

## Integrate yoga into community based well-being initiatives, says WHO

(GS Paper 3, International Organisation)

### Why in news?

- On the eve of International Day of Yoga (IDY), the WHO said policymakers should consider **integrating yoga into community-based mental health and well-being initiatives** while increasing efforts to leverage the potential of safe and effective traditional medicine.

### Significance of Yoga:

- The regular yoga practice can help people of all ages and incomes achieve adequate physical activity, making it a high-impact, cost-effective way to prevent and control non-communicable diseases (NCDs) one of UN South-East Asia Region's eight flagship priorities.
- It has been shown to have immediate psychological effects, decreasing anxiety and stress, and increasing feelings of emotional and social well-being.
- Throughout the COVID-19 response, yoga has helped hundreds of millions of people from all countries and cultures stay healthy and well.



### Initiatives by WHO:

- The region continues to intensify action to increase physical activity and enhance mental health, in line with its flagship priorities - the WHO **Global Action Plan on Physical Activity (GAPPA) 2018-2030**, **Comprehensive Mental Health Action Plan 2013-2030**, and the Sustainable Development Goals.
- In 2021, the WHO launched a Regional Roadmap on implementing the GAPPA, which will help member states identify and implement policies to achieve a 15 per cent relative reduction in the prevalence of insufficient physical activity by 2030.
- Ministers of health and education from across the region issued a call to action to scale up the implementation of comprehensive health programmes in schools, including by facilitating physical activity.

### GCTM in India:

- In March 2022, WHO and the Indian government signed an agreement to establish the **WHO Global Centre for Traditional Medicine (GCTM)** in Jamnagar, India.
- The GCTM which is supported by an investment of USD 250 million from the Centre has a strategic focus on evidence and learning, data and analytics, sustainability and equity, and innovation and technology, with the overall aim of optimising the contribution of TRM to global health and sustainable development.
- The mission of the GCTM aligned with the region's long-standing focus on strengthening traditional medicine (TRM) system performance monitoring, increasing safety monitoring for such products, enhancing research capacity and integrating safe and effective TRM into health service delivery, especially at the PHC level.

#### **International Yoga Day 2022:**

- The word 'yoga' is derived from the Sanskrit root 'Yuj' which symbolises the union of body and consciousness.
- The idea of International Yoga Day was conceived by Prime Minister Narendra Modi, who proposed the concept on September 27, 2014, during his speech at the UN General Assembly.
- The United Nations proclaimed 21 June as the International Day of Yoga on December 11, 2014.
- Consequently, the first International Yoga Day was observed on June 21, 2015.

#### **Theme:**

- The theme for International Yoga Day 2022 is 'Yoga for Humanity'.

### **Lightning Incidents in India** **(GS Paper 1, Geography)**

#### **Why in news?**

- Recently, seventeen people have been killed by lightning in various parts of Bihar.
- Of all the atmospheric phenomena, lightning perhaps is the most dangerous and mysterious. In India, lightning kills about 2,000-2,500 people every year. Bihar is just one of the several hotspots for lightning in India, as a new atlas of lightning shows.

#### **What is lightning?**

- Scientifically, lightning is a **rapid and massive discharge of electricity in the atmosphere** some of which is directed towards earth.
- The discharges are generated in giant moisture-bearing clouds that are 10-12 km tall. The base of these clouds typically lie within 1-2 km of the Earth's surface, while the top is 12-13 km away. Temperatures in the top of these clouds are in the range of  $-35^{\circ}$  to  $-45^{\circ}\text{C}$ .
- As water vapour moves upward in the cloud, the falling temperature causes it to condense. As they move to temperatures below  $0^{\circ}\text{C}$ , the water droplets change into small ice crystals.
- They continue to move up, gathering mass until they are so heavy that they start to fall to Earth. This leads to a system in which, simultaneously, smaller ice crystals are moving up and bigger crystals are coming down.

#### **How electricity is produced?**

- **Collisions follow and trigger the release of electrons**, a process that is very similar to the generation of sparks of electricity. As the moving free electrons cause more collisions and more electrons, a chain reaction ensues.
- This process results in a situation in which the **top layer of the cloud gets positively charged, while the middle layer is negatively charged.**
- The electrical potential difference between the two layers is huge, of the order of a billion to 10 billion volts. In very little time, a massive current, of the order of 100,000 to a million amperes, starts to flow between the layers.
- While the **Earth is a good conductor of electricity**, it is electrically neutral. However, in comparison to the middle layer of the cloud, it becomes positively charged. As a result, about 15%-20% of the current gets directed towards the Earth as well. It is this flow of current that results in damage to life and property on Earth.
- Direct lightning strikes are rare but even indirect strikes are fatal given the immense amount of charge involved.

# 2019-22: TOP 8 LIGHTNING-PRONE DISTRICTS

Over 2 lakh strikes each

■ Mayurbhanj

■ Keonjhar

■ Purulia

■ Chandrapur

■ Korba

■ Jaisalmer

■ Medinipur  
West

■ Prakasam

*Source: Lightning Annual Report 2021-22*

## Which areas are lightning-prone?

- A recently released **annual report on lightning by the Climate Resilient Observing Systems Promotion Council (CROPC)**, which works closely with government agencies like the India Meteorological Department, includes a lightning atlas which maps vulnerability at the district level.
- According to the report, **Madhya Pradesh has reported the largest number of cloud to ground lightning strikes**, followed by Chhattisgarh, Maharashtra, Odisha and West Bengal. Other states with high strike rate include Bihar, UP, Karnataka, Jharkhand and Tamil Nadu.
- Lightning is fairly common, though it is not often realised in the urban centres. In India, well over one crore lightning strikes have been recorded in recent years.
- It is only over the last few years that lightning records have begun to be maintained, thanks to the efforts of CROPC and India Meteorological Department.

## Reduction during Covid-19 pandemic:

- In 2019-20, about 1.4 crore lightning strikes were recorded, which increased to 1.85 crore in 2020-21.
- In 2021-22, about 1.49 crore strikes were recorded across the country. The reduction, in line with the trend observed globally, has been attributed to the impact of the Covid-19 pandemic.
- The reason attributed to reduction in lightning is due to Covid-2019 pandemic induced reduction in aerosol level, pollution, environmental upgradation and relatively stable weather system in Indian subcontinent,” the annual lightning report said.
- But most of this reduction was seen in the cloud-to-cloud lightning. Of the strikes that reach the Earth, only a 2.5% reduction was observed.

## How can the effects of lightning strikes be mitigated?

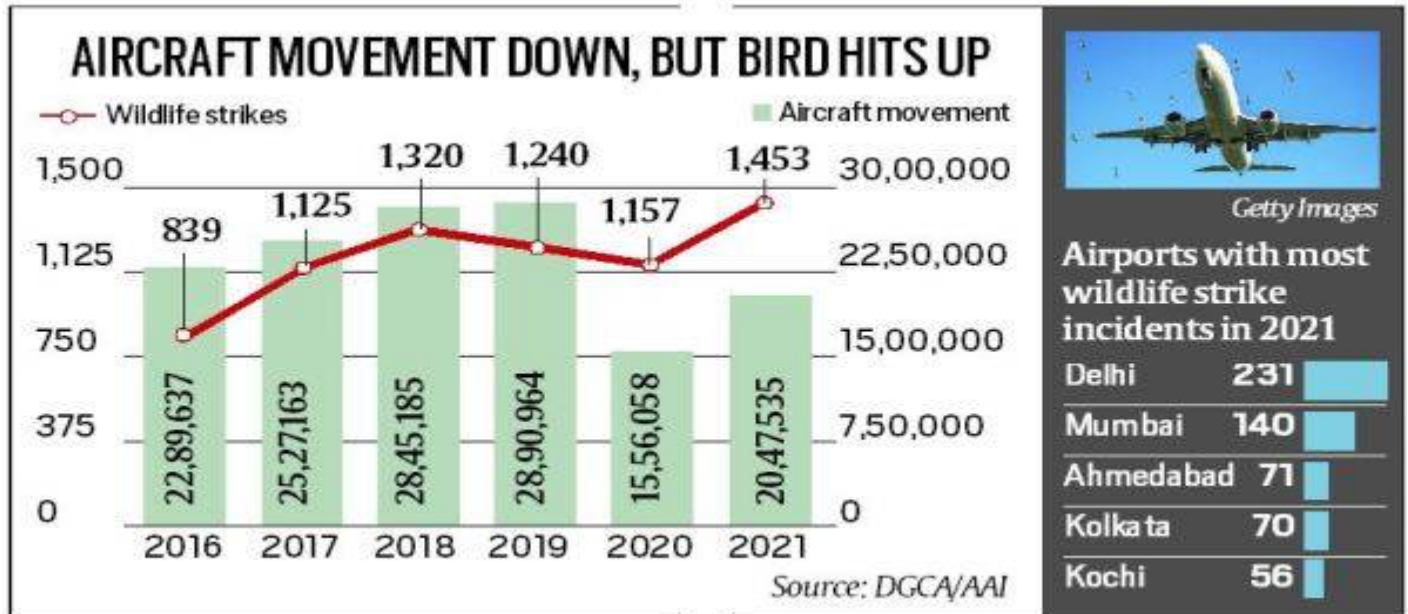
- Lightning is **not classified as a natural disaster in India**. But recent efforts have resulted in the setting up of an early warning system that is already saving many lives.
- More than 96% of lightning deaths happen in rural areas. As such, most of the mitigation and public awareness programmes need to focus on these communities.
- Lightning protection devices are fairly unsophisticated and low-cost. Yet, their deployment in the rural areas, as of now, is extremely low.

## Bird strikes and how they can affect flights

(Miscellaneous)

### Why in news?

- Recently, two bird strike incidents 1000-kilometre apart prompted the aviation regulator DGCA to shoot off a letter to airports across the country, asking them to strictly implement guidelines pertaining to wildlife hazard management.
- According to DGCA data, there were 1,466 bird strike incidents last year across Indian airports, a 27% increase from 2020. This translates to about 4 bird strike incidents per day.



### What are bird strikes and what can happen as a result of a strike?

- Bird strikes are among the most common threats to aircraft safety, and they typically occur during the take-off or landing phases of a flight.
- Typically, when birds will collide with an aircraft's airframe, it is unlikely to cause significant problems for the pilots flying.
- But there are cases where the aircraft engine ingested the birds causing damage to the power plants. This can lead to a loss of thrust for the engine and cause manoeuvrability problems for the crew.
- In these cases, where a jet engine ingests a bird, procedures would generally call for pilots to get the plane on the ground at the closest airport.
- However, while most airframe bird strikes are not considered critical to air safety, if the collision has happened with a window or a windscreen resulting in cracking of the structure, pilots will look to land the plane as early as possible.

### Could bird strikes be critical to air safety?

- Smaller planes would generally be more susceptible to the dangers of bird strikes than larger ones. Also, modern jetliners are built with a number of redundancies and common passenger aircraft like Boeing 737 or Airbus A320 are designed to safely land with even a single-engine.
- However, given that bird strikes mostly happen during take-offs and landings, these incidents could distract the pilots during what are highly critical phases of a flight that demand the complete attention of the crew.

### What causes bird strikes?

- Bird and animal movement goes up around airports particularly during the monsoon season because of increased insect breeding in the nearby fields.
- In some cases, bird hits also happen at higher altitudes when a plane is cruising. These are more dangerous than the low-altitude hits given that they can cause rapid depressurisation of cabins.

- Other reasons for bird activity around an airfield could be the presence of landfills or waste disposal sites that attract a large number of birds.

### Guidelines to keep birds at bay:

- The risk of bird hits at Patna airport, where the SpiceJet plane made the emergency landing, is higher due to the presence of an open abattoir and butcher shops around the airport.
- The Aircraft Rules 1937 **prohibit dumping of garbage and slaughtering of animals** in a way that could attract birds and animals within a 10 km radius of airports.
- Airports can employ various methods to keep birds away from their vicinity. The measures include trimming of grass, spraying of insecticide, frequent runway inspections, deployment of bird chasers, noise makers, reflective tapes, laser beam guns and regular garbage disposal.
- The DGCA also said that there should be no water concentration and open drains.
- Further, **constant surveillance of the airports by their respective wildlife control units** is necessary.

### Way Forward:

- While pilots are trained in managing bird-strike events, clearly more needs to be done on ground by airport operators with the help of local authorities to reduce the occurrence of bird and animal strikes.

## Single-use plastic ban in India

(GS Paper 3, Environment)

### Why in news?

- The Centre has banned the use of 'single-use plastic' from July 1.
- The Ministry for Environment, Forest and Climate Change had issued a gazette notification in 2021 announcing the ban, and has **now defined a list of items that will be banned**.
- The **manufacture, import, stocking, distribution, sale and use of following single-use plastic, including polystyrene and expanded polystyrene**, commodities shall be prohibited with effect from the 1st July, 2022.

## 9 WAYS TO REDUCE PLASTIC IN YOUR SCHOOL

<p><b>1</b> </p> <p>Hold an educational film screening or talk</p>	<p><b>2</b> </p> <p>Organise school, park, river and beach cleans</p>	<p><b>3</b> </p> <p>Stop selling plastic bottles, encourage reusables instead</p>
<p><b>4</b> </p> <p>Encourage less plastic in packed lunches</p>	<p><b>5</b> </p> <p>Choose reusables for the canteen and school events</p>	<p><b>6</b> </p> <p>Request that supplier deliveries are plastic-free</p>
<p><b>7</b> </p> <p>Rethink catering options to eliminate single-use plastic</p>	<p><b>8</b> </p> <p>Ditch the laminator, choose plastic-free displays</p>	<p><b>9</b> </p> <p>Share your successes, to inspire other schools too</p>

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## What is single-use plastic?

- It refers to plastic items that are used once and discarded. **Single-use plastic has among the highest shares of plastic manufactured and used from packaging of items**, to bottles (shampoo, detergents, cosmetics), polythene bags, face masks, coffee cups, cling film, trash bags, food packaging etc.
- The single-use plastics **account for a third of all plastic produced globally**, with 98% manufactured from fossil fuels. Single-use plastic also accounts for the majority of plastic discarded, all of which is burned, buried in landfills or discarded directly into the environment.
- On the current trajectory of production, it has been projected that single-use plastic could account for 5-10% of greenhouse gas emissions by 2050.
- India features in the top 100 countries of single-use plastic waste generation – at rank 94 (the top three being Singapore, Australia and Oman).

## Items banned by CPCB:

- The items on which the Central Pollution Control Board (CPCB) have announced a ban are earbuds; **balloon sticks; candy and ice-cream sticks; cutlery items including plates, cups, glasses, forks, spoons, knives, trays; sweet boxes; invitation cards; cigarette packs; PVC banners measuring under 100 microns**; and polystyrene for decoration.
- The Ministry had already banned **polythene bags under 75 microns in September 2021**, expanding the limit from the earlier 50 microns. From December, the ban will be extended to polythene bags under 120 microns.
- The ban is being introduced in phases to give manufacturers time to shift to thicker polythene bags that are easier to recycle. While manufacturers can use the same machine for 50- and 75-micron bags, the machinery will need to be upgraded for 120 microns.
- According to the Plastic Waste Management Rules, 2016, there is also a **complete ban on sachets using plastic material for storing, packing or selling gutkha, tobacco and pan masala**.

## How will the ban be enforced?

- The ban will be monitored by the CPCB from the Centre, and by the State Pollution Control Boards (SPCBs) that will report to the Centre regularly. Directions have been issued at national, state and local levels to not supply raw materials to industries engaged in the banned items.
- Directions have also been issued to SPCBs and Pollution Control Committees to modify or revoke consent to operate issued under the Air/Water Act to industries engaged in single-use plastic items. Local authorities have been directed to issue fresh commercial licenses with the condition that SUP items will not be sold on their premises, and existing commercial licences will be cancelled if they are found to be selling these items.
- Earlier, the CPCB issued one-time certificates to 200 manufacturers of compostable plastic and the BIS passed standards for biodegradable plastic.
- Those found violating the ban can be penalised under the Environment Protection Act 1986 – which allows for imprisonment up to 5 years, or a penalty up to Rs 1 lakh, or both.
- Violators can also be asked to pay Environmental Damage Compensation by the SPCB. In addition, there are municipal laws on plastic waste, with their own penal codes.

## How are other countries dealing with single-use plastic?

- Earlier in 2022, 124 countries, parties to the United Nations Environment Assembly, including India, signed a resolution to draw up an agreement which will in the future make it legally binding for the signatories to address the full life of plastics from production to disposal, **to end plastic pollution**.
- **Bangladesh became the first country to ban thin plastic bags in 2002**. New Zealand became the latest country to ban plastic bags in July 2019. China issued a ban on plastic bags in 2020 with phased implementation.
- Eight states in the US have banned single-use plastic bags, beginning with California in 2014. Seattle became the first major US city to ban plastic straws in 2018.
- On July 2, 2021, the Directive on Single-Use Plastics took effect in the European Union (EU). The directive bans certain single-use plastics for which alternatives are available; single-use plastic plates, cutlery, straws, balloon sticks and cotton buds cannot be placed on the markets of the EU member states.
- The same measure applies to cups, food and beverage containers made of expanded polystyrene, and all products made of oxo-degradable plastic.