ENVIRONMENT AND CLIMATE CHANGE

Context: The effects of rising sea levels and ocean warming on marine biodiversity.

Why is it in the news?

- Tropical marine species are moving from the equator to the poles as a result of climate change, according to a recent study that was published in the journal Trends in Ecology and Evolution.
- Due to rising temperatures, increased competition for their habitat, and the introduction of new predators, temperate species are disappearing.

According to the study, how can climate change lead to tropicalization?

Tropicalization:

- As temperate species retreat, tropical species spread out throughout the ocean due to a phenomena called tropicalization brought on by climate change.
- Due to rising temperatures, increased competition for their habitat, and the emergence of new predators, temperate species are disappearing from the landscape.
- Ocean ecosystems, biodiversity, and the world economy may all be impacted by this worldwide change.
- The Mediterranean Sea was the site of the process's first detection.
- A rise in tropical species has led to the designation of the Mediterranean Sea as a "hotspot for tropicalization."

Dispersal of Species Affected by Climate Change:

- The physical elements that influence the distribution of species, such ocean currents in regions that divide tropical and subtropical zones from temperate ones, have changed due to climate change.
- The global seawater average is not warming as quickly as these warm-water boundary currents, which is promoting the retraction of temperate species and allowing species to migrate poleward.
- For instance, it has been shown that range-expanding tropical damselfishes and temperate reef fishes may cohabit by changing their social and eating habits.

Evolution of New Traits:

- Because ecology and evolution are closely related, modifications in the ways that species interact can lead to the evolution of new characteristics or behaviours

Ocean warming: What Is It?

About:

- The majority of the extra heat produced by greenhouse gas emissions is absorbed by the ocean, which causes ocean temperatures to rise.

Reasons for ocean warming

- **Greenhouse gas emissions**: The cause is greenhouse gas emissions. Carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) are among the major greenhouse gases released into the atmosphere by burning fossil fuels (coal, oil, and natural gas) for energy, deforestation, and industrial operations.
- The atmosphere and the oceans warm as a result of these gases' ability to trap heat
- **Carbon Dioxide Absorption:** Oceans serve as a huge reservoir that takes up a large amount of the extra carbon dioxide that comes from human activity. Although this absorption contributes to slowing down global warming on land, it also warms the water.
- **Solar Radiation:** Over extended periods of time, variations in solar radiation can affect ocean temperatures, even though they are a small factor in comparison to those caused by humans.

IMPACT

- **Coral Bleaching**: When temperatures rise, symbiotic algae that are residing in the tissues of corals can be forced out, resulting in coral bleaching. Extended bleaching poses a serious threat to coral reef ecosystems because it weakens corals and increases their susceptibility to disease.
- **Sea Level Rise:** Seawater expands thermally due to warmer ocean temperatures. Rising sea levels as a result of this and the melting of glaciers and polar ice caps can cause coastal erosion and make coastal towns more vulnerable.
- **Marine Food Web Disruption**: Variations in ocean temperatures can have an impact on the abundance and distribution of marine organisms, which can change how marine food webs are structured. The livelihoods of populations that rely on fisheries for their subsistence may be negatively impacted in a domino effect.
- **Ocean Acidification**: Ocean acidification is caused by the oceans absorbing too much carbon dioxide. The entire marine food chain can be impacted by acidification, which can damage marine species with calcium carbonate skeletons or shells, such as corals, molluscs, and certain types of plankton.

Conclusion:

Due to climate-induced tropicalization, marine species worldwide are changing; the Mediterranean is one example of this "hotspot." Coral bleaching, an increase in sea level, and disturbances to marine food webs are all results of ocean warming

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brought on by greenhouse gas emissions. Immediate climate mitigation is essential to maintain ocean health since it is endangering coastal communities, economy, and wildlife.

ECONOMY

Outcomes under bankruptcy code continue to fall short of expectations. Measures are needed to improve its functioning.

What is the Bankruptcy and Insolvency Code?
- A new framework for resolution was introduced in 2016 by the Insolvency and Bankruptcy Code, which has strengthened the position of both operational and financial creditors and contributed to a reset of credit relations.

