

GOVERNANCE**Global Housing Technology Challenge-India**

The Prime Minister has laid the foundation of LightHouse Projects (LHPs), as part of the Global Housing Technology Challenge-India (GHTC-India) initiative, at six sites across six states via videoconference.

- He also announced the winners under Affordable Sustainable Housing Accelerators - India (ASHA-India) and gave away annual awards for excellence in implementation of Pradhan Mantri Awas Yojana - Urban (PMAY-U) Mission.
- He also released a certification course on innovative construction technologies named NAVARITIH (New, Affordable, Validated, Research Innovation Technologies for Indian Housing).

Key Points**Global Housing Technology Challenge-India:**

- The Ministry of Housing and Urban Affairs has conceptualized a Global Housing Technology Challenge - India (GHTC- India) which aims to identify and mainstream a basket of innovative technologies from across the globe for the housing construction sector that are sustainable, eco-friendly and disaster-resilient.
- The Prime Minister declared the year 2019-20 as 'Construction Technology Year' while inaugurating GHTC-India in March 2019.

3 Components of GHTC-India:

- Grand Expo and Conference: It is organized biennially to provide a platform to all stakeholders associated with housing construction for the exchange of knowledge and business.
- Proven Demonstrable Technologies for the Construction of Lighthouse Projects: These projects demonstrate the merits of the selected technologies and serve as live laboratories for research, testing, technology transfer, increasing mass awareness and for mainstreaming them in the country.
- The funding for the LHPs is as per the guidelines of PMAY-U.
- Potential Future Technologies for Incubation and Acceleration Support: Potential future technologies from India that are applicable to the housing sector will be supported and encouraged through the ASHA (Affordable Sustainable Housing Accelerators) India program.

LightHouse Projects at Six Sites:

- Six LHPs consisting of about 1,000 houses each with physical & social infrastructure facilities are being constructed at six places across the country namely Indore (Madhya Pradesh), Rajkot (Gujarat), Chennai (Tamil Nadu), Ranchi (Jharkhand), Agartala (Tripura) and Lucknow (Uttar Pradesh).
- These projects will showcase the use of the six distinct shortlisted innovative technologies for field level application, learning and replication.
- LHPs will demonstrate and deliver ready to live mass housing at an expedited pace as compared to conventional brick and mortar construction and will be more economical, sustainable, of high quality and durability.

Affordable Sustainable Housing Accelerator – India (ASHA India):

- The aim of ASHA-India is to catalyse research and development in the housing construction sector, building materials and related products by providing a suitable platform to promote and showcase India's vibrant and dynamic community of innovators.
- It will support the potential future technologies developed in India by the way of incubation and acceleration.
- Incubation and acceleration support is provided to potential future technologies that are not yet market ready (pre-prototype applicants) or to the technologies that are market ready (post prototype applicants) respectively.

INTERNATIONAL RELATIONS**IFSCA Becomes Associate Member of IOSCO**

The International Financial Services Centres Authority (IFSCA) has become an associate member of the International Organization of Securities Commissions (IOSCO).

Securities and Exchange Board of India (SEBI) is an ordinary member of IOSCO.

Key Points**International Financial Services Centres Authority (IFSCA):****About:**

- It was established in April 2020 under the International Financial Services Centres Authority Act, 2019. It is headquartered at GIFT (Gujarat International Finance Tec-City), Gandhinagar in Gujarat.
- It is a unified authority for the development and regulation of financial products, financial services and financial institutions in the International Financial Services Centre (IFSC) in India.
- An IFSC caters to customers outside the jurisdiction of the domestic economy.
- It has been established to promote ease of doing business in IFSC and to provide a world class regulatory environment.

Objective:

- To develop a strong global connect and focus on the needs of the Indian economy as well as to serve as an international financial platform for the entire region and the global economy as a whole.

