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Moyar Valley

Moyar valley is the home of critically endangered Gyps Vulture.

- **Other name –** It is also known by the name Maayar (Invisible River) valley.
- **Location –** It extends from Gudalur through the core area of Mudumalai Tiger Reserve.
- **Biome –** The valley is an important biome in the Nilgiri Biosphere Reserve, sheltering several vital species like tiger and elephant and the critically endangered Gyps vulture.
    - A biome is an area classified according to the species that live in that location.

It is the only region in peninsular India which has the biggest nesting colony of Gyps vultures in the wild.

- **NSAIDs –** The region provides a stable food-chain to nature's scavengers, simply because these carcasses are mostly free from Non-steroidal anti-inflammatory drugs (NSAIDs) and other poisonous chemicals.

According to Synchronized Vulture Survey 2024, valley indicates a rise in number of birds, White Rumped vultures (from 80 to 93); Long Billed vultures (from 12 to 28); and Red Headed vultures (from 5 to 15). Egyptian vultures (from 2 to 0).

- **Resident Vultures of Moyar Valley –** White Rumped vultures, Long Billed vultures, Red Headed vultures, and Egyptian vultures.

Quick Facts
Nilgiri Biosphere Reserve

• The Nilgiri Biosphere Reserve was the first biosphere reserve in India established in the year 1986.
• It is located in the Western Ghats and includes 2 of the 10 biogeographical provinces of India.
• The Nilgiri Biosphere Reserve encompasses parts of TamilNadu, Kerala and Karnataka.
• The Nilgiri Biosphere Reserve falls under the biogeographic region of the Malabar rain forest.
• The Mudumalai Wildlife Sanctuary, Wayanad Wildlife Sanctuary, Bandipur National Park, Nagarhole National Park, Mukurthi National Park and Silent Valley are the protected areas present within this reserve.

Vegetation Types of the Nilgiri Biosphere Reserve

Forest type	Nature of Vegetation	Area of occurrence
Moist evergreen	Dense, moist and multi storeyed forest with gigantic trees	In the narrow valleys of Silent Valley.
Semi evergreen	Moist, deciduous	Nilambur and Palghat division
Thorn	Dense	North east part of the Nilgiri district
Savannah woodland	Trees scattered amid woodland	Mudumalai and Bandipur
Sholas & grasslands	High elevated evergreen with grasslands	South and western catchment area, Mukurthi national park

Mudumalai Tiger Reserve (MTR)

• Mudumalai Tiger Reserve (MTR) is located in the Nilgiri District of Tamil Nadu.
• It is at the tri-junction of Karnataka, Kerala and Tamil Nadu.
• The Tiger Reserve comprises of the wildlife sanctuary and the national park of the same name.
• It forms a part of the Nilgiris Biosphere Reserve.
• It has a common boundary with Wyanad Wildlife Sanctuary (Kerala) on the West, Bandipur Tiger Reserve (Karnataka) on the North.
• The Moyar River flows downstream into the Mudumalai Tiger Reserve and is the natural line of division between Mudumalai and Bandipur Sanctuary.

Vultures

• Nine species of vultures are recorded from India and out of these, five belong to the genus Gyps and the rest four are monotypic.

Gyps	Monotypic
• The Oriental White-backed Vulture (OWBV) Gyps bengalensis, • The Long-billed Vulture (LBV) G.indicus, • Slender-billed Vulture (SBV) G. tenuirostris, • The Himalayan Vulture (HV) Gyps himalayensis and • The Eurasian Griffon (EG) Gyps fulvus.	• The Red-headed Vulture (RHV) Sarcogyps calvus, • Egyptian Vulture (EV) Neophron percnopterus, • Bearded Vulture (BV) Gypaetus barbatus and • Cinereous Vulture (CV) Aegypius calvus

• The Gyps Vultures faced near extinction owing to the use of diclofenac, which the Government of India banned for veterinary use in 2006.

References

1. The New Indian Express – Protect Moyar valley
2. News9Live – Moyar Valley

Financing Agrochemical Reduction and Management Programme (FARM)

Ecuador, India, Kenya, Laos, Philippines, Uruguay, and Vietnam have joined forces to launch a $379 million initiative in order to reduce the environmental impact of the agricultural sector.

- **Led by –** FARM is led by the UN Environment Programme (UNEP) with financial support from the Global Environment Facility (GEF).

