



# 1. International Indian Ocean Conference

Topic: International Relations



**In News:** Bangladesh is hosting the sixth international Indian Ocean Conference in its capital city Dhaka.

## More on the Topic

- The theme of the event is 'Peace, Prosperity and Partnership for a Resilient Future' in view of the post-Covid scenario and the ongoing Russia-Ukraine conflict.
- **The IOC has been held annually since 2016** and has become a key platform for regional countries to discuss regional affairs.
- It focuses on fostering regional cooperation for **Security and Growth for All in the Region (SAGAR)**, bringing together critical states and maritime partners in the region.
- The conference is being organized by the India Foundation in collaboration with the Bangladesh Ministry of Foreign Affairs.

## What Significance of Indian Ocean Region:

- The Indian Ocean, which lies at the crossroads of Africa, Asia, and Australia, houses a number of littorals that play critical roles in the region.
- **Strategic Choke Points:** The IOR is a vital sea lane with choke points such the Strait of Hormuz, Strait of Malacca, Bab-el Mandeb, and so forth.
- These choke points are of immense strategic importance. These choke points are exposed to piracy, international disputes, political dissents, and accidents.
- **Resource Richness:** The IOR littoral states are rich in producing various raw materials, primarily oil, which are key to development of major manufacturing industries of developed as well as developing nations.



- **Trade significance:** More than half of the global seaborne trade and commerce passes through the Indian Ocean out of which, almost 70 per cent goes to countries external to the region.
- **Attractive Market:** The IOR littorals house more than one-third of world's population.

#### Challenges in the IOR:

- **Security Threats:** Piracy, maritime terrorism, drug trafficking, illicit weapons trafficking, illegal migrants, poaching etc are common threat in the region.
- **Rowing Chinese Presence:** Chinese presence on the ports like Gwadar, Hambantota, Djibouti to name a few, in guise of maritime Silk Road needs no elaboration.
- **Climate Change:** Climate change is affecting all the nations especially the small island nations in the region. This might lead to exodus of climate refugees in the near future.
- **Regional Uncertainty:** Uncertainty in Somalia, Yemen, Iran, and other countries makes maritime security in the IOR more difficult.

#### Way Ahead:

- **There is a need to have capability enhancement of IOR nations**, particularly their navies to accrue immense benefit for the entire IOR.
- Chinese is developing their might in the small island nations. There is a need to close vigils and counter strategies to counter their presence and strategies in in the region.
- India should **use its military presence more actively**, increasing its interaction with small nations and littoral countries
- India must make **improvements to its coordinated patrols with all of the littoral states**. It would be necessary for ASEAN to work through SAARC, BIMSTEC, and ASEAN to fill in the gaps and establish a framework for shared maritime security.
- Climate mitigation as well as disaster reduction strategies should be envisaged to help small island nations.

**Source: Indian Express**

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## 2. India's Nuclear Power Journey

Topic: Polity and Governance



**In News:** India successfully conducted three nuclear bomb test explosions at the testing site in Pokhran on May 11, 1998. While these tests caused an international outcry at the time, they cemented India's status as a nuclear power.

### More on the Topic:

- India's nuclear programme can be traced **to the work of physicist Homi J Bhaba**.
- In 1945, after Bhaba's successful lobbying of India's biggest industrial family, the Tata Institute of Fundamental Research was opened in Bombay. TIFR was India's first research institution dedicated to the study of nuclear physics.
- After Bhaba's perusal then government has established the Department of Atomic Energy (DAE) in 1954, with Bhabha as director.
- **The War Effects:** A pivotal moment in India's nuclear journey came after it suffered a crushing defeat in the 1962 Sino-Indian War and China's subsequent nuclear bomb test at Lop Nor in 1964.
- In 1965, India went to war with Pakistan once again, with China openly supporting Pakistan this time.
- **International Dynamics:** After China successfully tested its own bomb, there was increasing international consensus among the big powers regarding the need for a non-proliferation treaty.
- In 1968, the Non-Proliferation Treaty (NPT) came into existence. The treaty defines nuclear-weapon states as those that have built and tested a nuclear explosive device before January 1, 1967 – the US, Russia (formerly USSR), the UK, France and China – and effectively disallows any other state from acquiring nuclear weapons. While the treaty

has been signed by almost every country in the world, India is one of the few non-signatories.

