



For IAS/IPS/IFS Coaching - Call us at 7994058393 www.enliteias.com

www.enliteias.com FOLLOW US facebook.com/EnliteIASTrivandrum twitter.com/enlite\_ias instagram.com/enliteias

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

#### SUNDAY, 28th SEPTEMBER 2025

## **Table of Contents**

Soilification Technology      Volcano-Induced Earthquakes      UNESCO World Network of Biosphere Reserves (WNBR) and Cold Desert Biosphere Reserve (CDBR)	2
	5
	6
5. Digital Divide in Gram Panchayats	
6. Liberalised Remittance Scheme	

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

## 1. Ishwar Chandra Vidyasagar

- Prelims Ishwar Chandra Vidyasagar
- Mains GS 1 Modern Indian History

#### Why in the news?

September 26 2025 marks 205th birth anniversary of Ishwar Chandra Vidyasagar

#### Ishwar Chandra Vidyasagar

- **Birth:** Born in 1820 in Birsingha village (Medinipur, Bengal).
- Early Life:
  - → Excelled in Sanskrit studies at Sanskrit College, Calcutta.
  - → Known for simplicity and erudition.
  - → Earned the title "Vidyasagar" (Ocean of Knowledge).

#### • Social Reforms:

- → Widow Remarriage Movement:
  - ★ Strong advocate of widow remarriage in Hindu society.
  - ★ His efforts led to the enactment of the Hindu Widows' Remarriage Act, 1856.
- → Opposition to Child Marriage & Polygamy: Criticised regressive practices and worked for rational, humanitarian reforms.
- → Women's Education:
  - ★ Established several schools for girls in Bengal.
  - ★ Believed education was the foundation of women's empowerment.

#### • Educational Reforms:

- → Principal of Sanskrit College, Calcutta (1851).
- → Introduced Western learning alongside Sanskrit.
- → Modernised curriculum to include subjects like science, mathematics, philosophy, English.
- → Simplified and modernised **Bengali prose**, making it accessible to common people.
- → Authored **Borno Porichoy** (Bengali primer) still used in Bengal.

#### • Legacy of Vidyasagar:

- → Remembered as a great humanist, educationist, and reformer.
- → His reforms laid the groundwork for **modern Bengali society**.
- → Called "Dayar Sagar" (Ocean of Kindness) for his philanthropy.
- → His contributions remain central in **India's social reform movements**.

>> Thiruvananthapuram

www.enliteias.com

>> Kozhikode

#### >> Ernakulam

## 2. Soilification Technology

- Prelims Soilification Technology
- Mains GS 3 Environment

#### Why in the news?

 An innovative experiment has been initiated to grow wheat for the first time in arid land of western Rajasthan using desert 'soilification' technology.

#### **Soilification Technology**

#### • What is it?:

- → Soilification is an innovative ecological restoration technology developed in China in the 2010s to transform desert sand into arable soil.
- → It aims to combat desertification, enhance land productivity, and promote sustainable agriculture in arid regions.

#### • Principle:

- → Soilisation agent: A paste-like binding material derived from plant cellulose and other polymers.
- → When it is mixed with sand and water:
  - ★ It gives sand **soil-like properties** such as water retention, fertility, and air permeability.
  - ★ Creates a **topsoil layer** that can support vegetation growth.

#### • Applications:

- → **Desert reclamation:** Turning barren deserts into cultivable land.
- → Afforestation & greening projects in arid/semi-arid zones.
- → Agriculture: Growing crops in desertified areas, improving food security.
- → **Urban landscaping:** Used for greening projects in sandy areas.

#### Advantages:

- → Cost-effective and scalable.
- → High water efficiency (reduces irrigation needs by 80–90%).
- → Restores degraded ecosystems and mitigates climate change impacts.
- → Potential to reduce **dust storms** and desert expansion.
- → Supports UNCCD (United Nations Convention to Combat Desertification) and SDG 15 Life on Land.







facebook.com/EnliteIASTrivandrum twitter.com/enlite\_ias instagram.com/enliteias

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

#### • Challenges:

- → Long-term ecological impacts are still being studied.
- → Requires periodic maintenance and input costs.
- → Risk of **over-dependence on technology** vs. natural ecosystem balance.

