

INDIAN GEOGRAPHY

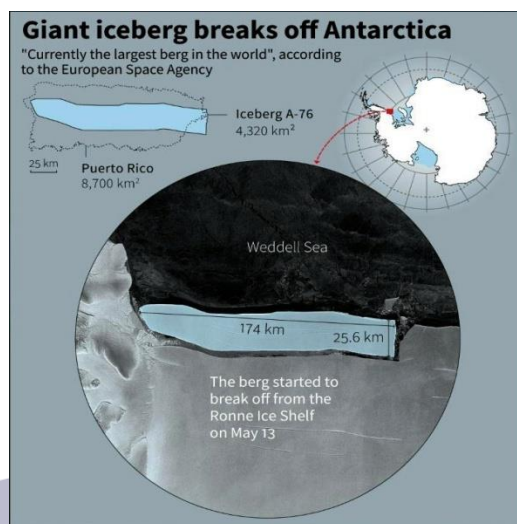
World's Largest Iceberg

An enormous iceberg 'A-76' has calved from the western side of the Ronne Ice Shelf, lying in the Weddell Sea, in Antarctica. It measures around 4320 sq km in size – currently making it the largest berg in the world.

Key Points

About A-76:

- The newly calved berg 'A-76' was spotted in recent satellite images captured by the Copernicus Sentinel-1 mission. Sentinel-1 is one of the missions of the European Space Agency (ESA) under Copernicus initiative (an earth observation programme).
- It has surpassed the now second-place A-23A, about 3,380 sq km in size and also floating in the Weddell Sea.



Iceberg:

- An iceberg is ice that broke off from glaciers or shelf ice and is floating in open water.
- Icebergs travel with ocean currents and either get caught up in shallow waters or ground themselves.
- The US National Ice Center (USNIC) is the only organisation that names and tracks Antarctic Icebergs. Icebergs are named according to the Antarctic quadrant in which they are spotted.

Ice Shelves:

- An ice shelf is a floating extension of land ice. The Antarctic continent is surrounded by ice shelves.
- The Ronne Ice Shelf on the flank of the Antarctic Peninsula is one of the largest of several enormous floating sheets of ice that connect to the continent's landmass and extend out into the surrounding seas.

Iceberg Calving:

- **Meaning:** Calving is the glaciological term for the mechanical loss (or simply, breaking off) of ice from a glacier margin. Calving is most common when a glacier flows into water (i.e. lakes or the ocean) but can also occur on dry land, where it is known as dry calving.
- **Recent Cases of Calving:** Up to the end of the 20th century, the Larsen Ice Shelf (on the West Antarctic Peninsula) had been stable for more than 10,000 years. In 1995, however, a huge chunk broke off, followed by another in 2002. This was followed by the breakup of the nearby Wilkins Ice Shelf in 2008 and 2009, and A68a in 2017.

Concerns:

- Periodic calving off of large chunks of those shelves is part of a natural cycle, but the process has been accelerated by climate change.
- Average sea levels have risen about nine inches since 1880, and about a quarter of that increase comes from ice melting in the Greenland and Antarctica ice sheets, along with land-based glaciers elsewhere.
- According to a recent study, more ambitious national goals to cut greenhouse gas emissions and slow down climate change set recently are not enough to stop sea levels from rising. In fact,

melting glaciers and ice sheets will raise sea levels twice as fast as they would if countries fulfilled their earlier pledges under the Paris Agreement.

SOCIAL ISSUE

Assistance to Transgender

In view of Covid-19 pandemic, the Ministry of Social Justice and Empowerment will give transgender persons a one-time financial assistance of Rs. 1,500.

Key Points

About the Assistance: Immediate subsistence assistance to trans persons would be given through Direct Benefit Transfer (DBT), for which beneficiaries can register with the National Institute of Social Defence.

National Institute of Social Defence (NISD):

- NISD is an Autonomous Body and is registered under Societies Act XXI of 1860 with the Government of National Capital Territory (NCT), Delhi.
- It is a central advisory body for the Ministry of Social Justice and Empowerment.
- It is the nodal training and research institute in the field of social defence.
- It currently focuses on human resource development in the areas of drug abuse prevention, welfare of senior citizens, beggary prevention, transgender and other social defence issues.