International Organization of Securities Commissions (IOSCO):**About:**

- Founded: April 1983
- Headquarters: Madrid, Spain
- IOSCO Asia Pacific Hub is located in Kuala Lumpur, Malaysia.
- It is the international organization that brings together the world's securities regulators, covering more than 95% of the world's securities markets, and is the global standard setter for the securities sector.
- It works closely with the G20 (Group of Twenty) and the Financial Stability Board (FSB) in setting up the standards for strengthening the securities markets.
- The FSB is an international body that monitors and makes recommendations about the global financial system.
- The IOSCO Objectives and Principles of Securities Regulation have been endorsed by FSB as one of the key standards for sound financial systems.
- IOSCO's enforcement role extends to matters of interpretation of International Financial Reporting Standards (IFRS), where IOSCO maintains a (confidential) database of enforcement actions taken by member agencies.
- IFRS is an accounting standard that has been issued by the International Accounting Standards Board (IASB) with the objective of providing a common accounting language to increase transparency in the presentation of financial information.

Objectives:

- To cooperate in developing, implementing and promoting adherence to internationally recognized and consistent standards of regulation, oversight and enforcement in order to protect investors, maintain fair, efficient and transparent markets, and seek to address systemic risks;
- To enhance investor protection and promote investor confidence in the integrity of securities markets, through strengthened information exchange and cooperation in enforcement against misconduct and in supervision of markets and market intermediaries; and
- To exchange information at both global and regional levels on their respective experiences in order to assist the development of markets, strengthen market infrastructure and implement appropriate regulation.

Significance of the Membership:

- It would provide IFSCA the platform to exchange information at the global level and regional level on areas of common interests.
- The IOSCO platform would enable IFSCA to learn from the experiences and best practices of the regulators of other well established financial centres.

SCIENCE & TECHNOLOGY**Draft National Science Technology and Innovation Policy, 2020**

Recently, the draft of the 5th National Science Technology and Innovation Policy (STIP) has been uploaded by the Department of Science and Technology (DST) on its website.

This Policy will replace the Science Technology and Innovation Policy of 2013.

Key Points**Aim:**

- To bring about profound changes through short, medium and long-term mission mode projects by building a nurtured ecosystem that promotes research and innovation on the part of both individuals and organizations.

- To identify and address strengths and weaknesses of the Indian Science Technology and Innovation (STI) ecosystem to catalyse socio-economic development of the country and also make the Indian STI ecosystem globally competitive.

Important Provisions:**Related to Equity and Inclusion:****Gender Equality:**

- It proposes that at least 30% representation be ensured for women in all decision-making bodies, as well as “spousal benefits” be provided to partners of scientists belonging to the Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ+) community.
- The LGBTQ+ community should be included in all conversations related to gender equity, and provisions be made to safeguard their rights and promote their representation and retention in the science and technology sector.

Child and Elderly Care:

- Child-care benefits are proposed to be made gender-neutral, and flexible work timings and adequate parental leave are to be offered to cater to maternity, childbirth and child care.
- All publicly-funded research institutions and universities will be asked to provide day-care centres for children of employees, and also have a provision for elderly care.

For Disabled:

- For the benefit of people with disabilities, the policy asks all publicly-funded scientific institutions to make “structural and cultural changes” to support their inclusion.

Other Related Provisions:

- For age-related cut-offs in matters relating to selection, promotion, awards or grants, the “academic age” and not the biological age would be considered.
- Removal of bars on married couples being employed in the same department or laboratory.
- As of now, married couples are not posted in the same department, leading to cases of loss of employment or forced transfers when colleagues decide to get married.
- Open Science Policy (One Nation, One Subscription): To make scientific knowledge and data available to all, the government has proposed:
 - To buy bulk subscriptions of all important scientific journals across the world, and provide everyone in India free access to them.
 - To set up a Science, Technology and Innovation Observatory that will serve as the central repository of all kinds of data generated from scientific research in the country.

Research and Education:

- It proposes to establish Education Research Centres (ERCs) and Collaborative Research Centres (CRCs) to provide research inputs to policymakers and bring together stakeholders.
- Research and Innovation Excellence Frameworks (RIEF) will be developed to enhance the quality of research along with the promotion of engagements with the relevant stakeholders.
- A dedicated portal to provide access to the outputs of such publicly-funded research will be created through the Indian Science and Technology Archive of Research (INDSTA).
- To set up Infrastructure to boost local Research and Development capabilities and reduce large scale import in selected sectors of domestic importance such as electronic hardware for home appliances, railways, intelligent transport, clean tech, defence, etc.

