

NATIONAL

1. India's national highways network

Why in news - India's network of national highways (1.45 lakh km) is now the 2nd largest in the world after the United States.

Key Points –

- It has increased by 59% in the past 9 years.
- National Highways - 1,45,240 km in 2022-23. (91,287 km in 2013-14).
- The usage of FASTags has reduced the waiting time at the toll plazas to 47 seconds. (saved approximately Rs 70,000 crore in wasted fuel).
- The waiting time is envisaged to be completely eliminated by 2047.
- Toll collection target - Rs 1,30,000 crore by 2030.

Value Addition –

Name →	Responsibility of	Connects [वि मार्ग किसे जोड़ता है?]
National Highways	Union Government	State capitals, major cities, ports
State Highways	State Government	State Capital to District HQ
District Roads	Zila Parishad	District HQ to tehsil and Blocks
Village Roads	Gram Panchayat	Villages to neighboring towns
Expressway	PPP / SPV (usually under aegis for NHAI)	Six to eight lane high class highways e.g. A'bad Vadodara Expressway made by SPV owned by NHAI+ IRB Infrastructure Developers.



2. Groundwater extraction

Why in news - The excessive extraction of groundwater for drinking and irrigation has shifted the Earth's axis of rotation.

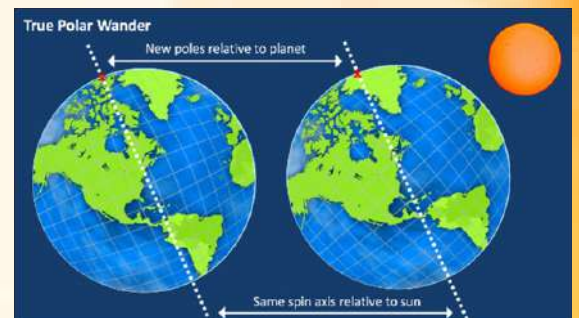
Key Points –

- Study name - Drift of Earth's Pole Confirms Groundwater Depletion as a Significant Contributor to Global Sea Level Rise (6.24mm) 1993–2010.
- Study carried out by –
 - a) Seoul National University (South Korea)
 - b) Kyungpook National University (South Korea)
 - c) University of Melbourne (Australia)
 - d) Hong Kong Polytechnic University (Hong Kong)
 - e) University of Texas at Austin (USA).
- Humans pumped out around 2,150 gigatons of groundwater between 1993 and 2010.
- It has drifted the Earth's axis at the rate of 4.36 cm per year towards the east and contributed to global sea level rise.
- Groundwater extraction from North America and northwestern India (midlatitude) had an outsized impact in comparison to the extraction taking place in poles or equators.
- It associated with the moment of inertia of the Earth, which is sensitive to midlatitude mass change. Mass change on the equator or pole cannot affect change in the rotational pole.

Value Addition –

• Polar motion –

- a) Earth spins around an imaginary axis that passes through the north pole, its centre of mass and the south pole (like a top spins around its spindle).



- b) The poles and the axis keep shifting naturally as the mass distribution in and on the planet changes.
- c) Causes - rocks circulating inside Earth's mantle, ocean currents, hurricanes,

climate-driven changes in water mass distribution e.g., melting of glaciers.

INTERNATIONAL

1. Lab-grown meat

Why in news - United States has approved the production and sale of laboratory-grown meat for the first time in the country.

Key Points –

- 2 companies, Upside Foods and Eat Just, got the final go-ahead to begin commercial production and sales in the US.
- US has become the 2nd country, after Singapore, to allow the commercial sale of lab-grown chicken.
- Lab-grown meat is cultivated using animal cells that are fed water, salt and nutrients, and allowed to multiply in large tanks (no animal slaughter).

ECONOMY

1. GI tag to 7 UP products

Why in news - The Geographical Indications Registry in Chennai has given tags to 7 different products from Uttar Pradesh.

Key Points –

- 7 products - Amroha Dholak, Mahoba Gaura Patthar Hastashlip, Mainpuri Tarkashi, Sambhal Horn Craft, Baghpat Home Furnishings, Barabanki Handloom Product and Kalpi Handmade Paper.
- GI tag assure consumers of the product's quality and distinctiveness derived from its specific geographical locality.

SCIENCE – TECH

1. Critical minerals

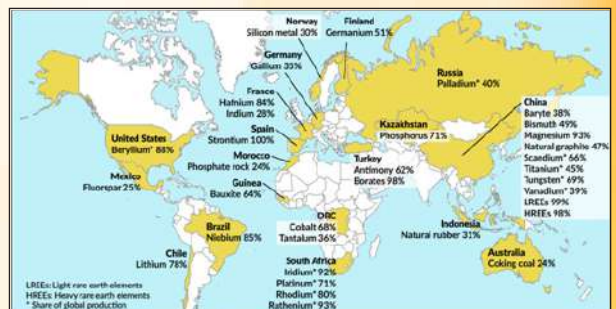
Why in news - The Centre has identified 30 critical minerals which are essential for India's economic development and national security.

