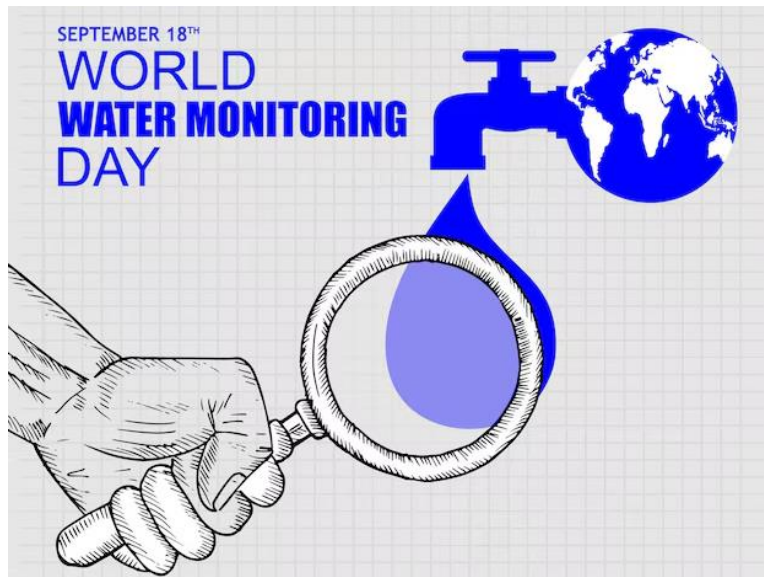
World Bamboo Day 2024 - September 18

- ❖ This day highlights bamboo's numerous medicinal and practical uses.
- ❖ World Bamboo Organisation (WBO) has taken steps to promote its conservation, sustainable use, and the protection of our environment.

- ❖ This day was established in 2009, during the eighth World Bamboo Congress in Bangkok.



World Water Monitoring Day 2024 - September 20



- ❖ In 2003, America's Clean Water Foundation (ACWF) launched this day.
- ❖ Initially, the date was October 18, in honour of the US Clean Water Act 1972.
- ❖ To maximize the number of participants and participating countries, the official date was changed to September 18 in 2007.
- ❖ The theme 2024 is 'Water for Peace'.
- ❖ 72% of freshwater withdrawals are used by agriculture.
- ❖ About 80% of jobs are water-dependent in low-income countries
- ❖ Some 700 million people could be displaced by intense water scarcity by 2030.

- ❖ By 2040, roughly 1 in 4 children worldwide will be living in the areas of extremely high-water stress.

World Cleanup Day 2024 - September 20



- ❖ It is a global social program aimed at tackling the problems associated with marine debris and waste management.
- ❖ It will be uniting 157 countries across the world for a cleaner planet.
- ❖ On 8 December 2023, the United Nations General Assembly declared this day.
- ❖ The theme for 2024 is 'Arctic Cities and Marine Litter'.