Major Initiatives Related to Transgender:

- **Judgements of the Supreme Court:**
 1. National Legal Services Authority (NALSA) v. Union of India, 2014: The SC declared transgender people to be a 'third gender'.
 2. Read down the Provisions of Section 377 of the Indian Penal Code (1860): The SC decriminalised same-sex relationships.
- **Transgender Persons (Protection of Rights) Act, 2019:**
 1. A transgender person is one whose gender does not match the gender assigned at birth. It includes transmen and trans-women, persons with intersex variations, gender-queers, and persons with socio-cultural identities, such as kinnar and hijra.
 2. Establishes National Council for Transgender persons.
 3. Gives right to obtain Certificate of Identity.
 4. Provides the right of residence with parents and immediate family members.
 5. Prohibits discrimination against a transgender person in various sectors such as education, employment, and healthcare etc.
 6. Offences against transgender persons will attract imprisonment between six months and two years, in addition to a fine.
 7. Transgender Persons (Protection of Rights) Rules, 2020, National Portal for Transgender Persons and the Scheme of 'Shelter Home for Transgender Persons'.

INTERNATIONAL RELATION

1. India-Oman

Recently, India and Oman renewed the Memoranda of Understanding (MoUs) on military cooperation as well as on maritime security.

Key Points

India-Oman Relationship:

- The Sultanate of Oman is a strategic partner of India and an important speaker at the Gulf Cooperation Council (GCC), Arab League and Indian Ocean Rim Association (IORA) fora. India is a member of IORA but not a member of GCC and Arab League.
- India and Oman are linked by geography, history and culture and enjoy warm and cordial relations, which are attributed to historical maritime trade linkages, intimacy of the Royal family with India and the seminal role played by Indian expatriate community in building Oman, which is acknowledged by the Omani Government.
- Institutional mechanisms like Joint Commission Meeting (JCM) and Joint Business Council (JBC) oversee economic cooperation between the two.
- Key bilateral agreements/MoUs cover cooperation in Defence; peaceful uses of Outer Space; Extradition; Legal and judicial cooperation in civil and commercial matters; Agriculture; Civil Aviation; Avoidance of Double Taxation; Maritime issues; etc.

Defence Cooperation:

- In West-Asia, Oman is one of India's oldest defence partners and an ally in anti-piracy campaigns.
- India has supplied rifles to Oman. Also, India is considering setting up a defence production unit in Oman.
- India and Oman conduct regular biennial bilateral exercises between all three services.
 1. Army exercise: Al Najah
 2. Air Force exercise: Eastern Bridge
 3. Naval Exercise: Naseem Al Bahr

Maritime Cooperation:

- Oman is at the gateway of Strait of Hormuz through which India imports one-fifth of its oil imports.
- The berth rights given by Oman to Indian vessels is important for the Indian Navy to carry out anti-piracy operations in the Gulf of Aden.
- India signed a pact with the country in 2018 to access the Duqm port of Oman.
- India is working closely with Oman to enhance strategic depth in the region and add heft to its Indo-Pacific vision in the Western and Southern Part of Indian Ocean.
- India needs its support to counter the growing Chinese foothold in the region. India is concerned with China's acquisition of strategic assets in the region including setting its base at Port of Doraleh in Djibouti.

2.China's New Strategic Highway

Recently, China has completed construction of a strategically significant highway enabling greater access to remote areas along the disputed border with Arunachal Pradesh in India.

Key Points

About:

- The construction began in 2014 and is part of a wider infrastructure push in border areas in Tibet.
- The highway passes through the Grand Canyon of the Brahmaputra river (Yarlung Zangbo in Tibet).
- The Brahmaputra is the longest river in Tibet and its valley is the world's deepest with a 7,000-metre drop from the highest mountain peak to the lowest basin.
- It connects Pad Township in the city of Nyingchi and Medog County.
- Nyingchi and Medog County both are located in Tibet Autonomous Region (TAR), China.
- Medog is the last county in Tibet, which is located close to the Arunachal Pradesh border.
- China claims Arunachal Pradesh as part of South Tibet, which is firmly rejected by India. The India-China border dispute covers the 3,488-km-long Line of Actual Control (LAC).
- The Highway will shorten the road length connecting the city proper of Nyingchi and Medog County and will reduce the travel time by eight hours.