  Highly hazardous pesticides and agricultural plastics release toxic persistent organic pollutants (POPs), chemicals which don't break down in the environment and contaminate air, water, and food.

- **Tenure –** 5 years.
- **Objective –** FARM programme will support government regulation to phase out POPs-containing agrochemicals and agri-plastics and adopt better management standards.
- FARM will also strengthen banking, insurance and investment criteria to improve the availability of effective pest control, production alternatives and trade in sustainable produce.

Quick Facts
United Nations Environment Programme (UNEP)

• UNEP is the leading global environmental authority that sets the global environmental agenda.
• **It works on 7 thematic areas –** Climate change, Disasters and conflicts, Ecosystem management, Environmental governance, Chemicals and waste, Resource efficiency, and Environment under review.
• **Reports –** Global Environment Outlook, Emission Gap Report, Adaptation Gap Report, Actions on Air Quality & Rise of Environmental Crime Report (along with INTERPOL)
• **UNEA –** The UN Environment Assembly is the world's highest-level decision-making body on the environment which brings together representatives to address the world's most pressing environmental challenges.

Global Environment Facility (GEF)

• The Global Environment Facility (GEF) is a multilateral family of funds dedicated to confronting biodiversity loss, climate change, and pollution, and supporting land and ocean health.
• Its financing enables developing countries to address complex challenges and work towards international environmental goals.
• The partnership includes 186 member governments as well as civil society, Indigenous Peoples, women, and youth, with a focus on integration and inclusivity.
• Over the past three decades, the GEF has provided nearly $25 billion in financing and mobilized another $138 billion for thousands of priority projects and programs.
• The family of funds includes:
1. Global Environment Facility Trust Fund,
2. Global Biodiversity Framework Fund (GBFF),
3. Least Developed Countries Fund (LDCF),
4. Special Climate Change Fund (SCCF),
5. Nagoya Protocol Implementation Fund (NPIF),
6. Capacity-building Initiative for Transparency Trust Fund (CBIT)

• **India –** India has formed a permanent Constituency in the Executive Council of the GEF together with Bangladesh, Sri Lanka, Bhutan, Nepal and Maldives.

References

1. UNEP – FARM
2. GEF – FARM

Vitamin D

An 89 year old resident in the UK died as due to overdose of vitamin D.

- Vitamin D also referred as calciferol is a fat-soluble vitamin.
- **Sources –** Sunlight exposure triggers vitamin D synthesis in the skin, making it the primary natural source.
- Foods rich in vitamin D, including fatty fish like salmon, tuna, and mackerel, as well as fortified dairy products like milk, yogurt, and cheese.
- Eggs, mushrooms exposed to sunlight, and fortified plant-based milk alternatives are also sources.
- **Role of Vitamin D –** Crucial role in maintaining overall health by regulating calcium and phosphorus absorption, supporting bone health, and modulating immune function.

- It helps promote strong bones and teeth, reduces the risk of osteoporosis, and supports muscle function.
- Vitamin D is believed to have anti-inflammatory properties and may contribute to reducing the risk of certain chronic diseases, including cardiovascular disease, autoimmune disorders, and some cancers.
- **Vitamin D Toxicity –** When one consumes too much of these supplements, it might lead to vitamin D toxicity or hypervitaminosis.
- Hypercalcemia or high amounts of calcium, is a direct consequence of high level of Vitamin D in the body.
- Symptoms of hypercalcemia may include confusion, disorientation, excessive thirst, frequent urination, and kidney damage.

- **Symptoms –** In its early stages, symptoms may include nausea, vomiting, poor appetite, constipation, weakness, and weight loss.

  Blood tests can measure serum levels of 25-hydroxyvitamin D (the primary circulating form of vitamin D) and calcium to assess for toxicity. Imaging studies such as X-rays or bone density scans can also be used to evaluate bone health and assess for signs of hypercalcemia.

- **Treatment –** Treatment of vitamin D toxicity primarily involves stopping vitamin D supplementation and limiting dietary sources of vitamin D.
- In severe cases of hypercalcemia, medical interventions such as intravenous fluids, diuretics, or medications to lower calcium levels may be necessary.
- **Ideal amount –** The ideal amount of vitamin D in a human body should be 10 micrograms per day.
- For most adults, the recommended dietary allowance (RDA) for vitamin D ranges from 600 to 800 IU per day, with an upper limit of 4,000 IU per day to avoid toxicity.