Key Points –

- The identification was done on the basis of a report on critical minerals prepared by an expert team constituted by the Ministry of Mines.
- They form part of multiple strategic value chains e.g.,
 - a) clean technologies - zero-emission vehicles, wind turbines, solar panels
 - b) ICT – semiconductors
 - c) advanced manufacturing - defence applications, permanent magnets, ceramics.
- Some Critical minerals identified are - Rare Earth Elements, Cobalt, Copper, Lithium, platinum-group elements (PGE e.g., platinum, palladium), Tungsten, Zirconium, Graphite etc.
- It also called for a need for establishing a National Institute or Centre of Excellence on critical minerals
- A mineral (metals, non-metals and minerals) is critical when the risk of supply shortage and associated impact on the economy is (relatively) higher than other raw materials.

Other Indian Initiatives –

- Geological Survey of India (attached office of M/o of Mines) estimated an inferred resource of 5.9 million tonnes of lithium ore in the Salal-Haimna areas of Reasi (J&K).
- Khanij Bidesh India Ltd. (KABIL) is mandated to identify and acquire overseas mineral assets of critical and strategic nature such as lithium, cobalt etc.
- India was inducted into the Mineral Security Partnership (MSP), a US-led collaboration of 14 countries to catalyze public and private investment in critical mineral supply chains globally.





RANKS & INDICES

1. 20thQS World University Rankings 2024

Why in news - Global higher education analyst Quacquarelli Symonds released the ranking.

Key Points –

- **Top 3 –**
 - a) 1st - Massachusetts Institute of Technology (MIT)
 - b) 2nd - University of Cambridge
 - c) 3rd - University of Oxford.
- **Top 3 (in India) –**
 - a) 149th - Indian Institute of Technology Bombay (IITB)
 - b) 197th - Indian Institute of Technology Delhi (IITD)
 - c) 225th - Indian Institute of Science Bengaluru (IISc).
- QS Ranking has introduced 3 new indicators this year –
 - a) Sustainability
 - b) Employment Outcomes
 - c) International Research Network.

AWARDS & HONOURS

1. PEN Pinter Prize

Why in news - Michael Rosen has been awarded the prestigious PEN Pinter Prize 2023.

Key Points –

- **His most well-known books –**
 - a) You Can't Catch Me (1982, won the Signal Poetry Award)
 - b) You Wait Till I Am Older Than You (1996)
 - c) Rover (2007) etc.
- He is a British children's writer and performance poet.
- The award is given to a writer from the UK, Ireland, and the Commonwealth whose work is committed to a fearless exposition of truth about contemporary life.
- Previous winners - Hanif Kureishi (2010), Salman Rushdie (2014), LemnSissay (2019) and Malorie Blackman (2022).

FESTIVALS

1. Hemis Festival

Why in news - The Hemis monastery celebrates the HemisTsechufestival in Leh, Ladakh.

Key Points –

- It is celebrated on the birthday of Guru Padmasambhava (Guru Rinpoche).
- Monastery is adorned with thangka (Buddhist paintings) of Mahasiddhas.

About Guru Padmasambhava –

- introduced tantric Buddhism in the Himalayan kingdom.
- played a major role in the spread of Buddhism in Tibet.
- has 8 manifestations or avatars.

Value Addition –

- Dungchen - long trumpets.
- Chaam dance - lamas and monks perform the dance.
- Hemis Gompa is the biggest monastery in Ladakh.

BIHAR

1. Monsoon in Bihar

Why in news - The season's first widespread rain lashed several parts of Bihar.

Key Points –

- Despite the onset of monsoon, rain activity remained weak in the state.
- As per MeT office, Bihar recorded 71% deficient rain in June, recording 40.8mm of actual rainfall against 142.4mm of normal rainfall.
- A well-marked low-pressure area has formed over Madhya Pradesh and neighbouring places.
- Apart from this, an east-west trough is lying over Rajasthan to Bay of Bengal via Jharkhand and West Bengal.
- As a result of these meteorological mechanisms, Bihar would receive widespread rain.



➤ CURRENT AFFAIRS ONE LINERS ◀

- Who has become the first spinner to take 5 wicket haul in 3 consecutive ODIs - **WaninduHasaranga**.
- INS Sunayna has visited which country to strengthen bilateral ties with maritime neighbors on the theme of the Ocean Ring of Yoga- **Mombasa, Kenya**.
- The government has increased the price of sugarcane by Rs 10 per quintal to how much per quintal for 2023-24 - **Rs.315 per quintal**.
- The New Delhi Municipal Council has approved the proposal to rename Aurangzeb Lane in Lutyens' Zone after whom - **APJ Abdul Kalam**.
- Which insurance company has become the first life insurer to enable digital payments via WhatsApp and Unified Payment Interfaces - **Tata AIA Life Insurance (Tata AIA)**.
- According to ISRO, when will Chandrayaan 3 be launched - **13 July 2023**.
- India's first hydrogen powered train will run in which state - **Haryana**.
- Who has become the first bowler in world cricket to play 100 consecutive tests - **Nathan Lyon**.
- What is the rank of India in the Energy Transition Index released by the World Economic Forum - **67th**.
- Which union minister has launched 'Champions 2.0 Portal' - **Mr. Narayan Rane**.