

PRELIMS EDGE 202521-07-2025**TERMS IN NEWS****Laser Interferometer Gravitational-Wave Observatory (LIGO)**

- It is the **world's largest gravitational wave observatory**.
- It is an international network of laboratories that detect **gravitational waves**
- It is an ambitious project by U.S to detect the **faintest ripples from cosmic explosions millions of light years away**.
- LIGO exploits the **physical properties of light and of space itself to detect and understand the origins of gravitational waves (GW)**.
- LIGO Comprises two large observatories located 3000 kilometers apart - at Hanford in the

State of Washington, and at Livingston in Louisiana.

- Besides the United States such gravitational wave observatories are currently **operational in Italy (Virgo) and Japan (Kagra)**.

LIGO India Project

- A **third gravitational-wave detection facility is being built in India** as part of the LIGO-India collaboration to:
 - increase the chances of detecting gravitational waves from anywhere in the observable universe.
 - improve the detectors' collective ability to pinpoint sources of gravitational waves in the sky.
- To be located in the **Hingoli district of Maharashtra, LIGO-India is scheduled to begin its scientific runs in 2030**.
- The Department of Atomic Energy and the Department of Science and Technology are building LIGO-India in partnership with the U.S. National Science Foundation and various national and international research institutions.

SCHEMES IN NEWS

Lakhpati Didi Scheme



- A "Lakhpati Didi" is a member of a Self Help Group who has successfully achieved an **annual household income of Rupees One Lakh or more**.
- This income is sustained across at least four agricultural seasons or business cycles, ensuring that the average monthly income exceeds Rupees Ten Thousand (Rs. 10,000).
- It was initiated by the **Deendayal Antyodaya Yojana- National Rural Livelihoods Mission (DAY-NRLM)**, wherein each SHG household is encouraged to take up multiple livelihood activities coupled with value chain interventions, resulting in a sustainable income of **Rs. 1,00,000 or more per year**.
- **Purpose:** The initiative aims to **empower women not only by improving their income but by transforming their lives through sustainable livelihood practices**.
- These women serve as role models in their communities, demonstrating

the power of effective resource management and entrepreneurship.

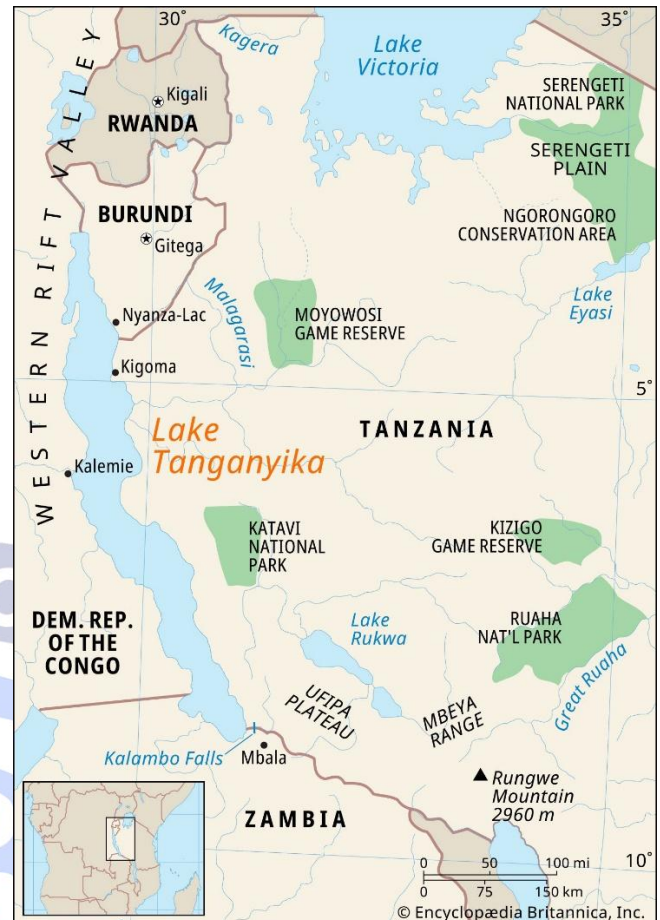
Lakhpati Didi Strategy:

- **Diversified Livelihood Options:** The initiative emphasises deepening, strengthening, and expanding livelihood options for SHG members.
- Trained Community Resource Persons facilitate livelihood planning for SHG members using digital tools for resource linkages.
- **Implementation Support:** The scheme is an initiative implemented by the **Ministry of Rural Development**
- SHG members receive timely support in the form of assets (inputs, equipment, infrastructure), skills (knowledge and practical skills), access to finance (bank linkage, departmental schemes), and market access (branding, packaging, e-commerce).
- **Capacity Building:** Regular and structured training programs are provided to Mission Staff, community institutions, and SHG members on various aspects of livelihood activities.
- **Convergence and Partnerships:** The initiative leverages convergence with various government schemes and partnerships with private sector players to mobilise technical, financial, and capacity-building resources.

PLACES IN NEWS

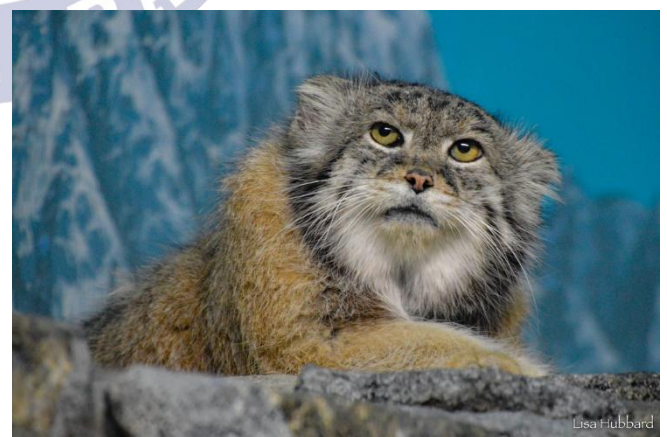
Lake Tanganyika

- It is an ancient lake located in **East Africa**.
- **Bordering Countries:** Burundi, Democratic Republic of the Congo (DRC), Tanzania and Zambia.
- It is **extremely long, deepest and is the longest lake in the world**, measuring over 400 miles long.
- It occupies the southern end of the **Western Rift Valley**, and for most of its length the land rises steeply from its shores.
- It is situated on the line dividing the floral regions of eastern and western Africa, and oil palms, which are characteristic of the flora of western Africa, grow along the lake's shores.
- The largest rivers discharging into the lake are the **Malagarasi, the Ruzizi, and the Kalambo**.
- Its outlet is the Lukuga River, which flows into the Lualaba River.
- Rice and subsistence crops are grown along the shores, and fishing is of some significance



SPECIES IN NEWS

Palla's Cat



- The Pallas's cat, or manul (*Otocolobus manul*), is a small, long-haired cat (family Felidae).

- It was named Pallas's cat after Peter Simon Pallas, who first described it in 1776 based on specimens collected near Lake Baikal, Russia.

Distribution:

- They are **primarily found in Central Asia**, with their range extending to western Iran, Mongolia, China, Russia (on the border of Mongolia and China), Kazakhstan, and Kyrgyzstan.
- In these regions, **these cats inhabit mountainous plains and semi-desert foothills.**
- In India they are found along the **Western Himalayas**

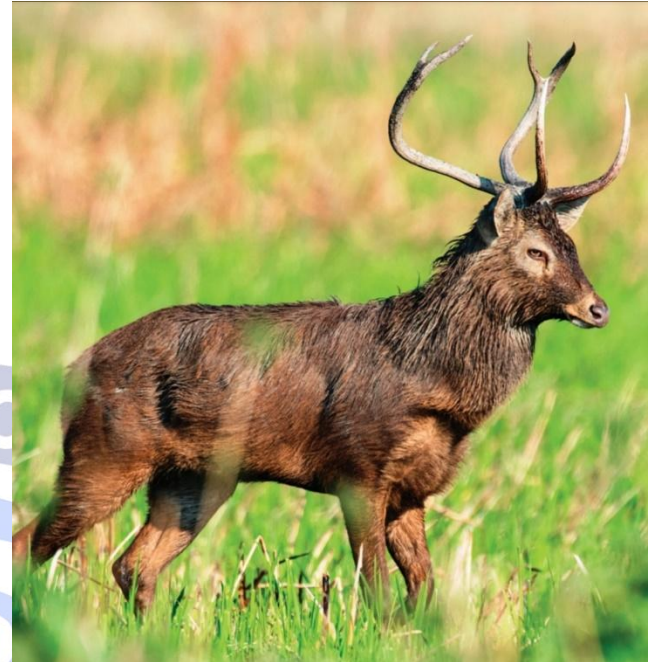
Features:

- It is a soft-furred animal about the size of a house cat and is pale silvery gray or light brown in colour.
- Head and body length ranges from 45 to 60 centimeters (18 to 24 inches) with an additional 23–30 cm for the tail; weight ranges from 2.5 to 3.5 kilograms (5.5 to 7.7 pounds).
- The Pallas's cat is distinguished by **abroad head with high-set eyes and low-set ears.**
- The end of its tail is ringed and tipped with black, and some individuals have vague, dark markings on the body.
- The fur of the underparts is about twice as long as that of the upperparts and possibly represents an adaptation to the cat's habitual lying and crouching on cold ground.

Conservation Status:

- IUCN Red List: Least Concern
- CITES: Appendix II

Sangai Deer



- The brow-antlered deer, or sangai, is the state **animal of Manipur.**

Habitat:

- The deer's habitat has varied from shrubland and grassland to dry forests and marshland, depending on the country they're found in.
- Native to Cambodia, China, India, Laos and Myanmar, these animals were earlier spread widely across habitats in **south and south-east Asia.**
- In India, these animals are found only in **Manipur's famed Loktak lake, Keibul Lamjao National Park**
- The brow-antlered deer usually consumes grass.

Appearance

- It is a medium-sized deer, with uniquely distinctive antlers, with extremely long brow tine, which form the main beam.
- The forward protruding beam appears to come out from the eyebrow, hence called the brow-antlered deer.
- It has a **dark reddish-brown winter coat, which turns paler in summer.**
- The deer walks on the hind surface of its pasterns with mincing hops over floating foliage, and is hence also called the **Dancing Deer.**

Threat:

- While globally habitat loss has been a grave concern in the conservation of this deer, hunting is an additional threat in Manipur.
- While the habitats have been encroached for grazing, cultivation, and fish farming, the animals are highly threatened by a hydro-electric project in the lake.

Conservation status

- IUCN: Critically Endangered
- The Wildlife (Protection) Act, 1972: Schedule-1

PRACTICE QUESTIONS

Q1: The Sangai deer's habitat has varied from shrubland and grassland to dry forests and marshland, depending on the country they're found in. Native to Cambodia, China, India, Laos and Myanmar, these animals were earlier

spread widely across habitats in south and south-east Asia.

In India, this animal is found only in which of the following regions?

- A. Kanha National Park
- B. Panna National Park
- C. Manas National Park
- D. Keibul Lamjao DNational Park

Q2: It is a soft-furred wild cat about the size of a house cat and is pale silvery gray or light brown in colour. This cat is distinguished by abroad head with high-set eyes and low-set ears. The fur of the underparts is about twice as long as that of the upperparts and possibly represents an adaptation to the cat's habitual lying and crouching on cold ground. They are mostly found the Central Asian Highlands including Western Himalayas

Identify the species from the given description

- A. Lynx
- B. Caracal
- C. Palla's Cat
- D. Fishing Cat

Q3: Which of the following countries is not part of the East African Rift Valley Region?

- A. Uganda
- B. Kenya
- C. Tanzania
- D. Morocco

Q4 : Consider the following statements regarding Lakhpati Didi Scheme?

1. A "Lakhpati Didi" is a member of a Self-Help Group who has successfully achieved an annual household income of Rupees 10 Lakh or more.
2. The initiative aims to empower women not only by improving their income but by transforming their lives through sustainable livelihood practices.
3. The scheme is an initiative implemented by the Ministry of Rural Development

Answers

1. D
2. C
3. D
4. A
5. B

How many of the above statements are incorrect?

- A. Only One
- B. Only Two
- C. All of the Above
- D. None of the Above

Q5 : Consider the following statements regarding Laser Interferometer Gravitational-Wave Observatory (LIGO)

1. It is an international network of laboratories that detect gravitational waves
2. World's First LIGO Observatory is set to be established in India

How many of the above statements are incorrect?

- A. Only Statement 1
- B. Only Statement 2
- C. Both the statements
- D. None of the Above