#### • Significance for India:

- → Beneficial to combat desertification in Rajasthan, Gujarat, Haryana and parts of Deccan Plateau.
- → It aligns with the objectives and actions of-
  - ★ National Action Plan on Climate Change (NAPCC)
  - ★ National Afforestation Programme (NAP)
  - ★ National Mission for a Green India
  - ★ Desert Development Programme

>> Ernakulam

>> Thiruvananthapuram

www.enliteias.com

facebook.com/EnliteIASTrivandrum

## 3. Volcano-Induced Earthquakes

- Prelims Volcano-Induced Earthquakes
- Mains GS 1 Geography

#### Why in the news?

• As per the study the earthquake swams that hit Greece is due to magma push in Santorini and Kolumbo volcanos which shared a common magma chamber.

#### **Volcano-Induced Earthquakes**

 <u>Definition</u>: A volcano-induced earthquake (volcanic earthquake) is a seismic event generated by magma movement, volcanic gases, or hydrothermal activity beneath or around a volcano, unlike tectonic earthquakes that are caused by plate boundary interactions.

#### Causes

- → Magma Intrusion: Magma forcing its way through cracks fractures surrounding rocks.
- → Gas & Hydrothermal Pressure: Sudden release of pressurised gases/steam.
- → Volcanic Explosions: Eruptive blasts cause shockwaves in the crust.
- → Structural Collapse: Caldera subsidence or flank collapse generates seismicity.

#### • Types

- → Volcano-Tectonic (VT) Earthquakes Similar to tectonic quakes, caused by rock fracturing due to magma intrusion.
- → Long-Period (LP) Earthquakes Low-frequency tremors linked to magma/gas movement.
- → Harmonic Tremors Continuous rhythmic shaking, often a precursor to eruption.

#### • Characteristics

- → Usually shallow focus (within 10 km of surface).
- → Often occur in swarms (clusters before eruptions).
- → Lower magnitude than major tectonic quakes, but critical as warning signals.

#### • Example

- → Mount St. Helens, USA (1980): Earthquake swarms preceded the eruption.
- → Mount Pinatubo, Philippines (1991): Seismicity indicated magma build-up before catastrophic eruption.
- → Eyjafjallajökull, Iceland (2010): Quakes linked to magma movement prior to eruption that disrupted air traffic.



>> Ernakulam

>> Thiruvananthapuram

www.enliteias.com

facebook.com/EnliteIASTrivandrum

# 4. UNESCO World Network of Biosphere Reserves (WNBR) and Cold Desert Biosphere Reserve (CDBR)

- Prelims UNESCO WNBR and Cold Desert Biosphere Reserve (CDBR)
- Mains GS 3 Environment

#### Why in the news?

• The Cold Desert Biosphere Reserve (CDBR) in Himachal Pradesh, along with 25 other biosphere reserves across several countries, has been included in World Network of Biosphere Reserves (WNBR) by the UNESCO.

#### **UNESCO World Network of Biosphere Reserves (WNBR)**

- <u>Launch</u>: The World Network of Biosphere Reserves (WNBR) is part of the UNESCO Man and the Biosphere (MAB) Programme, launched in 1971.
- <u>Objective</u>: Objective: To promote sustainable development by balancing conservation of biodiversity, economic development, and socio-cultural well-being.

#### • Function

- → Conservation: Protect genetic resources, species, ecosystems, landscapes.
- → Development: Foster sustainable economic & human development.
- → Logistic Support: Provide sites for research, monitoring, education, and training.

