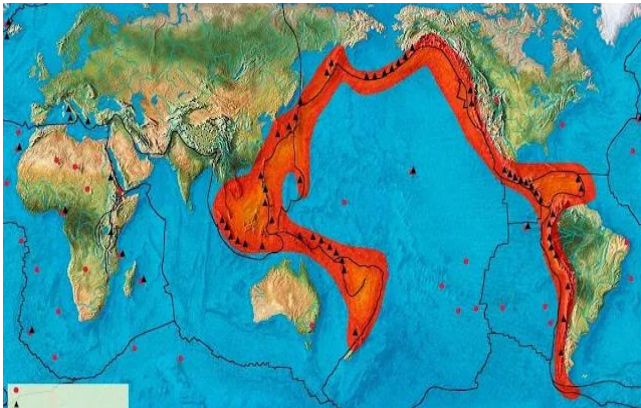


**PRELIMS EDGE 2025****31-07-2025****TERMS IN NEWS****Pacific Ring of Fire**

- It is a **string of hundreds of volcanoes and earthquake-sites which runs along the Pacific Ocean**. It is a semicircle or horse shoe in shape and stretches nearly 40,250 kilometres.
- It traces the meeting points of numerous tectonic plates, including the Eurasian, North American, Juan de Fuca, Cocos, Caribbean, Nazca, Antarctic, Indian, Australian, Philippine, and other smaller plates, which all encircle the large Pacific Plate.
- It runs through 15 more countries including the USA, Indonesia, Mexico, Japan, Canada, Guatemala, Russia, Chile, Peru, and the Philippines.

Why is it more prone to earthquakes?

- It witnesses so many earthquakes due to **constant sliding past, colliding into, or**

moving above or below each other of the tectonic plates. As the edges of these plates are quite rough, they get stuck with one another while the rest of the plate keeps moving.

- An earthquake occurs **when the plate has moved far enough and the edges unstick on one of the faults.**
- There are many volcanoes in the Ring of Fire due to the movement of tectonic plates. Many of the volcanoes have been formed through a process known as **subduction.**
- It takes place when two plates collide with each other and the heavier plate is shoved under another, creating a **deep trench.**
- **Most of the subduction zones on the planet are located in the Ring of Fire and that's why it hosts a large number of volcanoes**

PLACES IN NEWS

Kamchatka Peninsula



- **Location:** It lies in far eastern Russia, between the Sea of Okhotsk on the west and the Pacific Ocean and Bering Sea on the east.
- It is one of the **world's most concentrated areas of geothermal activity**
- It is part of the Kamchatka Krai. Kamchatka, also known as a **land of fire and ice**, sits on the **Pacific Ring of Fire** and is home to **over 150 volcanoes, including 29 active volcanoes**.
- It is about 1,200 km long north-south and about 480 km across at its widest.
- **Area:** Approximately 370,000 square km. About the size of New Zealand, it is one of the largest peninsulas in the world.
- **Population:** About 300,000 people live on the peninsula. The population density is one of the lowest in the world, at less than a person per square kilometre.
- **Climate:** Severe, with prolonged, cold, and snowy winters and wet, cool summers.
- **Highest Point:** The Klyuchevskaya Sopka in the Eastern Range is the highest point on the Kamchatka Peninsula.

- **Regional Capital:** Petropavlovsk-Kamchatsky.
- The **Kuril Island chain** runs from the southern tip of the peninsula to a short distance from Japan's northern Hokkaido Island

SPECIES IN NEWS

Mangroves

- Mangroves are a unique type of **coastal ecosystem found in tropical and subtropical regions**.
- They are dense forests of salt-tolerant trees and shrubs that thrive **in intertidal zones**, where land meets the sea.
- These ecosystems are characterized by their **ability to withstand harsh conditions**, such as saline water, tidal fluctuations, and muddy, oxygen-poor soils.



Features of Mangroves

- They are **salt-tolerant plant** species with roots dangling down into the water.
- Since they grow in very high salinity waters, they are adapted to the condition and are salt tolerant.
- They can secrete salt from their leaves to balance the salt intake.

- They have developed roots bearing **pneumatophore (or aerial roots)**.
- These forests are also become quite resistant to high temperatures.
- They exhibit a **viviparous mode of reproduction**.