For Strengthening India's Strategic Position:

- To achieve technological self-reliance and position India among the top three scientific superpowers in the decade to come.
- To double the number of Full-Time Equivalent (FTE) researchers, Gross Domestic Expenditure on R&D (GERD) and private sector contribution to the GERD every 5 years.
- Establishment of a Strategic Technology Board that will bridge all strategic government departments, and monitor and recommend technologies to be bought or indigenously made.

BIODIVERSITY & ENVIRONMENT**Arctic: Concerns & Opportunities**

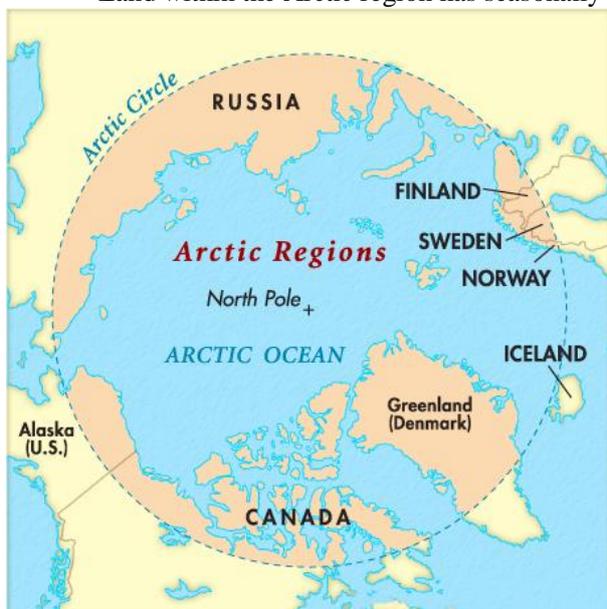
As per the WWF-Arctic Programme, the Arctic region is warming up twice as fast as the global average. The ice cap has been shrinking fast since 1980 and the volume of Arctic sea ice has declined by as much as 75%.

- Since 1992, WWF's (World Wide Fund for Nature) Arctic Programme has been working with its partners across the Arctic to combat threats to the Arctic and to preserve its rich biodiversity in a sustainable way.

Key Points

About Arctic:

- The Arctic is a polar region located at the northernmost part of Earth.
- The Arctic consists of the Arctic Ocean, adjacent seas, and parts of Alaska (United States), Canada, Finland, Greenland (Denmark), Iceland, Norway, Russia, and Sweden.
- Land within the Arctic region has seasonally varying snow and ice cover.



Ecological Impact of Warming on Arctic:

- The loss of ice and the warming waters will affect sea levels, salinity levels, and current and precipitation patterns.
- The Tundra is returning to swamp, the permafrost is thawing, sudden storms are ravaging coastlines and wildfires are devastating interior Canada and Russia.
- Tundra: Found in regions north of the Arctic Circle and south of the Antarctic Circle. These are treeless regions.
- The phenomenally rich biodiversity of the Arctic region is under serious threat.
- The absence of year-long ice and higher temperatures are making the survival of Arctic marine life, plants and birds difficult while encouraging species from lower latitudes to move north.
- The Arctic is also home to about 40 different indigenous groups, whose culture, economy and way of life is in danger of being swept away.
- Increasing human encroachment with its attendant stresses will only aggravate this impact and upset a fragile balance.

Commercial Importance of Arctic:

- The opening of the Arctic presents huge commercial and economic opportunities, particularly in shipping, energy, fisheries and mineral resources.

Commercial navigation:

- The Northern Sea Route (NSR) which would connect the North Atlantic to the North Pacific through a short polar arc is the most tempting.

Oil and natural gas deposits:

- Estimated to be 22% of the world's unexplored resources, mostly in the Arctic ocean, will be open to access along with mineral deposits including 25% of the global reserves of rare earths, buried in Greenland.

Issues Involved:

- Navigation conditions are dangerous and restricted to the summer.
- Lack of deep-water ports, a need for ice-breakers, shortage of workers trained for polar conditions, and high insurance costs add to the difficulties.

- Mining and deep-sea drilling carry massive costs and environmental risks.
- Unlike Antarctica, the Arctic is not a global common and there is no overarching treaty that governs it.