References

1. Times of India – Man dies due to Vitamin D toxicity
2. The Economic Times – Death due to Vitamin D overdose raises alarm
3. NIH – Vitamin D

Predicate Offence

The Delhi CM Kejriwal in Delhi excise policy case can be booked for the offence of laundering proceeds of crime derived from the case.

- The Prevention of Money Laundering Act (PMLA) criminalises money laundering.
- According to PMLA, money laundering is defined as:
  - Whosoever directly or indirectly attempts to indulge in any process connected with the proceeds of crime, including its concealment, possession, acquisition shall be guilty of offence of money laundering.

- Proceeds of crime is any property derived directly or indirectly, by any person as a result of criminal activity relating to a scheduled offence.

- The law also defines scheduled offences, which are listed in two schedules attached to the PMLA.
- These acts in the schedules (scheduled acts) are also called predicate offences.

Predicate offence

- Predicate as an adjective means something said of a subject, originally from Latin praedicare meaning to proclaim or make known.
- Predicate offenses in money laundering refers to a crime component of a larger crime.
- In a financial context, the predicate offense would be any crime that generates monetary proceeds.
- The larger crime would be money laundering or financing of terrorism.
- A predicate offence is a crime that is a component of a more serious crime.
- For example, producing unlawful funds is the primary offense, and money laundering is the predicate offense.

Cases associated with Predicate Offence

- In a judgement in the ***Vijay Madanlal Choudhary & Ors v Union of India case***, the Supreme Court upheld key provisions of the PMLA.
- The court had said that if an accused in the predicate offence is acquitted or discharged, he cannot be prosecuted for the offence punishable under the PMLA.
- The Supreme Court in ***Pavana Dibbur v Enforcement Directorate*** verdict, answered the question of, what if an accused is not even shown as an accused in any scheduled or predicate offence.
- The verdict said that an accused in the PMLA case who comes into the picture after the scheduled offence is committed, by assisting in the concealment or use of proceeds of crime, need not be an accused in the scheduled offence.
- Here, the proceeds of crime that the accused has allegedly concealed or possessed must simply be linked to the scheduled offence.
- Such an accused can still be prosecuted under PMLA so long as the scheduled offence exists, the court had said.

References

1. The Indian Express – Can Arvind Kejriwal be booked for money laundering
2. Live Law – PMLA charges can’t proceed if investigation into predicate offence is stalled

PSLV Orbital Experimental Module 3 (POEM 3) Mission

ISRO’s POEM 3 mission accomplishes zero orbital debris mission.

- The fourth stage of PSLV (PS4), also called the PSLV Orbital Experimental Module (POEM) will perform orbital experiments.
- Since this is the 3rd time ISRO has used PS4 to exhibit orbital experiments, XPoSAT's PS4 is called POEM-3.
- The spent PS4 stage will be used to conduct in-orbit scientific experiments in microgravity conditions for an extended duration of 4-6 months.

- It derives power from the solar panels mounted around the PS4 tank and a Lithium-ion battery.
- POEM-3 is equipped with 10 payloads.

- Following the successful placement of all satellites into their designated orbits, the final stage of the PSLV was converted into a 3-axis stabilized platform known as POEM-3.
- This stage was then deorbited from an altitude of 650 km to 350 km, enabling an expedited re-entry process.
- The mission objectives of these payloads were met in a month.

References

1. ISRO – POEM-3 Mission
2. The Hindu – POEM-3 mission accomplishes zero orbital debris mission
3. India Today – Poem-3 burns up above Earth to give Isro zero debris mission

Other Important News

Shaheed Diwas

Farmers pay tributes to freedom fighters Bhagat Singh, Rajguru, Sukhdev at the Shambhu border recently.

• **March 23** is observed as Shaheed Diwas, or ***Martyr's Day*** to mark the death anniversary of Bhagat Singh, Rajguru and Sukhdev.

• The 3 freedom fighters were hanged by the British imperialists in 1931 in the 'Lahore conspiracy' case.

Lahore Conspiracy Case (1928–1931)

• It is a case that involves the assassination of Police Assistant Superintendent ***John Saunders*** by revolutionaries Bhagat Singh and Rajguru.