Mangrove Cover in India:

- According to the **Indian State Forest Report 2021**, Mangrove cover in India is 4992 sq. Km which is **0.15% of the country's total geographical area**.
- **Sundarbans** in West Bengal are the largest mangrove forest regions in the world. It is listed as a **UNESCO World Heritage Site**.
- Besides the Sundarbans, the Andamans region, the Kachchh and Jamnagar areas in Gujarat too have substantial mangrove cover.

Amur Falcon ★



- It is a small raptor of the falcon family.
- These are locally known as Akhuipuina, the bird mainly in **Manipur and Nagaland**.
- They breed in south-eastern Siberia and **Northern China** and migrate long

distances in large flocks to winter in Southern and East Africa.

- The one-way journey via India is about 20,000 km long and the birds do this twice a year.

Conservation efforts:

- It is protected under the Wildlife Protection Act 1972 and included under its **Schedule IV**.
- Hunting of the birds or possessing its meat is punishable with imprisonment up to three years or a fine upto 25,000 or with bonds.
- In 2018, the forest department started a conservation programme by radio-tagging the birds to study their migratory route.
- **IUCN**: Least Concern.
- **Threats**: Illegal trapping and killing during migration, habitat loss from agricultural practices and land reclamation

SCHEMES IN NEWS

MISHTI Scheme



- The **Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI) scheme** is a government-led initiative aimed at **increasing the mangrove cover**

along the coastline and on salt pan lands.

- “MISHTI” comes after India joined the ‘Mangrove Alliance for Climate’ launched during the **27th Conference of Parties (COP27) to the UNFCCC held in Egypt in November 2022.**
- It was launched by the Ministry of Environment, Forest & Climate Change on the occasion of World Environment Day, i.e., 5th June 2023.
- MISHTI envisages the restoration/reforestation of mangroves covering approximately 540 sq.km., spreading across 9 states and 3 union territories for a period of five years commencing 2023-24 onwards.
- The scheme is primarily focused on the Sundarbans delta, Hooghly Estuary in West Bengal, India, and other bay parts of the country, but also includes other wetlands in the country.
- Under the MISHTI scheme, the government is providing **financial assistance to local communities to undertake mangrove plantation activities.**
- The scheme also involves **awareness campaigns to educate people** about the importance of mangroves and their role in protecting the environment.
- The plantation activities are carried out in a **participatory manner, involving local communities and NGOs**, to ensure sustainability and community ownership of the initiative.
- It leverages the strengths and provisions of different government schemes and initiatives such as the **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), the Compensatory**

Afforestation Fund Management and Planning Authority (CAMPA) Fund and other relevant sources.

PRACTICE QUESTIONS

Q1: Consider the following statements regarding the Pacific Ring of Fire

1. It is a string of hundreds of volcanoes and earthquake-sites which runs along the Pacific Ocean.
2. Many of the volcanoes have been formed through a process known as subduction.
3. Most of the subduction zones on the planet are located in the Ring of Fire and that's why it hosts a large number of volcanoes

How many of the above statements are incorrect?

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

Q2: The Kamchatka Peninsula recently seen in the news is part of which of the following countries?

- A. Russia
- B. Japan
- C. China
- D. USA

Q3: They are a unique type of coastal ecosystem found in tropical and subtropical regions. They are dense forests of salt-tolerant trees and shrubs that thrive in intertidal zones, where land meets the sea. These ecosystems are characterized by their ability to withstand

harsh conditions, such as saline water, tidal fluctuations, and muddy, oxygen-poor soils.

Identify the species from the given description.

- A. Mangroves
- B. Sea Weed
- C. Kelp Forest
- D. Elephant Bamboo

Q4: Consider the following statements regarding the Amur Falcons

1. They breed in south-eastern Siberia and Northern China and migrate long distances in large flocks to winter in Southern and East Africa.
2. The one-way journey via India is about 20,000 km long and the birds do this twice a year.
3. These are locally known as Akhuipuina, the bird mainly in Manipur and Nagaland.

How many of the above statements are correct?

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

Q5: Consider the following statements regarding MISHTI Scheme

1. The Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI) scheme is a government-led initiative aimed at increasing the mangrove cover along the coastline and on salt pan lands.
2. Under the MISHTI scheme, the government is providing financial assistance to local communities to

undertake mangrove plantation activities.

3. It leverages the strengths and provisions of different government schemes and initiatives such as the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) Fund and other relevant sources.

How many of the above statements are incorrect?

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

Answers

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