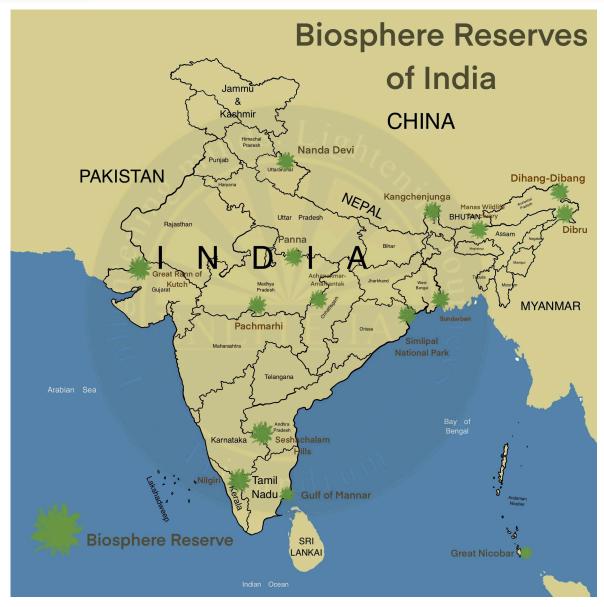
#### • Zonation of a Biosphere Reserve

- → Core Area: Strictly protected for conservation of landscapes, ecosystems, species.
- → **Buffer Zone**: Surrounds the core; limited activities like research, education, tourism.
- → Transition Zone: Outermost; sustainable resource use, human settlements, traditional practices.

>> Ernakulam

>> Thiruvananthapuram

www.enliteias.com FOLLOW US facebook.com/EnliteIASTrivandrum



## **Cold Desert Biosphere Reserve (CDBR)**

- Established: 2009 under India's Biosphere Reserve Programme.
- <u>Location</u>: Himachal Pradesh, in the western Himalayas.
- Physical Features
  - → Climate: Extreme cold, low rainfall (<12 cm annually), dry winds.
  - → **Geography**: Part of the high-altitude Trans-Himalayan region, characterized by cold arid climate.
  - → Topography: Rugged mountains, glaciers, alpine meadows, and cold deserts.
  - → Rivers: Chenab, Spiti, Sutlej and their tributaries.
- Flagship Species: Snow Leopard.
- Vegetation: Alpine & dry temperate vegetation



>> Ernakulam

>> Thiruvananthapuram

www.enliteias.com

## 5. Digital Divide in Gram Panchayats

- Prelims Digital Divide in Gram Panchayats
- Mains GS 2 Governance

#### Why in the news?

 The Ministry of Panchayati Raj (MoPR) has introduced digital governance reforms for Gram Panchayats, in line with the vision of Digital India and Atmanirbhar Bharat, aimed at fostering transparency, efficiency, and inclusivity in rural administration.

#### **Digital Divide in Gram Panchayats**

#### • What is Digital Divide:

- → The digital divide refers to the gap between individuals, households, communities, or regions in terms of access to, use of, and skills in information and communication technologies (ICTs).
- → It encompasses disparities in internet access, digital literacy, affordability, and availability of devices.

### • <u>Dimensions of Digital Divide in Rural India:</u>

#### → Infrastructure Gaps:

- ★ Limited last-mile internet connectivity, especially in hilly, tribal, and border villages.
- ★ Delays in **BharatNet Phase-II** implementation.
- ★ Inadequate electricity supply and power backup.

#### **→** Socio-Economic Barriers:

- ★ Low digital literacy among elected representatives and rural citizens.
- ★ Gender divide: women in rural areas face limited access to smartphones and the internet.
- ★ The cost of smartphones, data packs, and devices remains prohibitive for poorer households.

#### → Capacity and Human Resource Issues:

- ★ Lack of trained staff to operate **Gram Panchayat digital platforms** (e-Gram Swaraj, PFMS, DBT portals).
- ★ Dependency on external operators (CSC owners, private agents) leads to inefficiency and corruption risks.



facebook.com/EnliteIASTrivandrur twitter.com/enlite\_ias instagram.com/enliteias

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

#### → Language and Content Barriers:

- ★ Digital services are often in English/Hindi, not in local languages.
- ★ Limited locally relevant digital content for agriculture, health, education, and governance.

#### → Administrative Challenges:

- ★ Poor integration between State-level and Gram Panchayat-level digital systems.
- ★ Cybersecurity concerns with sensitive citizen data.