Other Strategic Constructions by China:

- **Railway Line:** In 2020, China had begun work on a strategically significant railway line that will link Sichuan province with Nyingchi in Tibet, which lies close to Arunachal Pradesh border. It is the second major rail link to Tibet after the Qinghai-Tibet railway that opened in 2006.
- **New Villages:** In January 2021, there were reports of Chinese construction of three villages in Arunachal Pradesh 5 kilometres from the Bum La pass. In 2020, satellite images emerged showing a new village called Pangda built 2-3 km into what Bhutan sees as its land. In 2017, the TAR government launched a plan to build moderately well-off villages in border areas. Under this plan 628 first line and second line villages — referring to those right on the border and others in remote areas slightly further within — would be developed in the prefectures of Ngari, Shigatse, Shannan and Nyingchi, along China's borders with India, Bhutan and Nepal.

Concerns for India:

- The highway is also expected to play a key role in the surveying of and planning for the mega Yarlung Zangbo hydro-power project that China is planning to build at the canyon in the same Medog county, triggering unease among downstream countries like India.
- A highway connecting the border will largely improve the efficiency and convenience of military personnel and material transportation and logistical supplies in the border area.

Steps Taken by India:

- India will spend 10% funds of the Border Area Development Programme (BADP) only to improve the infrastructure along the China border.
- The Border Roads Organisation (BRO) constructed the Daporijo bridge over Subansiri river in Arunachal Pradesh. It links roads leading upto the LAC between India and China.
- Foundation of a tunnel at Nechiphu in West Kameng district of Arunachal Pradesh has been laid down which will shorten travel time for troops till the LAC through Tawang, which China claims to be its territory.
- A tunnel is being constructed under the Se La pass in Arunachal Pradesh which connects Tawang to the rest of Arunachal and Guwahati.
- The state government of Arunachal Pradesh has advocated selection of 10 census towns along the India-China border as pilot projects for infrastructure development in order to stop people living along its international borders, specifically with China, from migrating to faraway urban centres in the State.
- Sisseri River Bridge, located at lower Dibang Valley in Arunachal Pradesh, connects Dibang Valley and Siang.
- In 2019, the Indian Air Force inaugurated resurfaced runway at India's easternmost Village-Vijaynagar (Changlang district) in Arunachal Pradesh.
- In 2019, the Indian Army conducted exercise 'HimVijay' in Arunachal Pradesh and Assam with its newly created Integrated Battle Groups (IBG).
- Bogibeel bridge, which is India's longest road-rail bridge connecting Dibrugarh in Assam to Pasighat in Arunachal Pradesh was inaugurated in 2018. It will facilitate quicker movement of troops and equipment to areas near the India-China border.

Way Forward

India needs to be vigilant enough for any new development in China near its border to protect its interests efficiently. Further, it needs to build robust Infrastructure in difficult border areas in its territory to ensure movement of personnel and other logistical supplies in an efficient manner.

SCIENCE AND TECHNOLOGY

Coviself

Recently, the Indian Council of Medical Research (ICMR) approved India's first self-use Rapid Antigen Test (RAT) for Covid-19 named as CoviSelf.

Key Points

About:

- It uses a RAT and gives results within 15 minutes. This test is synced with a mobile app, CoviSelf, which will help directly feed the positive case's report on the ICMR portal.
- ICMR has advised this test only for those who have symptoms or are high-risk contacts of positive patients and need to conduct a test at home.
- This test is not advised for general screening in public places of hawkers, show owners, or commuters.

Benefits of Self Testing:

- **Cost Effective:** Swab collection in this case is fairly simple and quick, and reduces overall testing expenditure and the stress of booking appointments in labs.
- It is cheaper than RT-PCR and a RAT in the laboratory.
- **Reduced Risk of Transmission:** A person testing himself at home rather than visiting a hospital or lab, or calling a technician at home, reduces the risk of transmission to others. Reliable self-collection and self-testing will reduce population movement, reduce Covid-19 exposure risk.
- **Reduced Burden:** Self-testing will reduce the burden on laboratories that are currently working 24 hours up to full capacity with manpower that is already saturated.
- **Mass Surveillance:** Cheap rapid tests can help in accomplishing the aim of mass surveillance even if their sensitivity to capture accurate results are inferior to other tests.

Concerns:

Reliability: The reliability of results remains a major concern. The likelihood of the sample not being collected correctly, or the swab stick getting contaminated, is high.

False Sense of Security: RAT comes with a high chance of false negatives. If a Covid-infected person is asymptomatic and tests negative, the test may give a false sense of security.

Challenge to Response Measures: Shifting the responsibility of reporting test results from health professionals and laboratories to individuals could lead to underreporting, and make response measures such as contact tracing and quarantine of contacts even more challenging.