Conflict over Arctic:

- Russia, Canada, Norway and Denmark have put in overlapping claims for extended continental shelves, and the right to sea-bed resources.
- Russia is the dominant power, with the longest Arctic coastline, half the Arctic population, and a full-fledged strategic policy.
- Claiming that the NSR falls within its territorial waters, Russia anticipates huge dividends from commercial traffic including through the use of its ports, pilots and ice-breakers.
- Russia has also activated its northern military bases, refurbished its nuclear armed submarine fleet and demonstrated its capabilities, including through an exercise with China in the eastern Arctic.
- China, playing for economic advantage, has moved in fast, projecting the Polar Silk Road as an extension of the Belt and Road Initiatives, and has invested heavily in ports, energy, undersea infrastructure and mining projects.

India's interests in Arctic:**Environmental Interest:**

- India's extensive coastline makes it vulnerable to the impact of Arctic warming on ocean currents, weather patterns, fisheries and most importantly, the monsoon.
- Scientific Interest:
- Scientific research in Arctic developments, in which India has a good record, will contribute to its understanding of climatic changes in the Third Pole, the Himalayas.

Strategic Interest:

- The strategic implications of an active China in the Arctic and its growing economic and strategic relationship with Russia are self-evident and need close monitoring.
- Since 2013, India has had observer status in the Arctic Council, which is the predominant inter-governmental forum for cooperation on the environmental and development aspects of the Arctic.
- It is high time that its presence on the Arctic Council was underpinned by a strategic policy that encompassed economic, environmental, scientific and political aspects.

IMPORTANT FACTS FOR PRELIM**Umed Paoni Karhandla Wildlife Sanctuary**

A tigress and her two cubs were found dead in the Umed Paoni Karhandla Wildlife Sanctuary, Nagpur, Maharashtra.

Key Points**About the Sanctuary:**

- Umed Paoni Karhandla Wildlife Sanctuary has a connection with Tadoba Andhari Tiger Reserve through forest along Wainganga river (a tributary of Godavari).
- The sanctuary is home to resident breeding tigers, herds of Gaur, wild dogs and also rare animals like flying squirrels, pangolins and honey badgers.

Other Protected Sites of Maharashtra:

1. Tadoba National Park
2. Gugamal National Park
3. Pench National Park
4. Navegaon National Park
5. Sanjay Gandhi National Park
6. Melghat Tiger Reserve
7. Sahyadri Tiger Reserve
8. Bor Tiger Reserve

203rd Anniversary of the Bhima-Koregaon Battle

The victory pillar (also known as Ranstambh or Jaystambh) in Bhima-Koregaon village (Pune district of Maharashtra) celebrated the 203rd anniversary of the Bhima-Koregaon battle of 1818 on 1st January, 2021.

In 2018, incidents of violent clashes between Dalit and Maratha groups were registered during the celebration of the 200th anniversary of the Bhima-Koregaon battle.

Key Points

Historical Background:

- A battle was fought in Bhima Koregaon between the Peshwa forces and the British on 1st January, 1818.
- The British army, which comprised mainly of Dalit soldiers, fought the upper caste-dominated Peshwa army.
- The British troops defeated the Peshwa army.
- Peshwa Bajirao II had insulted the Mahar community and terminated them from the service of his army.
- This caused them to side with the English against the Peshwa's numerically superior army.
- Mahar, caste-cluster, or group of many endogamous castes, living chiefly in Maharashtra state and in adjoining states.
- They mostly speak Marathi, the official language of Maharashtra.
- They are officially designated Scheduled Castes.
- The defeat of Peshwa army was considered to be a victory against caste-based discrimination and oppression.
- It was one of the last battles of the Third Anglo-Maratha War (1817-18), which ended the Peshwa domination.
- Babasaheb Ambedkar's visit to the site on 1st January, 1927, revitalised the memory of the battle for the Dalit community, making it a rallying point and an assertion of pride.

The Victory Pillar Memorial:

It was erected by the British in Perne village in the district for the soldiers killed in the Koregaon Bhima battle. It has attained legendary stature in Dalit history.

