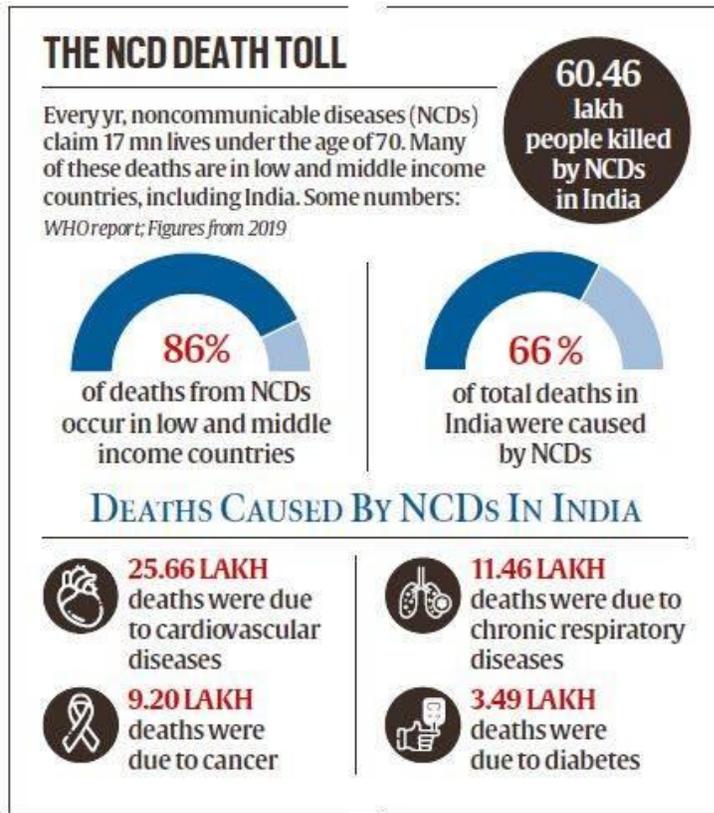


# 1. 'Invisible numbers – the true scale of non-communicable diseases'

Topic: Reports and Indices



**In News:** WHO has released the report: 'Invisible numbers – the true scale of non-communicable diseases' recently.

**More on the Topic:**

- Over 60.46 lakh people died due to NCDs in India in 2019.
- There was a **22 per cent probability of death between the age of 30 and 70 due to any type of non-communicable disease**, including cardiovascular diseases, cancer, diabetes or chronic obstructive pulmonary disease.
- Over 25.66 lakh deaths in 2019 in the country were due to cardiovascular diseases while 11.46 lakh deaths were due to chronic respiratory diseases. Cancer led to 9.20 lakh deaths while 3.49 lakh deaths in the country were attributed to diabetes.

**Global Scenario:**

- Globally, **one in three deaths – 17.9 million a year – are due to cardiovascular diseases (CVDs)**.
- Eighty-six per cent of CVD deaths could have been prevented or delayed through prevention and treatment.

- **Two-thirds of the people with hypertension live in low- and middle-income countries,** but almost half of the people with hypertension are not even aware they have it.
- Hypertension currently affects around 1.3 billion adults aged between 30 and 79.
- This major shift in public health over the last decade has gone largely unnoticed.
- Even in the Covid-19 pandemic, severe morbidity and high mortality were associated with prior affliction with NCDs.

**Recommendations:**

- There is a need for concerted global response, which uses policy instruments that have a population-wide impact on tobacco, alcohol, unhealthy foods and air pollution.
- There is also a need for **robust health system programmes that promote health, detect and control risk factors early and effectively, treat diseases in a cost-effective manner and prevent untimely deaths.**
- NCDs need to be accorded higher priority in financial allocation and health system strengthening initiatives, with strong emphasis on primary care.

Source: Indian Express

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## 2. 'National Program on High Efficiency Solar PV Modules'

**Topic: Government Policies**



**In News:** The Cabinet has approved the Ministry of New & Renewable Energy's proposal for implementation of the Production Linked Incentive Scheme (Tranche II) on 'National programme on High Efficiency Solar PV Modules' for achieving manufacturing capacity of Giga Watt (GW) scale in High Efficiency Solar PV Modules.

**More on the Topic:**

- The national programme on High Efficiency Solar PV Modules **aims to build an ecosystem for manufacturing of high efficiency solar PV modules in India**, and thus reduce import dependence in the area of Renewable Energy.
- It will strengthen **the Atamirbhar Bharat initiative** and generate employment.

**Under modified programme, a uniform fiscal support of:**

- **50% of Project Cost will be provided for all technology nodes** under Scheme for Setting up of Semiconductor Fabrication in India and Scheme for Setting up of Display Fabrication;
- **50% of capital expenditure under the Scheme** for Setting up of Compound Semiconductors / Silicon Photonics / Sensors Fabrication and Semiconductor ATMP /OSAT facilities in India.
- **Aim:** Expedite investments in semiconductor and display manufacturing in India.

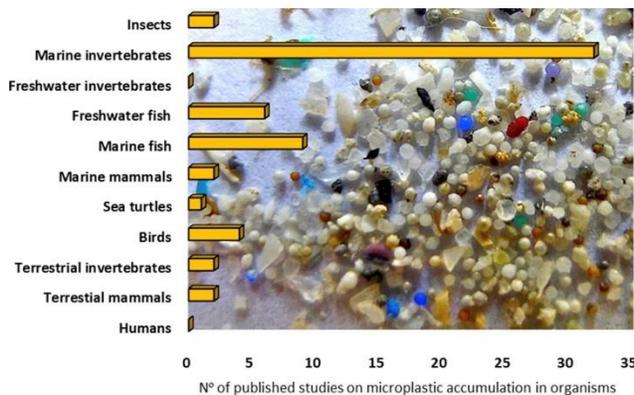
**The outcomes/benefits expected from the scheme are as follows:**

- It is estimated that about **65,000 MW per annum manufacturing capacity of fully and partially integrated, solar PV modules would be installed.**
- The scheme will bring **direct investment of around Rs.94,000 crore.**
- Creation of manufacturing capacity for Balance of Materials like EVA, Solar glass, Backsheet, etc.
- **Direct employment of about 1,95,000** and indirect employment of around 7,80,000 persons.
- **Import substitution** of approximately Rs.1.37 lakh crore.
- Impetus to Research and Development to achieve higher efficiencies in Solar PV Modules.

Source: Hindu

### 3.Nano Plastic

**Topic: Environment and Ecology**



**In News:** A team of researchers developed a new, metallic fingerprint-based method to detect and measure the amount of Nano plastics in organisms.

### More on the Topic:

- For their study, they applied the technique to a model food chain that contains three trophic levels (trophic level is the position an organism occupies in the food chain) — lettuce, which was the primary producer, black soldier fly larvae, the primary consumer, and insectivorous fish (roach) as the secondary consumer.
- The research showed that **the nanoplastics from the soil were taken up the roots of the plants** and accumulated in the leaves.
- Subsequently, the contaminated lettuce transferred the nanoplastics to the insects.
- Imaging of the black soldier fly digestive system showed that both PS and PVC nanoplastics were found in the mouth and gut, despite allowing them to empty their guts for 24 hours.
- Both the lettuce and insects, however, contained a lower amount of PS particles, as compared to the PVC nanoplastics.
- Due to their small size, **nanoplastics can likely pass through physiological barriers** and enter organisms.

### About Nano Plastic:

- Nonplastics are plastic debris particles that are **smaller than 1,000 nanometre**, which is equal to one billionth of a metre.
- **Nanoplastics pose significant health hazard to herbivores and humans** by entering into their bodies and staying there.
- Currently, agricultural soil is receiving microplastics from various sources like atmospheric deposition, irrigation using wastewater, usage of sewage sludge for agricultural purposes, and use of mulching film.
- **It can lead to cell damage and inflammation in humans;** growth impairments, larval deformities and other toxic effects in marine organisms.

Source: Hindu

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## 4. Hybrid Propulsion System

**Topic: Science and Technology**



**In News:** ISRO has successfully tested hybrid motor aiming at new propulsion system for rockets.

**More on the Topic:**

- The motor used Hydroxyl-terminated polybutadiene (HTPB) as fuel and liquid oxygen (LOX) as the oxidiser.
- Unlike **solid-solid or liquid-liquid combinations**, a hybrid motor uses solid fuel and liquid oxidiser.
- The use of **liquids facilitates throttling, and the control over the flow rate of LOX enables the re-start capability.**
- The hybrid model is **more efficient, "greener" and safer to handle** and paves the way for new propulsion technologies for future missions.

**Source: Indian Express**

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## 5. Tomistoma

**Topic: Environment and Ecology**



**In News:** The tomistoma is a shy and unsociable species that typically withdraws from areas with a high degree of human activity. However, increasing human activities in their habitat are making them attack people.

**More on the Topic:**

- **Tomistoma is a genus of gavialid crocodilians.** They are noted for their long narrow snouts used to catch fish, similar to the gharial.
- **The tomistoma is a large crocodilian species native to Southeast Asia.**
- It is found in **Indonesia, Malaysia and Brunei.**
- It is a freshwater species and is frequently associated with peat swamp forests.
- It shares its habitat with two other types of crocodilians; the Saltwater crocodile and the Siamese crocodile.

- It is recorded as **endangered species on the International Union for the Conservation of Nature Red List of Threatened Species.**

Source: Hindu

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## 6. Energy Access Explorer (EAE)

Topic: Economy



**In News:** The World Resources Institute had launched the Energy Access Explorer (EAE) in 2021.

**More on the Topic:**

- It was first introduced in the state of Jharkhand in 2021 and more recently in Assam, August, 2022.
- The aim behind the EAE was to bring visibility to the areas that need attention.
- Through combining public data with custom analyses, this platform **paints a clearer picture of energy access and, most critically, where it is lacking.**

**Present Indian Scenario:**

- The Saubhagya initiative has claimed an electrification rate of 99.99 per cent and that only 18,734 households in India are without electricity. **However, the quality and reliability of electricity access remain an issue.**
- Power for All, reveals that **energy access in India is 79.2 per cent.** There are several gaps in energy access to critical sectors like health and education.
- Even in 2019, **only 54 per cent of the healthcare facilities and 50 per cent of public schools were electrified.**
- **Healthcare, education and livelihoods sectors continue to remain un-electrified or under-electrified.**

**Significance of Energy Access Explorer (EAE) to present scenario:**

- EAE could be used by decision-makers who are tasked with the responsibility of ensuring socio-economic development in the state **to ensure access to energy.**
- It will further ensure that **the country meets the Sustainable Development Goals targets.**
- The most significant impacts of EAE have been in the health sector, where EAE analysis has helped prioritise 300 un-electrified healthcare facilities best suited for solarisation by the Jharkhand Renewable Development Agency.

Source: Hindu

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## 7. Insider Trading

**Topic: Economy**



**In News:** The Supreme court recently held that mere possession of price-sensitive information and trading on the basis of that are not sufficient to prove insider trading charges.

**More on the Topic:**

- It is equally important to establish that the intent behind the transaction too was to gain from the insider information.
- **Insider trading refers to the practice of purchasing or selling a publicly-traded company's securities while in possession of material information that is not yet public information.**
- Material information refers to any and all information that may result in a substantial impact on the decision of an investor regarding whether to buy or sell the security.
- E.g.: A government employee acts upon his knowledge about a new regulation to be passed which will benefit a sugar-exporting firm and buys its shares before the regulation becomes public knowledge.

**Source: Hindu**

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