- **Pokhran-I and its aftermath:** By the 1970s, India was capable of conducting a nuclear bomb test. Bhaba's successor at the DAE, Vikram Sarabhai, had worked to significantly broaden India's nuclear technology.
- On May 18, 1974, **India carried out its first nuclear test at the Pokhran test site.** Pokhran-I, codenamed Operation Smiling Buddha, would be billed as a "peaceful nuclear explosion", with "few military implications".
- There was near-universal condemnation and countries like the US and Canada imposed significant international sanctions on India.
- **The culmination:** In March 1998, Pakistan launched the Ghauri missile – built with assistance from China. Two months later, **India responded with Operation Shakti.**
- While the 1974 tests were ostensibly done for peaceful purposes, the 1998 tests were the culmination of India's nuclear weaponisation process.
- **Consequently, the Indian Government declared itself as a state possessing nuclear weapons following Pokhran-II.**
- While the tests in 1998 also invited sanctions from some countries (like the US), the condemnation was far from universal like in 1974.
- In context of India's fast-growing economy and market potential, India was able to stand its ground and thus cement its status as a dominant nation state.

Source: IE

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### 3. LIGO - India Project

Topic: Science and Technology





**In News:** PM has laid foundation stone of the LIGO Project.

**More on the Topic:**

- Laser Interferometer Gravitational-Wave Observatory or LIGO is a global network of laboratories that can detect gravitational waves, which are tiny ripples in the fabric of space and time.
- **LIGOs have detectors designed to look for these tiny cosmic ripples.** For instance, the LIGO detectors can pick up a change of distance that is several times smaller than a proton.
- So far, there are four such facilities in the world.
- There are two LIGOs in Washington State and Louisiana in the US. The one in Italy is called Virgo. The fourth one, named Kamioka Gravitational-Wave Detector (KAGRA), is in Japan.

**What causes gravitational waves?**

- Gravitational waves are caused by some of the most violent events in the universe involving massive objects in motion, such as merging neutron stars or black holes, or exploding stars.
- **Albert Einstein has first predicted the existence of gravitational waves soon after formulating the theory of General Relativity in 1915.**
- Gravitational waves **can help expand our understanding of the universe.**
- **LIGO detected gravitational waves for the first time in 2015.** Two black holes, 29 and 36 times the mass of the sun, merged 1.3 billion years ago to produce those waves.
- The scientists involved in the project — Rainer Weiss, Barry C Barish, and Kip S Thorne — won the Nobel Prize in Physics in 2017.
- The detection confirmed Einstein's theory that space and time are not distinct entities but are **woven together in a fabric-like structure that curves, stretches, and even warps, because of gravity waves created by massive objects moving at high speeds.**
- Since then, LIGO and its partner observatory Advanced Virgo (the facility in Italy) have detected more than 50 such signals.

**How the LOGO observatory work:**

- The LIGO detectors comprise two 4-km-long L-shaped interferometers, which are essentially vacuum chambers about 4 ft in diameter with mirrors at the end.
- Light rays are released simultaneously in both chambers. The rays split into two beams traveling back and forth down the arms.
- The light should return at the same time in both chambers. However, if a gravitational wave passes through, there is a change in the length — smaller than one-ten-thousandth the diameter of a proton — which the LIGO detectors can pick up.

**Source: Hindu**

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## 4. Baobabs Trees

**Topic: Environment and Ecology**



**In News:** Bhil Tribes are fighting against uprooting of Baobabs trees in Madhya Pradesh.

**More on the Topic:**

- The endangered Baobabs belongs to the genus *Adansonia* are native to mainland Africa, Madagascar, and Australia.
- They have unusual barrel-like trunks and are known for their extraordinary longevity (live up to 2,000 years) and ethnobotanical importance.
- The tree's unique pendulous flowers are pollinated by bats and bush babies (Galagos).
- Madhya Pradesh government has applied for a Geographical Indication (GI) tag for Baobabs.

**Source:** HT

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## 5. Cham lama Dance

**Topic: Art and Culture**



**In News:** One of the most colourful events organised by monasteries in Sikkim are the ‘chaam’ or the ritualistic masked dances.