Way Forward

Self-tests can be effective if the patient follows isolation norms, feeds correct data and is able to interpret the results accurately. However while a RAT serves as a quick mass surveillance tool, over-dependence on it for testing is not advisable. It can supplement, not form, the bulk of testing.

ENVIRONMENT AND BIODIVERSITY

Sunderlal Bahuguna: Chipko Movement

Recently, Sunderlal Bahuguna, the Gandhian who was the driving force behind the Chipko movement died due to Covid-19.

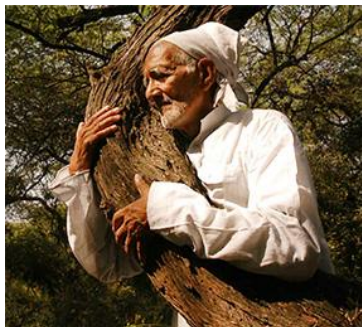
Key Points

Chipko Movement:

- It was a non-violent agitation which originated in Uttar Pradesh's Chamoli district (now Uttarakhand) in 1973.
- The name of the movement 'chipko' comes from the word 'embrace', as the villagers hugged the trees and encircled them to prevent being hacked.
- It is best remembered for the collective mobilisation of women for the cause of preserving forests, which also brought about a change in attitude regarding their own status in society.
- It's biggest victory was making people aware of their rights to forests, and how grassroots activism can influence policy-making regarding ecology and shared natural resources.
- It led to a ban on commercial felling of trees above 30 degrees slope and above 1,000 msl (mean sea level) in 1981.

Sunderlal Bahuguna (1927-2021):

- Initiated the chipko movement to guard the trees on the Himalayan slopes.
- Known for coining the Chipko slogan 'ecology is permanent economy'
- After the Chipko movement in the 1970s, he gave the message across the globe that ecology and ecosystem are more important. He was of the opinion that ecology and economy should go together.
- Campaigned against the Tehri Dam on River Bhagirathi, a mega-project with devastating consequences. He undertook one of India's longest fasts after Independence, over 56 days.
- Took 4,800 km Kashmir to Kohima padayatra (foot march) in the early 1980s to bring attention to the entire Himalayan region.



- Supported women-led movements against the liquor mafia in the hills, and for the Beej Bachao Andolan, a movement to save Himalayan agricultural biodiversity from being wiped out by the unsustainable, chemical-intensive Green Revolution.
- He was awarded the Padma Vibhushan in 2009.

2. International Day for Biological Diversity

The International Day for Biological Diversity (IDB) (International Biodiversity day) is observed on 22nd May every year.

Key Points

About:

- The United Nations General Assembly (UNGA) in 1993 proclaimed 22nd May as IDB to increase understanding and awareness of biodiversity issues.

- The UNGA also declared the period 2011-2020 as the United Nations (UN) Decade on Biodiversity to promote the implementation of a strategic plan on biodiversity and its overall vision of living in harmony with nature.
- It also declared 2021-2030 as the UN Decade of Ocean Science for Sustainable Development and the UN Decade on Ecosystem Restoration.

2021 Theme:

- This year's theme is "We're part of the solution" which is a continuation of 2020 theme- Our solutions are in nature.
- This serves as a reminder that biodiversity remains the answer to several sustainable development challenges.

Some Global Initiatives to Save Biodiversity:

- **Convention on Biological Diversity:** It is a legally binding treaty to conserve biodiversity that has been in force since 1993. India is a party to the convention.
- **Convention on International Trade in Endangered Species of Wild Fauna and Flora:** It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together. India is a member of the convention.

Biodiversity

- **About:** It is a term used to describe the enormous variety of life on Earth. It can be used more specifically to refer to all of the species in one region or ecosystem. Biodiversity refers to every living thing, including plants, bacteria, animals, and humans. It is often understood in terms of the wide variety of plants, animals and microorganisms, but it also includes genetic differences within each species.
- **Concerns:** World Wide Fund for Nature in its flagship Living Planet Report 2020 warned that global biodiversity is in steep decline. It has revealed a global species loss of 68% in less than 50 years, a catastrophic decline never seen before.
- **Need for Conservation:** It boosts ecosystem productivity where each species, no matter how small, all have an important role to play. A larger number of plant species means a greater variety of crops. Greater species diversity ensures natural sustainability for all life forms. The world should conserve it so as to maintain the food chain. The disturbance in the food chain may affect the whole ecosystem.
- **Some Indian Initiatives For Conservation of Biodiversity:**
 1. National Plan for Conservation of Aquatic Ecosystems.
 2. Wetland (Conservation and Management) Rules 2017.
 3. The Biological Diversity Act, 2002.
 4. Wild Life (Protection) Act, 1972

IMPORTANT FACTS FOR PRELIM

White Fungus

As the central government asks states to notify black fungus or mucormycosis an epidemic, an infection called white fungus or Candidiasis has also been found to affect some people. Black fungus is a serious but rare fungal infection caused by a group of molds called mucormycetes, which is abundant in the environment.