What is the IBC's mandate?
- There are two possible outcomes when insolvency is initiated under the IBC: resolution or liquidation.
- All efforts are made to come up with a new ownership plan or restructuring in order to end the insolvency; if these methods are unsuccessful, the company's assets are liquidated.

How long does it take to finish the exercise in accordance with the code?
- Under the IBC, companies have 180 days to complete the whole insolvency process.
- If the creditors do not object to the extension, the deadline may be extended.
- For start-ups and smaller businesses with an annual revenue of Rs 1 crore, the insolvency process must be finished in 90 days.

Who controls the procedures of the IBC?
- As a regulator, the Insolvency and Bankruptcy Board of India (IBBI) has been designated to supervise these procedures.
- The Reserve Bank of India, the Finance Ministry, and the Law Ministry comprise the ten members of IBBI.

IBC's performance
- 7,058 cases had been admitted under the IBC framework as of the end of September.
- The Insolvency and Bankruptcy Board of India reports that an additional 26,000 petitions, with underlying defaults totalling about Rs 9.33 lakh crore, were withdrawn before to their admission under the Insolvency and Bankruptcy Board of India.
- About half of the cases that have been accepted were started by operational creditors, indicating that the legislation does offer these businesses—which are often small and medium-sized—a mechanism to assist in recouping their debts.
- 947 cases have been withdrawn under section 12A, presumably as a result of a settlement with the applicant or creditors, out of the total number of cases that have been allowed thus far. 1,053 cases have been closed on appeal, reviewed, or settled.
- In 808 cases, resolution plans have been authorized, and in 2,249 cases, liquidation has started.
- Only Rs 3.15 lakh crore, or 31.85%, of the creditors' acknowledged claims have been realized in the instances that have resulted in resolution plans, indicating that realisations have been less than anticipated.
- Even lower, at only 6.5% of the claims, have been the liquidation values.
- Approximately 77% of cases that have been placed in liquidation, however, were previously under the Board for Industrial and Financial Reconstruction and/or were no longer in existence.
- IBBI reports that in the majority of these cases, the asset values were just 7 percent of the existing debt, indicating a decline in economic worth.

One of the best things about IBC was the move to a time-bound resolution process.
- The resolution of insolvency in India used to take 4.3 years, according to the World Bank's 2016 Ease of Doing Business report.
- Even if it takes less time under IBC, it still takes longer than anticipated.
- An average of 653 days is needed to close the resolution process.
- Over 67% of cases that are still pending have exceeded 270 days.
- Fifty-five percent of liquidation cases have lasted longer than two years.

How can the bankruptcy and insolvency processes in India be improved?

Potential actions to enhance bankruptcy and insolvency laws in India include:
- **Cut down on the length of time needed for insolvency resolution**: The existing 180-day period, plus an additional 90 days for extensions, is still thought to be excessive. To shorten the time, it takes to resolve insolvencies generally, more efforts should be made to streamline the CIRP procedure.
- **Enhance the settlement Professional's (RP) role**: The RP is essential to the CIRP process and the effective settlement of insolvency cases depends on their efficiency and knowledge. To guarantee the expertise and efficacy of RPs, measures should be implemented to improve their selection, training, and pay.

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- **Deal with operational creditor concerns**: In bankruptcy procedures, operational creditors frequently have difficulty getting their money back. It is imperative to establish mechanisms that safeguard and give priority to the interests of operational creditors, guaranteeing that they are given appropriate attention during the resolution process.
- **Improve cross-border cooperation in insolvency**: To promote cross-border insolvency procedures and cooperation, India's insolvency system ought to be in line with international standards and frameworks. This would be very helpful for international businesses who operate in India.
- **Enhance NCLT capacity and infrastructure**: The National Company Law Tribunal (NCLT) is the IBC's adjudicating body. The NCLT's capacity and infrastructure should be enhanced, notably by adding more benches and enhancing case management systems, in order to efficiently handle the growing caseload.
- **Address legal and procedural issues**: Since the IBC's founding, it has undergone a number of revisions; yet, there might still be legal and procedural difficulties that require attention. To make sure the IBC stays applicable and useful, it should undergo regular evaluations and revisions.
- **Increase awareness and education**: Businesses, creditors, and the general public all need to be made more aware of and educated about the IBC. This would facilitate comprehension of the code's provisions and guarantee its efficient application.