DAILY ANSWER WRITING PRACTICE

Qns. Discussing the impacts of Micro Climatic zones shifting in India, suggest measures required to mitigate its impact. (250 words)

Ans:

The microclimates of a region are defined by the moisture, temperature, and winds of the atmosphere near the ground, the vegetation, soil, and the latitude, elevation, and season. Weather is also influenced by microclimatic conditions

- Microclimatic zones are shifting across various districts of India. A shift in microclimate zones may lead to severe disruptions across sectors. For example: every 2 degrees Celsius rise in annual mean temperature will reduce agricultural productivity by 15-20%.
- Some reasons identified behind this shift in microclimatic zones is change in land-use patterns, deforestation, encroachments upon mangroves, disappearing wetlands and natural ecosystems by encroachment, and urban heat islands that trap heat locally.

Impact of Micro Climatic zones shifting

- Increase in frequency, intensity, and unpredictability of extreme events: While India witnessed 250 extreme climate events in 35 years between 1970 and 2005, it recorded 310 such weather events in only 15 years since then.
- With an unusual spike in extreme events since 2005, these districts are bearing the effects of changing microclimate with loss of property, livelihoods and lives.
- Loss of lives and property: Extreme weather events resulting from climate change led to 4,95,000 human deaths across the world in 1999-2018. More than 12,000 extreme weather events led to losses worth USD 3.54 trillion (measured in terms of purchasing power parity or PPP) during this period. The current trend of catastrophic climate events results from a mere 0.6 degrees Celsius temperature rise in the last 100 years.

Measures to mitigate impacts of Micro Climatic zones shifting

- Develop a Climate Risk Atlas to map critical vulnerabilities such as coasts, urban heat stress, water stress, and biodiversity collapse.
- Develop an Integrated Emergency Surveillance System to facilitate a systematic and sustained response to emergencies.
- Building Sustainable and Environmentally-friendly Cities.
- Legislating laws that plan and provide environmentally sound cities and smart growth.
- Mainstream risk assessment at all levels, including localised, regional, sectoral, cross-sectoral, macro and micro-climatic level.

- Enhance adaptive and resilience capacity to climate-proof lives, livelihoods and investments.
- Increase the participatory engagement of all stakeholders in the risk assessment process.
- Integrate risk assessment into local, sub-national, and national level plans.

Conclusion

According to the Council on Energy, Environment and Water (CEEW), India is already the 5th most vulnerable country globally in terms of extreme climate events, and it is all set to become the world's flood capital. Thus, India needs to take immediate steps taking cognisance of the report "Preparing India for Extreme Climate Events" released by CEEW, so that India is well equipped and prepared to mitigate the vulnerabilities from Micro Climatic zones shifting.

DAILY QUIZ

1. Consider the following statements about the LightHouse Projects (LHPs):

1. The LightHouse Project has been launched in India as a part of the United Nations Human Settlement Programme.
2. Under the project, the houses will be constructed in the capital cities of Jharkhand, Uttar Pradesh, Assam and Gujarat.

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**

2. Which among the following organisations publishes the Digital Payments Index?

- a) **Reserve Bank of India**
- b) National Payment Corporation of India
- c) NABARD
- d) Bank Bureau Board

3. Consider the following statements:

1. It is a battle fought between the Peshwa forces and the British in 1818.
2. The British army comprised mainly of Dalit soldiers and fought against the upper caste-dominated Peshwa army.
3. The victory pillar also known as Ranstambh was erected in the commemoration of this battle.

The above statements most appropriately explaining which of the following battles of India's Modern history?

- a) **Bhima-Koregaon Battle**
- b) Battle of Haldighati
- c) Battle of Chausa
- d) Battle of Wandiwash

4. Consider the following statements about the International Organization of Securities Commissions (IOSCO):

1. It is the international organization that brings together the world's securities regulators.
2. Both International Financial Services Centres Authority (IFSCA) and Securities and Exchange Board of India (SEBI) are the members of IOSCO.

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

5. Consider the following statements:

1. Satyamev Jayate was adopted as the national motto of India on 26th January 1950.
2. Satyamev Jayate was taken from the Mundka Upnishad.
3. It is inscribed in the Devanagari script at the base of the Lion Capital of Ashoka.

Which of the statements given above is/are correct?

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