Key Points

About:

- White Fungus or Candidiasis is a fungal infection caused by a yeast (a type of fungus) called Candida.
- Candida normally lives on the skin and inside the body, in places such as the mouth, throat, gut, and vagina, without causing any problems.
- Candida can cause infections if it grows out of control or if it enters deep into the body (for example, the bloodstream or internal organs like the kidney, heart, or brain). The most common species that causes infection is Candida albicans.

Cause:

- This infection can be caused due to low immunity, or if people come in contact with things that contain these moulds like water, etc. Children and women are more at risk of contracting the fungal infection.

- Like the black fungus, white fungus is also more likely to afflict people with compromised immune systems, pre-existing medical conditions, AIDS, a recent kidney transplant or diabetes.

Symptoms:

- People experience symptoms similar to Covid if it reaches the lungs such as chest infection, despite testing negative for the virus.
- White fungus affects the lungs as well as other parts of the body including the nails, skin, stomach, kidney, brain, private parts and mouth.

Diagnosis and Treatment:

- CT scans or X-Rays can reveal the condition.
- Patients with the white fungus are currently being treated with known anti-fungal medication.

Prevention:

- Special caution is required of moulds in water that can lead to infection.
- Proper sanitation is very important.

DAILY ANSWER WRITING PRACTICE

Qns. What are the salient features of the Jal Shakti Abhiyan launched by the Government of India for water conservation and water security?

Ans:

Introduction

Jal Shakti Abhiyan (JSA) is a time-bound and mission-mode water conservation campaign, launched by the Ministry of Jal Shakti in 2019. It is a campaign for water conservation and water security in India's most water-stressed districts through a collaborative effort of various ministries of the Government of India and state governments.

Body

Salient Features of the Jal Shakti Abhiyan

- Jal Shakti Abhiyan focuses on integrated demand and supply-side management of water at the local level, including the creation of local infrastructure for source sustainability using rainwater harvesting, groundwater recharge and management of household wastewater for reuse.
- **It majorly focuses on five aspects viz.:**
 1. Water conservation and rainwater harvesting
 2. Renovation of traditional and other water bodies/tanks
 3. Reuse and recharge structures
 4. Watershed development
 5. Intensive afforestation
- The conservation efforts will be supplemented by initiatives like developing block and district water conservation plans and 'Krishi Vigyan Kendra melas' to promote efficient water use for irrigation and better crop choices.
- Through Jal Shakti Abhiyan, the government plans to run water conservation, similar to the cleanliness drive i.e the Swachh Bharat Abhiyan. Thus, it aims at making water conservation a Jan Andolan through asset creation and extensive communication.

Conclusion

Jal Shakti Abhiyan signifies that the rising water emergency is making India listen to alarm bells and consequently a strong political commitment coming into place.

DAILY QUIZ

Q1. Consider the following statements:

1. Venus is the second planet from the Sun.
2. Venus is the smallest planet in the Solar System.
3. Venus rotates in the direction opposite of its orbital path around the sun.

Which of the above given statements is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) **1 and 3 only**
- (d) 1, 2 and 3

Q2. Mojave Desert is situated to the

- (a) **Southwestern United States**

- (b) Northeastern United States
- (c) Southwestern Mexico
- (d) Northeastern Mexico

Q3. The right to freedom of speech and expression in India is a

- (a) Natural Right
- (b) Constitutional Right
- (c) Legal Right
- (d) Fundamental Right**

Q4. Consider the following statements about National Payments Corporation of India:

1. It is an initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA).
2. It has been incorporated as a "Not for Profit" Company under the provisions of the Payment and Settlement Systems Act, 2007.

Which of the given above statements is/are correct?

- (a) 1 only**
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q5. Consider the following statements:

1. National Payments Corporation of India (NPCI) helps in promoting the financial inclusion in the country.
2. NPCI has launched RuPay, a card payment scheme.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2**
- (d) Neither 1 nor 2



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