Conclusion

Additional work has to be done even if a number of measures have been taken over time to tighten the code and enhance its functionality

PRELIM FACTS

1.Ayushman Arogya Mandir

Context: Recently, the Union Government has decided to rename the existing Ayushman Bharat Health and Wellness Centres (AB-HWCs) as 'Ayushman Arogya Mandir.

- The Central government of India in 2018 announced that 1.5 lakh HWCs would be created in the country by transforming existing sub health centres and primary health centres to deliver comprehensive primary health care and declared this as one of the two components of Ayushman Bharat.
- It was decided the Centre would provide 60% of the funding and, in turn, states would follow its design manual.
- Till date 1.61 lakh AB-HWCs have been made functional across the country which is higher than the initial target.
- The AB-HWCs provide maternal and child healthcare services; first level care for emergencies and trauma, including free drugs and diagnostic services, among other things.
- The new tag-line of AB-HWCs is Arogyam Parmam Dhanam'.

Key facts about Ayushman Bharat (AB)

- The union government in 2018 announced two major initiatives in health sector, as part of Ayushman Bharat programme.
- Curative care - Pradhan Mantri Jan Arogya Yojana (PMJAY): For hospitalisation at secondary- and tertiary-level private hospitals
- Primary care - Health and Wellness Centres (HWC): To strengthen primary healthcare.
- PMJAY will provide a cover of up to Rs. 5 lakhs per family per year to poor and vulnerable people, for secondary and tertiary care hospitalization.
- The National Health Authority (NHA) is responsible for the implementation of PMJAY.

2.Golan Heights

Context: India has voted in favour of a draft resolution in the UN General Assembly that expressed deep concern over Israel not withdrawing from the Golan Heights.

About Golan Heights:

- It is a rocky plateau in south-western Syria, about 60km (40 miles) south-west of the Capital, Damascus.
- It is bounded by the Jordan River and the Sea of Galilee on the west, Mount Hermon on the north, the seasonal Wadi Al-Ruqqād River on the east, and the Yarmūk River on the south.
- The Golan extends about 44 miles (71 km) from north to south and about 27 miles (43 km) from east to west at its widest point.
- It is roughly boat-shaped and has an area of 1,150 square km.

History:

- Israel seized the Golan Heights from Syria in the closing stages of the 1967 Six-Day War.
- Most of the Syrian Arab inhabitants fled the area during the conflict.
- An armistice line was established, and the region came under Israeli military control. Almost immediately, Israel began to settle the Golan.

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- Syria tried to retake the Golan Heights during the 1973 Middle East war. Despite inflicting heavy losses on Israeli forces, the surprise assault was thwarted.
- Both countries signed an armistice in 1974, and a UN observer force has been in place on the ceasefire line since 1974.
- Israel unilaterally annexed the Golan Heights in 1981.
- There are more than 30 Israeli settlements in the Golan. The settlements are considered illegal under international law, although Israel disputes this.
- About 20,000 Syrians and 20,000 Israelis live in the Golan.

Strategic Importance:
- The Syrian capital, Damascus, can be clearly seen from the top of the Golan Hills.
- When it rains here, its water goes to the Jordan River, which supplies water in dry areas. It is believed that this water supplies one-third of Israel's water.
- Apart from this, the land here is very fertile, which is very good for farming.

3.Angkor Wat
Context: Angkor Wat temple, located in Cambodia, has defeated Pompeii in Italy to become the eighth Wonder of the World.

The unofficial title "Eighth Wonder of the World" is sometimes given to buildings, structures, projects, designs, or even people who are thought to be comparable to the Seven Wonders of the World.

About Angkor Wat:
- It is the largest religious monument in the world.
- It was built by the Khmer King Suryavarman II in the first half of the 12th century.
- It was originally dedicated to the Hindu god Vishnu before becoming a Buddhist temple by the end of the 12th century.
- In 1992, the temple complex was named a UNESCO World Heritage Site.

Features:
- Sandstone blocks were used to build the structure.
- It is protected by a 15-foot-high wall and a wide moat.
- It covers an area of 200 acres.
- The temple has five major towers symbolising the peaks of Mount Meru, believed to be the abode of the gods in Hindu and Buddhist mythology.
- Thousands of bas-reliefs depicting important deities and figures in Hindu and Buddhist religions, as well as key events in their narrative traditions, adorn the temple walls.