#### • Implications of the Digital Divide:

- → Governance Deficit: Weak implementation of e-governance services like Gram Panchayat Development Plans (GPDPs).
- → Exclusion: Marginalised groups miss out on welfare schemes due to lack of digital access.
- → **Transparency Issues:** Without digital literacy, social audits and real-time monitoring remain ineffective.
- → **Slowed Rural Development:** Digital divide hampers rural entrepreneurship, e-commerce, telemedicine, and online education.

#### • GoI Initiatives to Bridge the Divide:

- → **BharatNet Project:** Optical fibre to all 2.5 lakh Gram Panchayats.
- → **Digital India Programme:** Digital literacy, CSCs, DigiLocker, UMANG app.
- → Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA):
  Digital literacy for 6 crore rural households.
- → e-Gram Swaraj portal & mobile app: Transparent planning and accounting at Panchayat level.
- → Common Service Centres (CSCs): Digital delivery hubs for G2C and B2C services.

#### • Wav Forward:

- → Universal Connectivity: Timely completion of BharatNet and promotion of 5G/6G in rural areas.
- → **Digital Capacity Building:** Training Gram Panchayat members and rural women in ICT.





facebook.com/EnliteIASTrivandrun twitter.com/enlite\_ias instagram.com/enliteias

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

- → Affordable Access: Subsidies for rural internet/data plans and low-cost devices.
- → Local Language Digital Content: To make governance and services more inclusive.
- → Community Participation: Involving SHGs, youth groups, and NGOs in digital awareness.
- → Data Security: Strengthening cybersecurity at Panchayat level.

>> Ernakulam

>> Thiruvananthapuram

www.enliteias.com

## 6. Liberalised Remittance Scheme

- Prelims Liberalised Remittance Scheme
- **Mains** GS 3 Economy

#### Why in the news?

 Outward remittances by resident individuals under the Reserve Bank of India's Liberalised Remittance Scheme (LRS) stood at \$2452.93 million in July 2025, registering an 11% year-on-year decline.

#### **Liberalised Remittance Scheme**

#### • What is it?:

- → The Liberalised Remittance Scheme (LRS) allows resident individuals, including minors, to remit a certain amount of money abroad for permitted current and capital account transactions.
- → It is part of India's gradual capital account liberalisation.
- → It was introduced by the Reserve Bank of India (RBI) in 2004.

#### • Key Features:

- → Remittance Limit: As of 2023–24, up to USD 250,000 per financial year per individual.
- → Eligible Persons: Only resident individuals (not corporates, partnership firms, HUFs, etc.).
- → Clubbing Not Permitted: Remittances cannot be pooled from multiple individuals to bypass the limit, except for family members going on joint trips, studies, or maintenance.
- → Mode: Transactions must be routed through Authorised Dealer (AD) banks.

#### • Permitted Uses under LRS:

- → Education Abroad tuition fees, living expenses.
- → Medical Treatment Abroad.
- → Travel & Tourism (private visits, business trips).
- → Maintenance of Close Relatives Abroad.
- **→** Investment Options:
  - ★ Purchase of shares, debt instruments, mutual funds.
  - ★ Setting up Joint Ventures/Wholly Owned Subsidiaries (within rules).







facebook.com/EnliteIASTrivandrur twitter.com/enlite\_ias instagram.com/enliteias

>> Kozhikode

>> Ernakulam

>> Thiruvananthapuram

- ★ Acquisition of immovable property outside India (except in countries prohibited by FATF or close to India's security concerns).
- → **Gift and Donation** to persons/charities abroad.

#### • Restrictions on use of LRS:

- → Margin trading, lottery tickets, sweepstakes, betting or gambling.
- → Remittances to countries identified by **FATF** as **non-cooperative** or with strict **tax-haven characteristics**.
- → Capital account remittances for corporates or partnership firms.
- → Trading in foreign exchange abroad.

#### • Significance:

- → Encourages international education, tourism, and investment opportunities.
- → Provides flexibility to Indian residents in managing global financial needs.
- → Acts as a **capital account management tool** for RBI to regulate forex outflows.

#### • Challenges:

- → Rising outward remittances may put pressure on India's forex reserves.
- → Misuse for round-tripping or money laundering.
- → High **TCS burden** discourages middle-class international travel/study plans.
- → Administrative hurdles and compliance requirements at AD banks.