

Geography Current Affairs April 2020



Geography

US Virginia Islands

Why in the news?

- The **United States Virgin Islands (USVI)** has recently banned sunscreen products with **chemicals are known to be harmful to coral reefs and marine life**.
- United States Virgin Islands became the **first territory in the United States** which **banned sunscreen product**.



About the Sunscreens

- Sunscreens containing the 3 Os — **oxybenzone, octocrylene and octinoxate** — **harm the coral reefs** that protect the Virgin Islands' shoreline.
- Sunscreens containing **mineral alternatives such as zinc oxide and titanium dioxide** have been exempted.
- The **concentration of these chemicals is 40 times** more than acceptable levels in some of **our territorial waters**.

Other countries banned who banned Sunscreens

- The **archipelago nation of Palau** is set to become the **first country to enact a sunscreen ban**, which will take effect in 2020.
- **Key West in Florida** has banned stores from **keeping sunscreen containing the toxin 3 O's from 2021**.
- The **Caribbean islands of Bonaire** have **unanimously voted to ban** the sale of sunscreen by 2021.
- The **Hawaii government** also voted to **ban the sale of sunscreens** containing reef-damaging chemicals oxybenzone and octinoxate from 2021.

Topic- GS Paper 3–Environment

Source- Down to Earth

Natuna Islands

Why in the news?

- **China** has been **illegally fishing in the Natuna Islands** area, which is **internationally recognized as Indonesia's exclusive zone**.

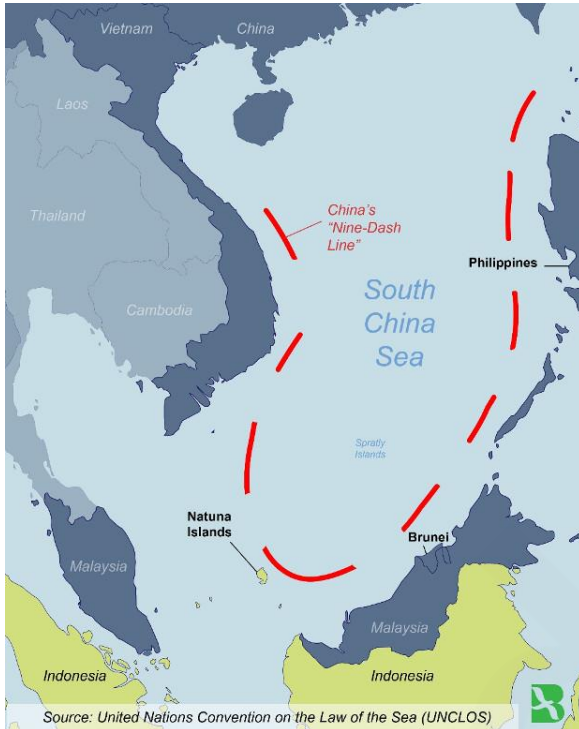


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About the Natuna Island

- The Natuna Islands are an **archipelago of 272 islands**, located between **Malaysia and Borneo (Kalimantan)**.
- They form a part of **Indonesia's Riau Islands province** (the west side of the South China Sea).



About the South China Sea

- It is an arm of **the western Pacific Ocean in Southeast Asia**.
- It is south of China, east & south of Vietnam, west of the Philippines and north of the island of Borneo.
- Taiwan Strait connects it with the **East China Sea and by Luzon Strait** with the **Philippine Sea**.
- It contains numerous shoals, reefs, atolls and islands.
- The **Paracel Islands**, the **Spratly Islands** and the **Scarborough Shoal** are the most important.

Topic- GS Paper 1–Geography

Source- New York Times

Dhauladhar range

Why in the news?

- Recently, the **Dhauladhar mountain range** has become **visible from Jalandhar, Punjab** for the first time **because of less air pollution** caused by the **ongoing lockdown**.