Where is Angkor Wat?
- It is located in the northwestern province of Siem Reap in Cambodia.
- The city of Angkor, home to Angkor Wat, was the capital of the Khmer Empire and thrived between the 9th and 15th centuries.
- Angkor itself stretches over 400 km2 and is now home to the magnificent remains of a variety of temples, including Angkor Wat, Angkor Thom, Bayon Temple, and Ta Prohm.

4. Sindhudurg Fort
The Indian Navy is preparing to demonstrate its operational capabilities in a grand 'Operational Demonstration' on Navy Day at Sindhudurg Fort in Maharashtra.

About Sindhudurg Fort:
- It is a historical fort that occupies an islet in the Arabian Sea, just off the coast of Maharashtra in western India.
- The fortress lies on Kurte Island, very near the coast of Malvan town in Sindhudurg District in the Konkan region of Maharashtra, 450 kilometres south of Mumbai.
- The fort was built by Chhatrapati Shivaji Maharaj of the Maratha Empire.
- The construction of the fort began in 1664 and took three years to complete.
- The main objective was to counter the rising influence of foreign colonizers (English, Dutch, French, and Portuguese merchants) and to curb the rise of the Siddis of Janjira.

Features:
- It is spread over 48 acres with fortified walls that are29 feet high and 12 feet thick and stretch for two miles.
- As many as 52 bastions with embrasures for cannons guard its walls.
- One can enter the fort through the Dilli Darwaja, the main gate. Because of its architectural design, the gate is visible only from close quarters and seems to be part of the walls.
- It is surrounded by several smaller forts, such as Padmagad, Rajkot, and Sarjekot Forts.
- A handprint and footprint of the Maratha King are embedded on a slab within the fort.

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- A small temple dedicated to the Chhatrapati also finds a place within the bounds of the fort.

5. ICGS Sajag

Context: The Indian Coast Guard Ship (ICGS) Sajag, an Offshore Patrol Vessel, recently arrived at Port Sultan Qaboos, Muscat, Oman for a three-day visit as part of the overseas deployment of ICG ships to West Asia.

About Sajag OPV:

- ICGS Sajag is part of the Indian Coast Guard fleet of OPVs, based on the West Coast of India in Porbandar, Gujarat.
- It has been designed and built indigenously by Goa Shipyard Limited (GSL).
- It is the third in the series of 105-meter OPVs being built by GSL.
- It operates under the operational command of the Commander Coast Guard Region (North West).
- Sajag has undertaken various Coast Guard operations, including coastal security, IMBL / EEZ surveillance, anti-transnational crimes, and maritime SAR and pollution response operations in the past.

Features:

- The ship is equipped with modern weapon systems, sensors, and state-of-the-art navigation and communication systems.
- It is propelled by two 9100 KW diesel engines and can attain a maximum speed of 26 knots.
- It has an endurance of 6000 nm at an economical speed.
- It is fitted with a 40/60 Bofors gun and two 12.7 mm guns.
- It is designed to carry one twin-engine helicopter and four high-speed boats, including two inflatable boats for boarding operations, search and rescue, law enforcement, and maritime patrol.
- The ship is also capable of carrying pollution response equipment to contain oil spills at sea.
- The ship is also equipped with an Integrated Bridge System (IBS), Integrated Platform Management System (IPMS), Power Management System (PMS) and High Power External firefighting (EFF) system.

ANSWER WRITING

Q. The Citizens' Charter is an ideal instrument of organizational transparency and accountability, but it has its own limitations. Identify the limitations and suggest measures for greater effectiveness of the Citizens' Charter.

A government agency's voluntary statement stating its mission, the services to be provided, and how to seek redress in the event of a problem is called the Citizens' Charter. By doing this, it seeks to actualize the good governance tenets of accountability, openness, and responsiveness.

However, for the reasons listed below, its usefulness has been restricted.

Restrictions

- Absent a participatory approach to include end users and cutting edge staff in the formulation process.
- Lack of important information. Measurable norms of delivery are rarely specified when they are brought up.
- End users are not publicly aware of their obligations under the Citizens' Charter.
- Rarely are charters updated.
- Organizational noncompliance with the those' Charter due to the absence of a compensation mechanism for those affected by an organization's default.
- Local issues are neglected by the parent organization's tendency to establish a consistent Citizens' Charter for all of its offices.
- All Ministries and Departments still have not ratified the Citizens' Charter.
- Employees who were concerned were not sufficiently informed about its spirit and content or trained in it.

Steps to Enable the Citizens' Charter to Operate

- The creation of the Citizens' Charter ought to be a decentralized process, with broad guidelines only being provided by the head office and extensive stakeholder involvement.
- The Citizens' Charter needs to be clear and include quantitative promises on precise service delivery requirements.
- Clearly state the recourse process that the organization must offer in the event that it fails to meet the agreed-upon delivery standards.
- Regular assessment of the Citizens' Charter by an outside organization.
- Hold officials responsible for their actions by assigning blame when there is a default.
- For Citizens' Charters to be more effective and believable than those that are merely desk exercises without any system re-engineering, internal restructuring should come before the development of the charter.
- Increased publicity regarding it in colloquial languages.

Conclusion

Thus, urgent action, including the previously listed measures, is required to guarantee that Citizens' Charters are successful in accomplishing their goal, considering their significance in maintaining good governance.

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MCQs

1. Consider the following statements regarding Ayushman Bharat Health and Wellness Centre:
   1. It aims to strengthen primary healthcare.
   2. It provides free drugs and diagnostic services.
   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. Consider the following statements regarding Sindhudurg Fort:
   1. It occupies an islet in the Arabian Sea, off the coast of Maharashtra.
   2. It was built by Mughal emperor Aurangzeb in the 17th Century CE.
   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

3. Consider the following statements regarding Angkor Wat, recently seen in the news:
   1. It is the largest religious monument in the world located in Thailand.
   2. It was originally dedicated to the Hindu god Vishnu before becoming a Buddhist temple.
   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

4. 'Sajag', that was in the news recently, is a/an:
   a) advanced radar system
   b) state-of-the-art military drone
   c) indigenous Offshore Patrol Vessel (OPV)
   d) medical research facility

5. Consider the following statements regarding Golan Heights:
   1. It is a rocky plateau in northeastern Egypt.
   2. Israel seized control of Golan Heights during the 1967 Six-Day War.
   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

6. What event marked the end of the French Revolution and the rise of Napoleon Bonaparte?
   (a) The execution of Louis XVI.
   (b) The Congress of Vienna.
   (c) The Battle of Waterloo.
   (d) The Directory.

7. In the context of Indian economy, how many of the following is/are the part of eight Core sectors?
   1. Coal
   2. Crude oil
   3. Natural gas

4. Refinery products
   Select the correct answer using the code given below:
   a) Only one
   b) Only two
   c) Only three
   d) All four

8. Consider the following statements :
   1. Sickle cell disease is a genetic blood disorder characterized by an abnormality in hemoglobin, the protein responsible for carrying oxygen in red blood cells.
   2. Sickle cell disease causes red blood cells to adopt a sickle or crescent shape, hindering their movement through vessels, leading to potential complications.
   3. Similar to sickle cell disease, individuals with Thalassaemia experience severe anaemia due to low haemoglobin levels, necessitating lifelong blood transfusions.
   How many of the statements given above is/are correct?
   a) Only one
   b) Only two
   c) All three
   d) None

9. Decentralised Autonomous Organisations (DAOs) was seen in the news recently, is related to –
   a) Blockchain Technology
   b) Environmental Impact Assessment
   c) Primary Healthcare Facilities
   d) Establishment of Protected Areas

10. Consider the following statements::
    Statement-I: Double Taxation Avoidance Agreements (DTAAs) cannot be automatically applied in India simply because it has been signed or ratified by India and the other contracting state.
    Statement-II: Article 73 of the Constitution states that the executive can make international agreements, but they need legislative backing to become enforceable laws in India.
    Which one of the following is correct in respect of the above statements?
    a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
    b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
    c) Statement-I is correct but Statement-II is incorrect
    d) Statement-I is incorrect but Statement-II is correct

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