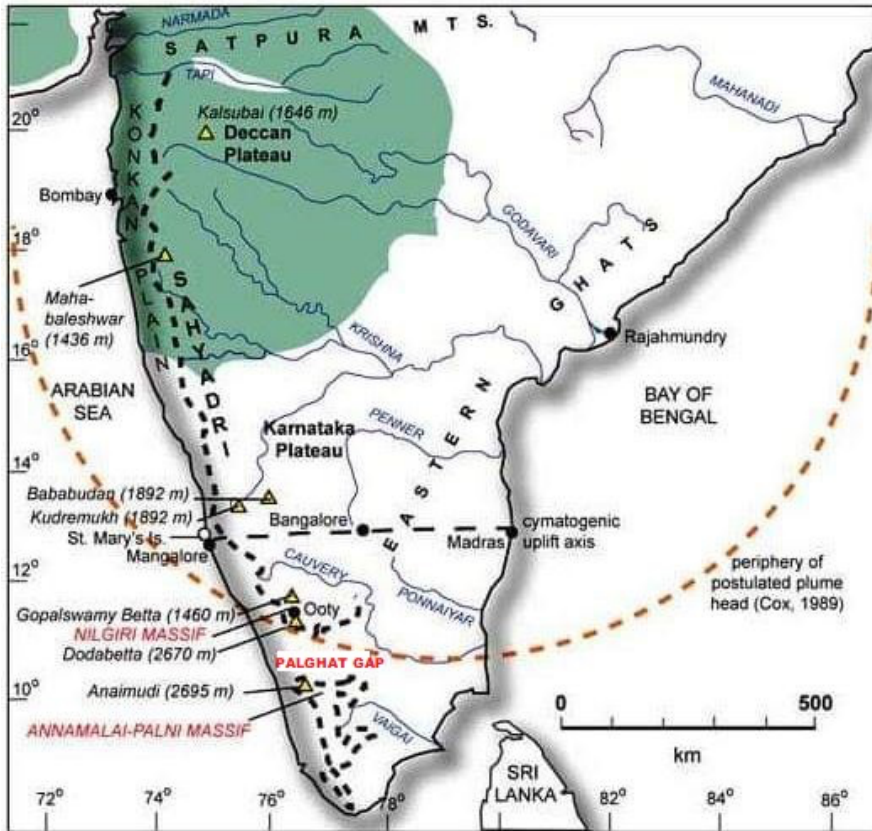
### **More on the Topic:**

- These are usually organised as part of a bigger festival and performed by the monks of the Tibetan Buddhism order.
- The theme can range from appeasement of the gods to tales from the life of the divine characters. Wearing elaborate masks and colourful costumes, the performers represent various characters, broadly divided into good and bad, the divine and the devil.
- **Padma Sambhava (Guru Rinpoche) the founder of Nyingmapa is believed to have started the Cham Dance tradition.**
- The dance often depicts scenes of Padmasambhava’s life and his 8 manifestations

**Source: Business Standard**

## 6. The Palghat Gap

Topic: Geography



**In News:** Often called as a significant discontinuity in the Western Ghats, the Palghat Gap is about 40 km wide, with the steep Nilgiris and Anamalai hills, both rising above 2,000 msl, on either side.

### More on the Topic:

- The Palghat Gap has historically been important as a significant gateway into the State of Kerala.
- It is a corridor for both roads and railways that connects Coimbatore with Palakkad. The **Bharathappuzha river flows through it.**
- In contrast to the tropical rainforests of the Western Ghats, **the vegetation in the Palghat Gap is classified as dry evergreen forest.**
- It also marks a divide in the flora and fauna of the region. For example, several species of frogs are found only on one side of the Gap.

### Origin of the Gap:





- The Gap is a geological shear zone that runs from east to west. Shear zones are weak regions in the earth's crust — this is the reason why tremors are sometimes felt in the region Coimbatore.
- The origin of the Palghat Gap also stems from the drift of continental shelves after Australia and Africa broke off from the Gondwana landmass.
- India and Madagascar remained as one landmass until large-scale volcanic activity split the two, the split occurring where the Palghat Gap is located — this is mirrored in the Ranotsara Gap on the eastern face of Madagascar.

Source: Business Standard

## 7. Centre for Processing Accelerated Corporate Exit (C-PACE)

Topic: e-Governance



**In News:** The corporate affairs ministry has set up Centre for Processing Accelerated Corporate Exit (C-PACE) .

**More on the Topic:**

- It is to ensure timely and process-bound deregistering of companies from records as well as provide more meaningful data to the stakeholders.
- The centre is situated at the Indian Institute of Corporate Affairs (IICA) in Manesar, Haryana.
- Several IT-based systems have been established **for accelerated registration of new companies.**
- The government has established C-PACE to facilitate the faster voluntary winding up of companies, reducing the current timeline of two years to less than six months,
- to facilitate the quick and procedure-bound deletion of businesses from public records and to provide stakeholders with more usable data.



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Source: Business Standard

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