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About the Dhauladhar range

- It is part of a **lesser Himalayan chain of mountains** and **located mainly in Himachal Pradesh**.
- These mountains are **mostly composed of granite**, but **limestone and sandstone** also exist in some parts.
- **Lam Dal lake**, a glacier lake, also situated in this range.
- One of the major passes across this range is the **Indrahar Pass** which forms the border between **Kangra and Chamba** districts of the state.

Topic- GS Paper 1–Geography

Source- The Hindu

Third mass bleaching of Great Barrier Reef: Study

Why in the news?

- Recently, **Australia's Great Barrier Reef** has suffered its **most widespread coral bleaching on record**, which is a **big threat posed by climate change** to the **world's largest living organism**.



What are Coral Reefs?

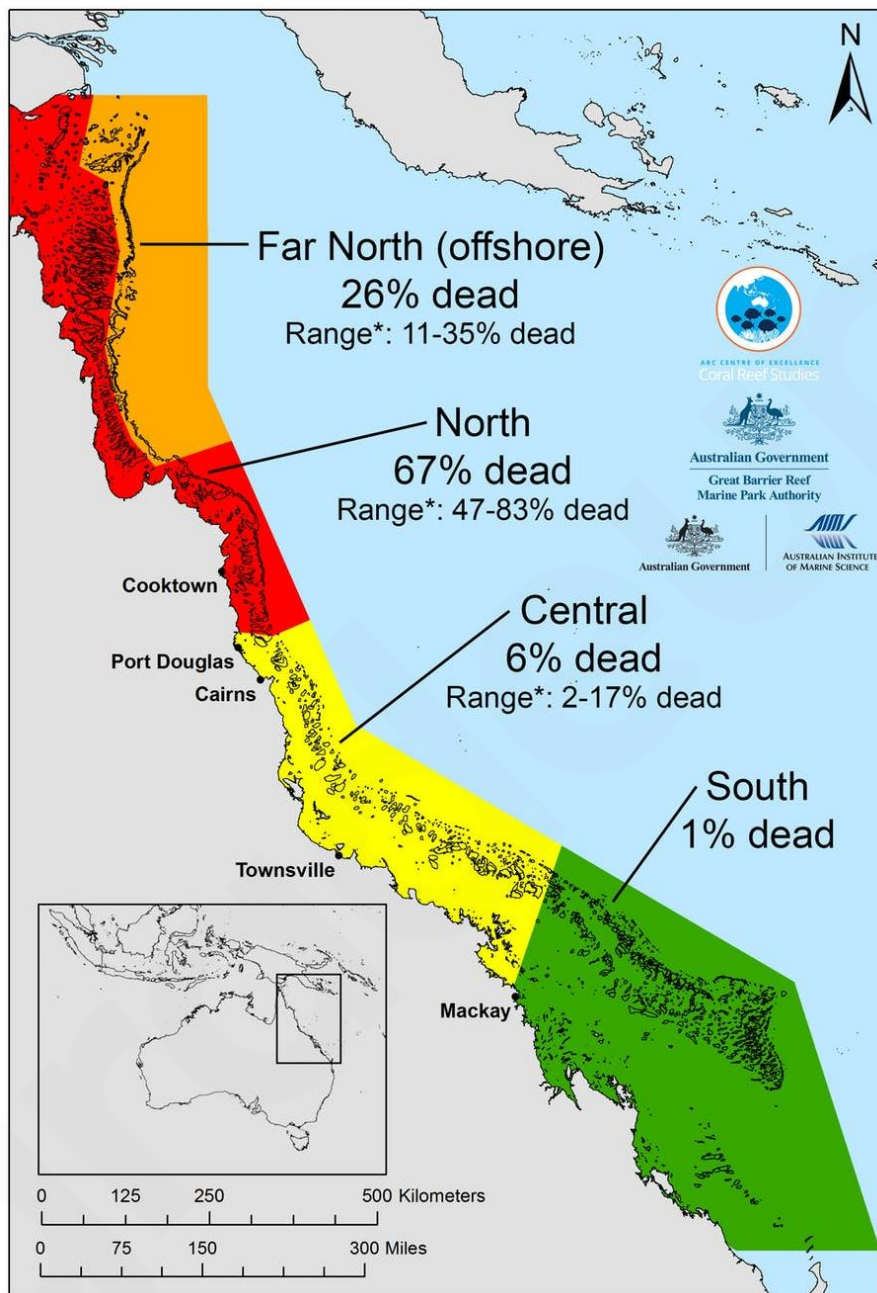
- Coral reefs are the **colonies of tiny living creatures** that are found in oceans.
- They are the **underwater structures** that are **formed of coral polyps** that are held together by **calcium carbonate**.

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- Coral reefs are also **regarded as the tropical rainforest** of the sea and **occupy just 0.1%** of the ocean's surface but are **home to 25% of marine species**.



What is Coral Bleaching?

- The **coral and the zooxanthellae share a symbiotic relationship**, and **90% of the nutrients** that are **produced by the algae** are **transferred to the coral hosts**.
- But this relationship **gets affected under severe environmental stress** which **causes the loss of symbiotic algae (zooxanthellae)**.

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- As a result, the white **calcium-carbonate exoskeleton** is visible through its transparent tissue leading to a **condition known as Coral Bleaching**.
- The corals become **vulnerable in the absence of the algae** and **begin to die** if the **temperature of the sea remains high for weeks**.
- **According to the records of 2016 and 2017, half of the Great Barrier Reef died due to Coral Bleaching.**

Types of Coral Reefs

Coral Reefs are **differentiated into three categories** based on **their shape, nature and mode of occurrence**.

a. Fringing Reef

- The coral reefs that are **found very close to the land and forms a shallow lagoon** known as **Boat Channel** are **called Fringing Coral Reefs**.
- The Fringing Reefs **develop along with the islands and the continental margins**.
- They grow from the **deep bottom of the sea** and have their **seaward side sloping steeply** into the **deep sea**.
- These are the **most commonly found coral reefs** among the three.
- Example: **Sakau Island in New Hebrides, South Florida Reef**.

b. Barrier Reef

- Barrier Reefs are **considered as the largest, highest and widest reefs** among the **three coral reefs**.
- They develop **off the coast and parallel to the shore** as a **broken and irregular ring**.
- Example of Barrier Reef: The **Great Barrier Reef of Australia** which is **1200 mile long**.

c. Atolls:

- An **atoll can be defined as a reef** that is **roughly circular and surrounds a large central lagoon**.
- This lagoon is **mostly deep having a depth of 80-150 metres**.
- The atolls are situated away from the **deep-sea platforms** and are found around an island or on a **submarine platform in an elliptical form**.
- For example, **Fiji Atolls, Suvadivo in Maldives and Funafuthis Atoll of Ellice**.

Factors responsible for Coral Bleaching

- **Increased water temperature** (most commonly due to global warming), or reduced water temperatures.
- **Oxygen starvation** caused by an increase in zooplankton levels
- **Increased solar irradiance** (photosynthetically active radiation and ultraviolet light)
- **Increased sedimentation** (due to silt runoff)
- **Bacterial infections change in salinity**
- **Herbicides**
- **Extreme low tide and exposure**
- **Cyanide fishing**
- Pollutants such as **oxybenzone, butylparaben, octyl methoxycinnamate**, or **enzacamene**: four common **sunscreen ingredients that are nonbiodegradable** and can wash off of skin
- **Ocean acidification** due to **elevated levels of CO₂** caused by air pollution
- Being **exposed to Oil** or other chemical spills



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Coral Reefs in India

- The major coral reef in India includes the **Palk Bay, the Gulf of Mannar, the Gulf of Kutch, the Andaman and Nicobar Islands** and **Lakshadweep Islands**.
- Among all these **coral reefs, the Lakshadweep reef** is an example of atoll while the rest are all fringing reefs.

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Source- Down to Earth

Anak Krakatau volcano

Why in the news?

- Recently **Indonesian Anak Krakatau volcano witnesses longest eruption** since its **explosive collapse in 2018**.

About the Anak Krakatau

- **Anak Krakatoa** is an **island** in a **caldera in the Sunda Strait** between the **islands of Java and Sumatra** in the **Indonesian province of Lampung**.
- On December 29, 1927, **Anak Krakatoa** emerged from the **caldera formed in 1883** by the **explosive volcanic eruption** that **destroyed the island of Krakatoa**.
- Anak Krakatau, which means **child of Krakatau**, is the offspring of the **famous Krakatau volcano**, whose monumental **eruption in 1883 triggered** a period of **global cooling**.



Other recent volcanic activity observed

Taal Volcano

- It is on the **island of Luzon, 50 km from Manila, the Philippines erupted on 12th January 2020**. It is classified as a **"complex" volcano** by the **Philippine Institute of Volcanology and Seismology**.
- A **complex volcano**, also called a **compound volcano**, is defined as one that doesn't have just **one main vent** or cone but **several eruption points**. Another such example is **Mount Vesuvius** on the west coast of Italy.

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Source- AIR

Matterhorn mountain

Why in the news?

- **Switzerland** has expressed **solidarity with India** in its **fight against the coronavirus pandemic** by **projecting the tricolour on the Matterhorn Mountain** in the **Swiss Alps**.



About the Matterhorn mountain

- The **Matterhorn** is a **mountain of the Alps** situated on the border of **Switzerland and Italy**.
- It is a **broad, near-symmetric pyramidal peak** in the **extended Monte Rosa** area of the **Pennine Alps**, whose summit is **4,478 metres (14,692 ft)** high.
- It is the **sixth highest mountain** in the **Alps and Europe**.



About Alps Mountains

- The Alps are a broad **mountain range** that lies **entirely in Europe**.
- It is **spread** over **eight alpine countries: France, Switzerland, Monaco, Italy, Liechtenstein, Austria, Germany, and Slovenia**. **Mont Blanc** is the highest mountain in the **Alps**.

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Source- The Hindu



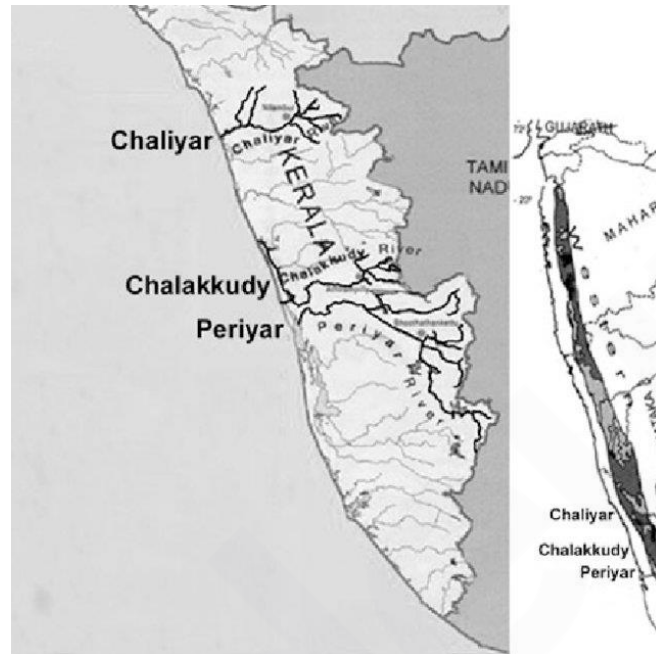
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Periyar river

Why in the news?

- Recently, the residents have witnessed sections of the '**Periyar River**' turning black after the shutters of **Pathalam bund** were opened.



About Periyar River

- It is the longest river of Kerala popularly known as '**Lifeline of Kerala**'.
- It is a **perennial river**.
- It is one of the few perennial rivers in the region and provides drinking water for several major towns.
- The Idukki Dam on the Periyar generates a significant proportion of Kerala's electrical power.
- It flows north through Periyar National Park into Periyar Lake, a 55 km² artificial reservoir created in 1895 by the construction of a dam across the river.
- Water is **diverted from the lake** into the **Vaigai River** in Tamil Nadu via a **tunnel through the Western Ghats**.
- From the lake, the **river flows northwest through the village of Neeleswaram** into **Vembanad Lake** and out to the **Arabian Sea coast**.
- Through the **Periyar Lake dam and tunnel**, the river serves as the primary water source for **five drought-prone districts in the state of Tamil Nadu, including Theni, Madurai and Ramanathapuram**.

Source of the river

- It **originates from Sivagiri Hills of Western Ghats** and flows through **Periyar National Park** and reaches the **Periyar Lake**, and then the water flows into **Vembanad Lake** and finally into the Arabian Sea.

Major tributaries



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- Its largest tributaries are the **Muthirapuzha River**, the **Mullayar River**, the **Cheruthoni River**, the **Perinjankutti River** and the **Edamala River**.

Dams on this river

a. Mullaperiyar dam

- It is located on the **confluence of the Mullayar and Periyar rivers** in **Kerala's Idukki district** which is operated and maintained by the **neighbouring state of Tamil Nadu**.

b. Idukki Dam

- It is situated on the **Periyar River** and **generates** a significant **proportion of Kerala's electrical power**.

Other Existing Hydroelectric Projects on the river

- Sengulam
- Nerimanagalam
- Panniar

Wetlands in Kerala:

a. **Ashtamudi Lake:** It is a **natural backwater** in Kollam district. The rivers, **Kallada and Pallichal** drain into it. It forms an estuary with the sea at **Neendarkara** which is a famous fishing harbour in Kerala. '**National Waterway 3**' passes through it. **Karimeen of Kanjiracode Kayal** is prominent fish harboured from Ashtamudi lake.

b. **Sasthamkotta Lake:** It is the largest freshwater lake in Kerala, situated in Kollam district. River Kallad had a unique replenishing system through a bar of paddy field which has now disappeared due to indiscriminate sand and clay mining. The lake is now depleting due to destruction of replenishing mechanism.

c. **Vembanad-Kol wetland:** Largest lake of Kerala, spanning across **Alappuzha, Kottayam, and Ernakulam** districts. Famous tourist locations like Alappuzha and Kumaeakom, known for houseboats falls here. River mouths of **Pamba-Achenkovil rivers in Vembanad** forms one of the unique wetland topography of Kerala, the Kuttanad. It is below sea level and is famous for exotic fish varieties and paddy fields that are below sea level.

Note: Farmers of Kuttanad are famous for Biosaline Farming. Food and Agriculture Organisation (FAO) has declared the Kuttanad Farming System as a Globally Important Agricultural Heritage Systems (GIAHS). Four of Kerala's major rivers, the **Pamba, Meenachil, Achankovil and Manimala** flow into the region. It is well known for its boat race in the Punnamada Backwaters, known in Malayalam as Vallamkalli.

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Source- The Hindu

Edakkal Caves

Why in the news?

- Recently a **huge crack has developed** on the eastern part of **Ambukuthi hills**, on which the **Edakkal caves** are situated after a fire devastated the area a few days ago.

About Edakkal Caves



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- It is located on **Ambukuthi mountain in the Sultan Bathery taluk of Wayanad district in Kerala.**



Historical Importance

- Edakkal caves are **famous for its pictorial paintings** (cave paintings), which are **considered to be of 6000 B C.** Edakkal is the only known place in India with **Stone Age carvings** which belongs to **Neolithic and Mesolithic age.**

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Source- Indian Express

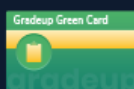
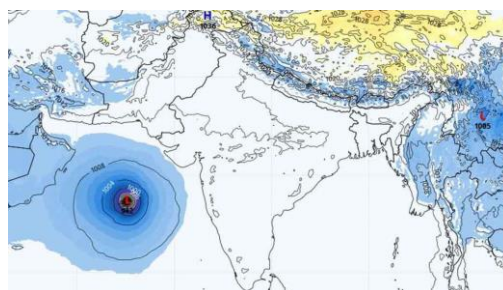
IMD releases new list of cyclone names

Why in the news?

- The **India Meteorological Department (IMD)** has released a **new list of names of tropical cyclones** over the **north Indian Ocean** including the **Bay of Bengal and the Arabian Sea.**

Some highlights

- It is comprising of **169 names including 13 from India** such as **Gati, Tej, Aag, Neer, Vyom, Jhar and Jaladhi** among others.
- The **other names from India** in the new list include **Murasu, Probaho, Prabhanjan, Ghumi, Ambud and Vega.**
- The current list has, in fact, **13 names each from all 13 member countries** of the **regional specialized meteorological centres (RSMCs)** including **Bangladesh, Iran, Maldives, Myanmar, Oman, Pakistan, Qatar, Saudi Arabia, Sri Lanka, Thailand, United Arab Emirates and Yemen.**



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How does the name assign?

- Any **tropical cyclone** that **hits the region** is known by a **name given in the list**.
- Since **the earlier list of 2004 is left** with only **one name - Amphan (shared by Thailand)**.

About India Meteorological Department

- The **India Meteorological Department** is **one of the six RSMCs in the world** to **provide tropical cyclone and storm surge** advisories finalized the **new list of 169 names**.

Significance

- **The naming of Tropical Cyclones** helps the scientific community, disaster managers, media and general masses to-
 - a. **Identify each individual cyclone.**
 - b. **Create awareness of its development.**
 - c. **Remove confusion** in case of **simultaneous occurrence of Tropical Cyclones** over a region
 - d. **Remember a Tropical Cyclones** easily
 - e. **Rapidly and effectively disseminate warnings** to a much wider audience

Some Tropical Cyclones name

- a. Nisarga (shared by Bangladesh)
- b. Gati (India)
- c. Nivar (Iran)

Note: The **names of Tropical Cyclones** over the **north Indian Ocean** are **not repeated, i.e. once used; it will cease to be used again.**

Topic- GS Paper 1–Geography

Source- Indian Express

Paracel and Spratly Islands disputes

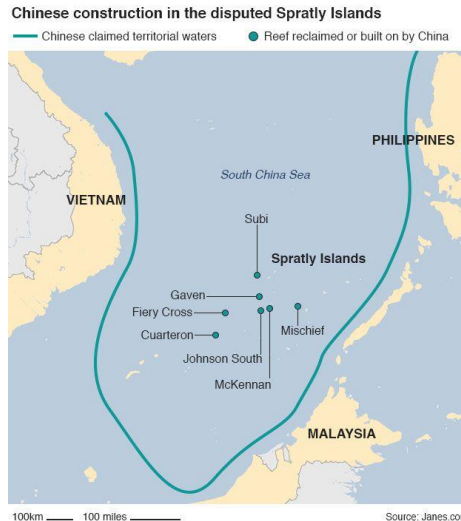
Why in the news?

- Recently, **China unilaterally renamed 80 islands, reefs and other geographical features** around the **Spratly and Paracel Islands (in the South China Sea)** with **Chinese names**, drawing criticism from neighbouring countries who have also **laid claim to the same territory.**



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About Spratly Islands

- Spratly Islands are a **disputed archipelago** in the **South China Sea** which is **largely uninhabited**.

Countries in Dispute: **China, Taiwan, Vietnam, the Philippines and Malaysia and Brunei** have also claimed the southeastern part of the Spratlys.

About Paracel Islands

- The **Paracel Islands** is a **disputed archipelago** which is a **collection of 130 islands and coral reefs** and is located in the **South China Sea**, almost **equidistant from China and Vietnam**.

Countries in Dispute: **China and Vietnam**

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Source- Indian Express



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