• The revolutionaries' initial target was Police Superintendent ***James Scott***, who ordered a lathi charge against demonstrators that led to the death of nationalist leader Lala Lajpat Rai.

UNSC resolution on Gaza

• The United Nations Security Council (UNSC) recently demanded an immediate ceasefire and release of all hostages in Gaza.

• The United States chose to abstain from voting on the resolution.

• India is a ***non- permanent member*** in UNSC.

Statio Shiv Shakti

• The ***International Astronomical Union (IAU)*** working group for Planetary System Nomenclature has approved the name 'Statio Shiv Shakti' for the landing site of Chandrayaan-3's Vikram lander recently.
• Planetary nomenclature is used to identify a feature on the surface of a planet or satellite so that it can be easily located, described, and discussed.
• **IAU -** The IAU is the ***internationally recognised authority*** for assigning names to planetary surface features.
• **Headquarters** - France.
• **Founded in** - 1919
• **India's status** – India is a ***member*** to the International Astronomical Union since 1964.

Asteroid 2005 EX296

• International Astronomical Union (IAU) has named an asteroid after Prof. Jayant Murthy, who was acting director of the ***Indian Institute of Astrophysics (IIA).***
• The asteroid 2005 EX296 has been designated as ***(215884) Jayantmurthy.***

Asteroid 2005 EX296

• The asteroid was discovered by MW Buie at the Kitt Peak National Observatory in Arizona, USA, in 2005.
• It orbits the ***Sun between Mars and Jupiter*** every 3.3 years.

World Earth Hour Day

The World Wildlife Fund (WWF) India recently celebrated the Earth Hour 2024 worldwide.
• Earth Hour is a *flagship annual event* by the ***World Wide Fund.***
• It encourages people worldwide to turn their lights off non-essential lights for 60 minutes to ***raise awareness about environmental issues.***
• It has been held since 2007 on the last Saturday in March.

Malawi

The southern African nation of Malawi has recently declared a state of disaster over drought in 23 of its 28 districts.
• Malawi is a ***landlocked country in southeastern Africa.***
• It is bordered by Zambia, Tanzania, and Mozambique.
• The ***East African Rift Valley*** runs through the country from north to south.
• The Great Rift Valley splits the highlands, and the southern end of Lake Malawi is in Lake Malawi National Park.

MTBVAC

Bharat Biotech's TB vaccine MTBVAC begins clinical trials in India

• MTBVAC is derived from a human strain of the ***Mycobacterium tuberculosis bacteria.***

• It was developed by Biofabri in collaboration with the Hyderabad-based Bharat Biotech.

• It is the ***only tuberculosis (TB) vaccine currently available,*** holds promise as a more effective and long-lasting alternative to the Bacille Calmette-Guérin (BCG).

TB claims over 1.6 million lives annually, infects more than 10 million worldwide each year and India holds the world's highest TB burden.

Sacred groves in India

Sacred groves are patches of primeval forest that some rural communities protect as abodes of deities and it helps in the protection of many rare, threatened and endemic species of plants and animals in the area.

Sacred groves	Location
Sarpakavus	Kerala
Devakadu	Karnataka
Nandavanam, Kovilkadu	Tamil Nadu
Devarais	Maharashtra
Pavithraskhetralu	Andhra Pradesh
Law kyntangs	Meghalaya
Khejri	Rajasthan

Gorkha Forts (Banasar, Malaun & Sabathu)

Gorkha forts in Himachal Pradesh, witnesses of historical battles, face neglect.

• Gorkha Fort situated on a small hill ***Subathu*** is situated in ***Himachal Pradesh***.

• It is believed to be founded by the ***Gurkha Army Chief Amar Singh Thapa*** to fight against British, the fort today exhibits strength even through its ruins.

• It is also known as Banasar fort, Malaun fort or Sabathu fort.

The COP Presidencies Troika

COP28 launches 'The COP Presidencies Troika' in partnership with the COP29 and COP30 Presidencies recently.

• It is mandated by the ***UAE Consensus***, unites COP28 with the next 2 COP Presidencies Azerbaijan and Brazil to drive ambitious collective climate action.

• The Troika will aim to raise and reframe ambition for the development process of the next round of Nationally Determined Contributions (NDCs), 2025.

• The troika's main aim is to coherently address climate action under the ***1.5°C umbrella.***

