

ENVIRONMENT

❖ **Greenwashing**

❖ **CONTEXT:** At the ongoing COP27 conference, Secretary-General of the United Nations (U.N.), António Guterres said, “We must have zero tolerance for net-zero greenwashing.” He made the remarks during the launch of a report, titled ‘Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions’, by the organisation’s High-Level Expert Group, instituted in March 2022.

• Referring to the recent net-zero commitments made by private companies and sovereigns, the Secretary-General observed that they had “varying levels of rigour and loopholes wide enough to drive a diesel truck through.

➤ **What is ‘greenwashing’?**

• Greenwashing refers to misleading the general public into believing that companies, sovereigns or civic administrators are doing more for the environment than they actually are. This may involve making a product or policy seem more environmentally friendly or less damaging than it is in reality.

• The term was coined by environmentalist Jay Westerveld in 1986. During a 1983 stay in Fiji, he came across notes next to towels in a particular resort. The note asked customers to reuse the towels and help reduce ecological damage to the ocean and the coral reefs. While it may appear to be an environment-friendly practice, in reality, the endeavour was for the hotel to save up on laundry bills.

• The phenomenon came into practice as consumers and regulators, owing to greater awareness and environmental consciousness, increasingly sought to explore planet-friendly, recyclable and sustainable ‘green’ products. By 2015, 66% of consumers were willing to shell out more for a product that was environmentally sustainable.

➤ **How is it done?**

• Although several companies, cities, states and regions have committed to reaching net-zero, in the absence of regulation, a lot of these pledges are not aligned with the science to achieving the same and do not have enough detail to be credible, the report notes.

• Additionally, the inconsistent use of terms ‘net-zero’, ‘net-zero aligned’, ‘eco-friendly’, ‘green’ and ‘ecological’ among others are not accompanied with satisfactory evidence to substantiate their claims.

• In April 2022, the U.S. Federal Trade Commission penalised retailers Kohl and Walmart \$5.5 million for misleading customers about their home furnishing products being made of bamboo. In reality, they were made of rayon — a fibre made from cellulose whose manufacturing entails the use of harmful chemicals such as sodium hydroxide that are hazardous to the environment.

➤ **Why does greenwashing happen?**

• It is done primarily for a company to either present itself as an ‘environment-friendly’ entity or for profit maximisation.

• The latter could be achieved by either introducing a product, catering to the inherent demand for environment-friendly products, or, in certain instances, using the larger idea as a premise to cut down on certain operational logistics and providing consumer essentials (as illustrated in the example above).

• If greenwash premised upon low-quality net zero pledges is not addressed, it will undermine the efforts of genuine leaders, creating both confusion, cynicism and a failure to deliver urgent climate action,” the High-Level expert committee’s report states. It is thus necessary to establish a level-playing field and measures where actions correspond with stated ambitions.

➤ **What does it have to do with the financial sector?**

• Sustainable investing has become increasingly popular among millennials and impact investors concerned with ‘ethical investing’. Thus, if the financial sector is to respond effectively to the demand for products that endeavour to introduce positive changes into the economy, it is imperative that ‘greenwashing’ is averted, and that customers are accorded the right information and standards.

• Financial services providers expect increased scrutiny of a company’s Environmental, Social and Governance (ESG) credentials from regulators, shareholders, customers as well as other stakeholders.

• In May 2022, Securities and Exchange Board of India (SEBI) constituted an advisory committee to look into all ESG-related matters. Among other things, the committee endeavours to institute norms for continuous enhancement of disclosures specific to ESG Schemes of Mutual Funds, with a particular focus on mitigating risks pertaining to mis-selling and ‘greenwashing’.

➤ **What are the broader expectations from the financial sector?**

• Financial institutions are expected to fund the transition towards renewable energy and discourage investments in further harnessing of conventional energy sources as coal, oil and gas.

- The Expert Committee recommends that financial institutions immediately discontinue all lending, underwriting and investments in companies wanting to strengthen or expand their coal-related infrastructure such as power plants and mines.
- As for oil and gas, it recommends the discontinuation of all investments that would involve exploration of new oil and gas fields, expansion of existing reserves and further production.
- Instead, companies should facilitate increased investment in renewable energy and institutions that are aligned to facilitate net zero emissions by 2050.
- **What are the recommendations to combat 'greenwashing' in the non-financial sector?**
- The committee states that non-state actors cannot claim to be net-zero while they continue to build or invest in new fossil fuel supply.
- As per the report, coal, oil and gas account for 75% of global greenhouse gas emissions, thus, net zero pledges are entirely incompatible with continued investment in fossil fuels.
- It states, firstly, that companies must work towards reducing emissions across their entire value chain and not limit the endeavour to only one part of the chain. Secondly, the companies must not invest, through any means, in harnessing fossil fuels or engage in deforestation and other environmentally destructive activities.
- In addition to this, companies cannot compensate for this investment by means of cheap credits that "often lack integrity". For perspective, carbon credits work as a permit allowing the holder to emit a stipulated amount of carbon dioxide or other greenhouse gases.
- Further, all state and non-state actors must ensure a 'just transition' such that livelihoods are not affected.
- The committee also recommends a transition from voluntary disclosures (pertaining to net emissions) to regulatory norms. Verification and enforcement in a voluntary space can be particularly challenging.
- To this effect, a regulatory mechanism would ensure that non-state actors also put forth their net-zero commitments in case they have not. This, in turn, would also induce competitiveness in the space — made possible by standardised norms and regulations.

PRELIMS

1. Ninth Schedule

- ❖ **CONTEXT:** The Jharkhand Assembly recently cleared two Bills, one increasing reservation in vacant government posts and services in the state to 77 per cent, and the second to use land records with 1932 as the cut-off year to determine domicile status the definition of 'local residents'. However, the Bill came with a caveat — Chief Minister Hemant Soren said they would into force only after the Centre carries out amendments to include these in the Ninth Schedule of the Constitution.

➤ **The Bills**

- **The first Bill**, 'Jharkhand Reservation of Vacancies in Posts and Services (Amendment) Bill, 2022', raised reservation to 77 per cent. Within the reserved category, the Scheduled Castes will get a quota of 12 per cent, up from 10 per cent; 27 per cent for OBCs, up from 14 per cent; 28 per cent for Scheduled Tribes, a 2 per cent increase; and 10 per cent for Economically Weaker Sections.
- **The second Bill**, 'Jharkhand Definition of Local Persons and for Extending the Consequential, Social, Cultural and Other Benefits to Such Local Persons Bill, 2022', is aimed at granting local residents "certain rights, benefits, and preferential treatment" over their land; in their stake in local development of rivers, lakes, fisheries; in local traditional and cultural and commercial enterprises; in rights over agricultural indebtedness or availing agricultural loans; in maintenance and protection of land records; for their social security; in employment in private and public sector; and, for trade and commerce in the state.

➤ **Why the need to include in Ninth Schedule**

- The 77 per cent reservation breaches the 50 per cent ceiling set by the Supreme Court in the landmark 1992 Indra Sawhney v Union of India verdict. However, placing a legislation in the Ninth Schedule shields it from judicial scrutiny.

➤ **Previous instances — Tamil Nadu's case**

- The Tamil Nadu Backward Classes, Scheduled Castes and Scheduled Tribes (Reservation of Seats in Educational Institutions and of Appointments or Posts in the Services under the State) Act, 1993, reserves 69 per cent of the seats in colleges and jobs in the state government.
- When it ran into legal obstacles in the 1990s after the SC verdict, the then Chief Minister Jayalalithaa, along with other leaders of various parties, led a delegation to New Delhi to meet the then Prime Minister PV Narasimha Rao. The reservation provision was then included in the Ninth Schedule.

❖ **What is the Ninth Schedule?**

- The Ninth Schedule contains a list of central and state laws which cannot be challenged in courts. Currently, 284 such laws are shielded from judicial review. Most of the laws protected under the Schedule concern agriculture/land issues.

- The Schedule became a part of the Constitution in 1951, when the document was amended for the first time. It was created by the new Article 31B, which along with 31A was brought in by the government to protect laws related to agrarian reform and for abolishing the Zamindari system. While A. 31A extends protection to 'classes' of laws, A. 31B shields specific laws or enactments.
- **Article 31B reads:** "Without prejudice to the generality of the provisions contained in article 31A, none of the Acts and Regulations specified in the Ninth Schedule nor any of the provisions thereof shall be deemed to be void, or ever to have become void, on the ground that such Act, Regulation or provision is inconsistent with, or takes away or abridges any of the rights conferred by, any provisions of this Part, and notwithstanding any judgment, decree or order of any court or Tribunal to the contrary, each of the said Acts and Regulations shall, subject to the power of any competent Legislature to repeal or amend it, continue in force."
- The First Amendment added 13 laws to the Schedule. Subsequent amendments in 1955, 1964, 1971, 1974, 1975, 1976, 1984, 1990, 1994, and 1999 have taken the number of protected laws to 284.
- **Are laws in the Ninth Schedule completely exempt from judicial scrutiny?**
- While the Ninth Schedule provides the law with a "safe harbour" from judicial review, the protection is not blanket.
- When the Tamil Nadu law was challenged in 2007 (**I R Coelho v State of Tamil Nadu**), the Supreme Court ruled in a unanimous nine-judge verdict that while laws placed under Ninth Schedule cannot be challenged on the grounds of violation of fundamental rights, they can be challenged on the ground of violating the basic structure of the Constitution.
- The court clarified that the laws cannot escape the "basic structure" test if inserted into the Ninth Schedule after 1973, as it was in 1973 that the basic structure test was evolved in the Kesavananda Bharati case as the ultimate test to examine the constitutional validity of laws.
- The **IR Coelho verdict said**, "A law that abrogates or abridges rights guaranteed by Part III of the Constitution may violate the basic structure doctrine or it may not. If former is the consequence of law, whether by amendment of any Article of Part III or by an insertion in the Ninth Schedule, such law will have to be invalidated in exercise of judicial review power of the Court."
- 2. **Personalised cell 'editing' used to treat cancer patients**
- ❖ **CONTEXT: Scientists have for the first time, used the CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) technology to insert genes that allow immune cells to attack cancer cells, potentially leaving normal cells unharmed and increasing the effectiveness of immunotherapy.**
- The CRISPR gene editing technique has been previously used in humans to remove specific genes to allow the immune system to be more activated against cancer.
- The research used CRISPR to not only take out specific genes, but also to insert new ones in immune cells efficiently redirecting them to recognize mutations in the patient's own cancer cells.
- When infused back to patients, these CRISPR-engineered immune cells preferentially traffic to the cancer and become the most represented immune cells there.
- **Cell therapy**
- The human immune system has specific receptors on immune cells that can specifically recognise cancer cells and differentiate them from normal cells.
- These are different for every patient, so finding an efficient way to isolate cancer cells and insert them back into immune cells to generate a personalised cell therapy to treat cancer is key to making the approach feasible on a large scale.
- After isolation, the immune receptors are used to redirect immune cells to recognise cancer using the CRISPR gene editing.
- **What is CRISPR?**
- CRISPR is a powerful tool for editing genomes.
- It allows researchers to easily alter DNA sequences and modify gene function.
- It has many potential applications, including: correcting genetic defects, treating and preventing the spread of diseases, and improving the growth and resilience of crops.
- "CRISPR" is shorthand for "CRISPR-Cas9."
- CRISPRs are specialized stretches of DNA, and the protein Cas9 (where Cas stands for "CRISPR-associated") is an enzyme that acts like a pair of molecular scissors, capable of cutting strands of DNA.
- CRISPR technology was adapted from the natural defense mechanisms of bacteria and archaea, a domain of relatively simple single-celled microorganisms. These organisms use CRISPR-derived RNA to foil attacks by viruses.
- When the components of CRISPR are transferred into more complex organisms those components can then manipulate genes, a process called "gene editing." How CRISPR works as a genome-editing tool

3. Municipal bonds

❖ **CONTEXT:** The RBI in its report has said that the issuance of municipal bonds by civic bodies may ease out the funding required to ramp up infrastructure.

- According to the RBI report, the federal government is borrowing a record 14.3 trillion rupees (\$176 billion) this fiscal year. It is about a third of its expenditure.
- Fundraising through bond sales is less than 10% of the municipal's total borrowings.

❖ **What is Municipal Bonds**

- A municipal bond (muni) is a debt security issued by a state, municipality, or county to finance its capital expenditures, including the construction of highways, bridges, or schools.
- Municipal bonds were first issued in India in 1997; five years after the 74th Constitutional Amendment decentralized urban local bodies and gave them autonomy; made them accountable to citizens, and reformed their finances enabling them to access capital markets and financial institutions.
- The Securities and Exchange Board of India (SEBI)'s detailed guidelines for the issue and listing of municipal bonds in March 2015.
- Through muni bonds, a municipal corporation raises money from individuals or institutions and promises to pay a specified amount of interest, and returns the principal amount on a specific maturity date.
- These are mostly exempt from federal taxes and most state and local taxes, making them especially attractive to people in high-income tax brackets.

➤ **Benefits of the Municipal Bonds Market in India:**

- Municipal Bonds can help the Urban Local Bodies (ULBs) to garner revenue to complete budgetary projects as property tax is the only major source of municipal revenue.
- The growth of the municipal bond market is critical for India's large cities and towns to upgrade their creaking infrastructure.
- The ability of municipal bodies to be self-sustaining is also critical to the success of the Centre's pet projects such as Smart Cities and Amrut
- Some developments were visible in the issuance of municipal bonds when Prime Minister Narendra Modi implemented various government programs aimed at building smart cities to upgrade water, sewer, and drainage infrastructure. But it didn't yield well as there are challenges around transparency and governance of local bodies.

4. Permacrisis

❖ **CONTEXT:** The Collins Dictionary's word of the year for 2022 is "permacrisis".

- The word is most widely understood as a portmanteau of "permanent" and "crisis."
- The term permacrisis refers to a long and permanent period of crisis, as a result of different factors that come together or follow each other.
- It can mean:

- ✓ Defining the era in which we live.
- ✓ Some in Britain inevitably ascribe the genesis of that era to Brexit.
- ✓ Others point to the pandemic.
- ✓ Russia's invasion of Ukraine

- "Permacrisis" is a term that perfectly embodies the dizzying sense of lurching from one unprecedented event to.
- This definition stems from the ancient Greek term krisis, which describes a medical or political moment of opportunity that bifurcates into life or death, victory or defeat.
- It is similar to Marx's idea that human history will lead to a final crisis, only it precludes any idea of further progress.
- Instead of leading to something better, it denotes a static and permanently difficult situation.
- Permacrisis suggests that every decision to accelerate a difficult situation in order to come out on the other side of it risks something far worse.
- Permacrisis signals not only a loss of faith in progress, but also a new realism in relation to what people can cope with and achieve.

ANSWER WRITING

Q. What do you understand by continental drift theory? Discuss along with the evidences that support the theory.

Introduction

Continental drift theory deals with the distribution of the oceans and the continents. It was first suggested by a German meteorologist, Alfred Wegener in 1912.

- According to the theory, all the continents formed a single continental mass- Pangea and mega ocean- Panthalassa surrounded it.

- Around 200 million years ago Pangaea started splitting and broke down into two large continental masses as Laurasia and Gondwanaland forming the northern and southern components respectively.
- Subsequently, Laurasia and Gondwanaland continued to break into various smaller continents that exist today.

Evidence that supports the theory

- The Matching of Continents (Jig-Saw-Fit): The shorelines of Africa and South America facing each other match remarkably.
- Rocks of Same Age Across the Oceans: radiometric dating methods have correlated the rock formation in different continents.
- Tillite: The glacial tillite found in Gondwana system of sediments has its resemblance to six different landmasses of the Southern Hemisphere. Counterparts of this succession are found in Africa, Falkland Island, Madagascar, Antarctica and Australia besides India.
- Placer Deposits: The placer deposits of gold in the Ghana coast do not have source rock in the region. The gold deposits of Ghana have been derived from the Brazil plateau when the two continents lay side by side
- