

Doomsday Glacier

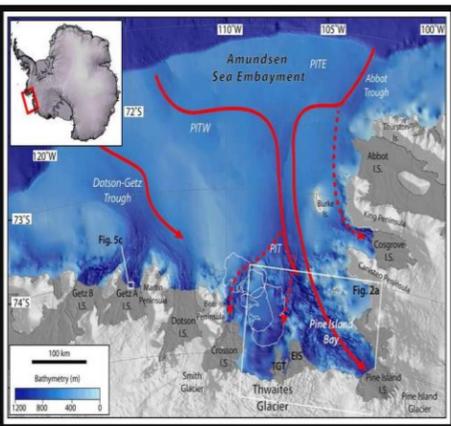
❖ Context

- According to a recent study, the rapid retreat of Antarctica's "doomsday glacier", **Thwaites Glacier**, may raise global sea levels by **3-10 feet**.



❖ Key Findings

- Roughly the **size of Spain**, the glacier is melting from the bottom, in contact with warm water.



- Warm water flows from deep open oceans to the continental shelf until it reaches the **grounding line** - the point where ice sheets begin to float.
- The base of the glacier, at some point over the past two centuries, dislodged from the seabed and retreated at a rate of **2.1 kilometres per year**.
- The former grounding line on the seabed has geological features called **ribs**. They look like tractor tyre marks in the rocky mud that cover the ocean bottom at the front of Thwaites.

❖ Dynamic Thinning

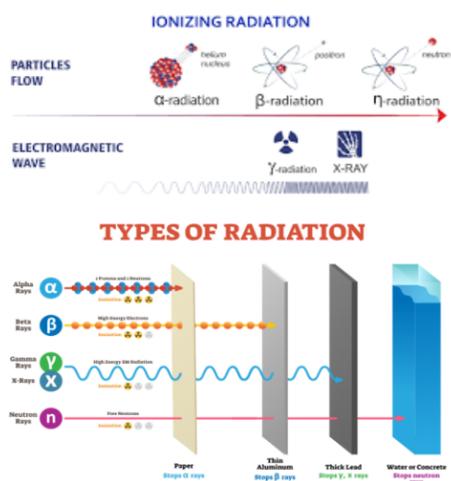
- Most profound changes in the ice sheets currently result from glacier dynamics at ocean margins.
- Many glaciers along the margins of the Greenland and Antarctic ice sheets are accelerating and increasingly contributing to global sea level rise.
- **Ice loss as a result of accelerated flow**, is known as dynamic thinning.
- Globally, ice losses contribute ~1.8 mm per year, but this could increase if the **retreat of ice shelves and tidewater glaciers** further
 - Enhances the loss of grounded ice or
 - Initiates the large-scale collapse of vulnerable parts of the ice sheets.

Occupational Radiation Protection

❖ Context

- The **International Labour Organisation (ILO)** is co-sponsoring the third international conference on Occupational Radiation Protection, organised with the **International Atomic Energy Agency** and hosted by the Government of Switzerland.

❖ What is Ionising Radiation (IR)?



- Ionising radiation is a type of **energy released by atoms** that travels in the form of **electromagnetic waves** (gamma or X-rays) or **particles** (neutrons, beta or alpha).
- The spontaneous disintegration of atoms is called **radioactivity** & the excess energy emitted is a form of ionising radiation.
- The process in which an electron is given enough energy to break away from an atom is called **ionisation**.
- There are three main kinds of ionising radiation:
 - **Alpha particles**, which include two protons and two neutrons.
 - **Beta particles**, which are essentially electrons.
 - **Gamma rays and X-rays**, which are pure energy (photons).
- **X-ray and gamma ray radiation** has high energy, enough to strip electrons from an atom or, in some cases, **break up the nucleus of the atom**.
- **Sources** of IR can be **natural** like radioactive materials naturally occurring in the environment, cosmic rays. **Radon**, a naturally-occurring gas, which emanates from rock and soil and is the main source of natural radiation.

- **Artificial sources** include nuclear power generation and medical uses for diagnosis and treatment which is most common.
- ❖ **Effects of Ionising Radiation**
 - Radiation tends to **damage cells or genes** present in cells. It is the genes within a cell that determine how a cell functions.
 - Thus, if damage occurs to the genes then it is possible for **cancer** to occur. If genes are damaged in reproductive organs, a **mutation** may occur. Such a mutation may be passed on to children.
 - The dose of radiation received, or the absorbed dose is expressed in a unit called the **gray (Gy)**.
 - The **sievert (Sv)** is the unit of effective dose in terms of the potential for causing harm.
 - The **risk factor** averaged over all ages and cancer types is about **1 in 10,000 per millisievert**.
 - According to ILO, exposure to ionising occupational radiation affects over **24 million workers**, like **radiologists, radiographers, underground miners, aircrew, and those in the medical and nuclear industries**, globally.
- ❖ **Radiation Protection Convention, 1960**
 - In **June 1960**, the **International Labour Conference** adopted the Radiation Protection Convention, 1960.
 - It is the **only international legal instrument** that addresses the **protection of workers against radiation**.
 - The Convention has been ratified by **50 countries including India in 1975**.





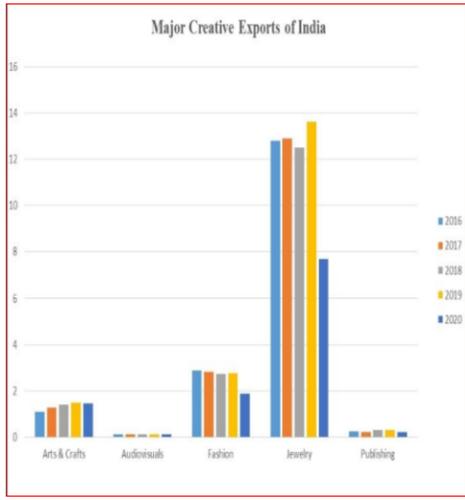
India's Creative Economy

❖ Context

- The Exim Bank of India has published a first of its kind study 'Reflection & Development of India's Creative Economy' recently.

❖ Key Highlights

- The research paper maps the untapped export potential of India's creative economy.



- The report analyzed seven different creative segments such as art & crafts, audio visuals, design and visual arts, as per the UN classification, to map their export potential.
- India's total exports of creative goods and services stood close to \$121 billion in 2019, of which exports of creative services accounted for almost \$100 billion.

- In India, the contribution of the design segment was **87.5%** of the total creative goods exports in 2019, and another 9% is contributed by art and crafts segment.
- The creative economy was significantly diversified in the country and industries such as the entertainment sector give an important push to the creative economy.
- India ranks 6th globally, outside the U.S., with respect to the top international box office markets by revenue.
- The study also captured the role of artificial intelligence and machine learning, extended reality, and blockchain, which are impacting the functioning of the creative economy.

6 States to Get Branches of NCDC

❖ Context

- The Union Health Minister virtually laid the foundation stone for **National Centre for Disease Control (NCDC)** branches in Andhra Pradesh, Arunachal Pradesh, Kerala, Maharashtra, Tripura and Uttar Pradesh.



❖ Key Highlights

- The regional branches of National Centre for Disease Control (NCDC) will play a pivotal part and will provide a boost to public health infrastructure with prompt surveillance, rapid detection and monitoring of diseases thereby enabling early interventions.
- NCDC branches in the States will support the State governments in timely disease surveillance and monitoring.
- These will enable early warning leading to timely intervention based on evidence gathered from the field.
- The State branches will coordinate with NCDC, Delhi with real time sharing of data and information aided by cutting edge technology.

- NCDC branches would also be crucial in ensuring timely availability of updated guidelines so that accurate scientifically backed information can be disseminated easily.
- ❖ **About NCDC**
- The Institute is under administrative control of the Director General of Health Services, Ministry of Health and Family Welfare, Govt. of India.
- The Director, an officer of the Public Health sub-cadre of Central Health Service, is the administrative and technical head of the Institute.
- Currently, NCDC has eight branches in states with focus on one or few diseases.
- It is headquartered at Delhi.

Karnataka Bank becomes part of Khajane – II

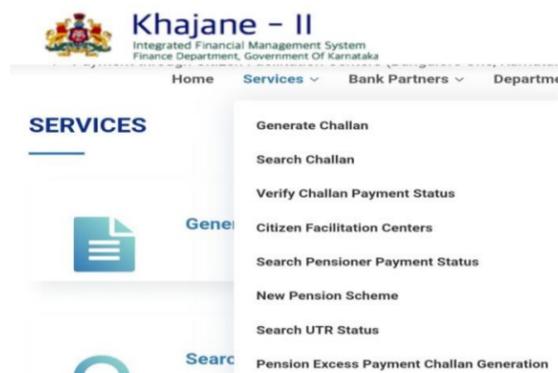
❖ Context

- Karnataka Bank Ltd has now become part of the Karnataka Government's **integrated financial management system (IFMS) - Khajane-II** - for implementing **single nodal agency (SNA)** account system for **Centrally-sponsored schemes**.



❖ Key Highlights

- Through this interface with **Khajane-II** in an automated environment, the bank will be strengthening the Government's efforts in implementing various sponsored schemes for disbursement of cash benefits to the targeted beneficiaries through direct credit to their bank accounts in a safe, secure and speedier manner.



- The bank, through its technology and digital led solutions, will continue to engage and partner with the Karnataka government for implementing its various initiatives towards welfare of the public.

Face to Face Centres

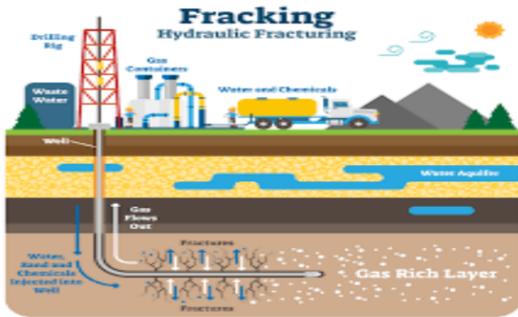


Fracking Technology

❖ Context

- The newly elected UK PM has promised to favour all-out investment in energy, including controversial fracking technology.

❖ About the Technology



• **Hydraulic fracturing, or fracking**, is a process that uses **high-pressure fluid** (water, sand, and small volumes of chemical additives) injections to shatter rock formations and extract natural gas.

• It has been in use for over 60 years and is often credited for the natural gas production boom.

❖ Effects on Environment

• However, it is controversial because of the number of natural resources it uses, and the negative effects it can have on the air and water quality of the fracked areas.

- One of the main pollutants released in the fracking process is **methane**, a greenhouse gas that traps 25 times more heat than carbon dioxide.
- In addition to methane, fracking also releases toxic compounds such as **nitrogen oxides, benzene, hydrogen sulphide, and other hydrocarbons**, forming smog and ozone.
- It uses large amounts of **water** and releases toxic chemicals into the surrounding water table. The **high salinity of wastewater** spills can reduce the **soil's ability** to support plant life.
- Following the completion of drilling operations, the resultant waste fluids are often disposed of by injecting them into deep wells, at pressures high enough to cause damaging **earthquakes**.

'Limited Change' in Cities Under Clean Air Scheme

❖ Context

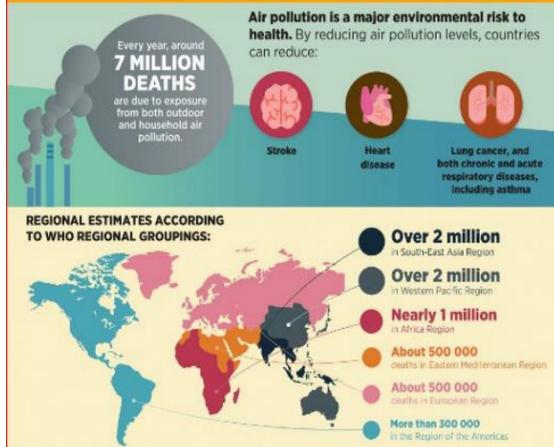
- **Centre for Science and Environment**, has reported recently that "there is barely any difference" in trends in **particulate matter** pollution (PM2.5) between the group of cities under the **National Clean Air Programme (NCAP)** and those outside its ambit.



❖ Key Highlights

- The NCAP covers 132 of India's most polluted or so-called non-attainment cities.
- The NCAP launched in 2019 aims to bring a 20%-30% reduction in pollution levels from PM2.5 and PM10 particles by 2024, using 2017 pollution levels as a base.

AIR POLLUTION - THE SILENT KILLER



- For disbursing funds, the Central Pollution Control Board, which coordinates the programme, only considers levels of PM10, the relatively larger, coarser particles.
- However PM2.5, the smaller, more dangerous particles, aren't monitored as robustly in all cities, mostly due to the lack of equipment.

- Cities are required to quantify improvement starting 2020-21, which requires 15% & more reduction in the annual average PM10 concentration & a concurrent increase in "good air" days to at least 200.
- Anything fewer will be considered 'low' & the funding consequently reduced.

- Cities in Punjab, Rajasthan and Maharashtra dominated the list of cities which registered a significant increase in PM2.5 levels between 2019 and 2021.
- Chennai, Varanasi and Pune show the most improvement among NCAP cities.
- The cities of Haryana, Madhya Pradesh and Gujarat dominate the list of non-NCAP cities that have registered significant increase in air pollution levels.

News in Between the Lines

❖ Context

- On the occasion of Teacher's Day, the Prime Minister announced development and upgradation of **14,500 schools** across India under the **PM-SHRI Yojana**.

❖ Key Highlights

- It is a new **Centrally sponsored scheme** to be administered by the **Ministry of Education**.

Pradhan Mantri Schools For Rising India (PM-SHRI) Yojana.

Face to Face Centres





- The schools will be **upgraded** to showcase all components of the **National Education Policy, 2020**.
- These schools will act as **examples and offer mentorships** to other schools in the vicinity. Under the scheme, the schools identified will include those run by the Centre, State, UTs and local bodies.

Menu Labelling Norms



❖ Context

- The **Food Safety and Standards Authority of India (FSSAI)** has suspended the licences of 16 food business operators for non-compliance with menu labelling norms.

❖ Key Highlights

- The mandatory menu labelling norms for the hospitality industry came into effect on **July 1, 2022**.
- Menu labelling norms apply to restaurant and hotel players with central licences.
- In addition, restaurant chains operating outlets in ten or more locations must comply with these norms.
- E-commerce aggregators selling food products of such restaurants are also required to declare menu labelling of the food items on their platforms.
- Under the norms, the operators should display **calories count, serving size, allergen information and vegetarian/non-vegetarian logo**.

V.O Chidambaram Pillai



❖ Context

- Recently, the Prime Minister paid tribute to **V. O. Chidambaram Pillai**, the legendary freedom fighter on his **151th birth anniversary**.

❖ About

- V O Chidambaram Pillai, was born on 5th September 1872 in Tamil Nadu.
- V. O. Chidambaram Pillai entered into active politics in the year 1905 by becoming a member of the Indian National Congress.
- Inspired by freedom fighter Ramakrishnananda, he set up the Swadeshi Steam Navigation Company on November 12, 1906. He established many institutions like Swadeshi Prachar Sabha, Dharmasanga Nesavu Salai, National Godown, Madras Agro-Industrial Society Ltd and Desabimana Sangam.
- In 1908, Pillai was charged with sedition and sentenced to two life terms as part of the Tuticorin Coral Mills strike.

National Cooperation Policy



❖ Context

- **Union Home and Cooperation Minister** recently announced the constitution of a national-level committee for drafting a new national cooperation policy document.

❖ Key Highlights

- The new National Cooperative Policy is being formulated to realise the vision of **'Sahakar Se Samridhi'**,
- The committee comprises experts of the cooperative sector, representatives of national/state/district & primary cooperative societies; secretaries (cooperation) & registrars of cooperative societies of states some states and officers from central ministries. India has around **8.5 lakh co-operative societies** with a member base of around 29 crore, spread across the length & breadth of the country.

❖ Objectives

- The scheme would facilitate **Primary Agricultural Credit Society (PACS)** to diversify their business and undertake multiple activities and services. The Centre has shared a draft rules for PACS exclusively to fulfil the objective of allowing them to undertake diversified activities.
- The new policy document is being formulated :
 - to strengthen the cooperative movement in the country and deepen its reach, promote cooperative-based economic development model,
 - create an appropriate policy,
 - legal and institutional framework to help cooperatives realise their potential.

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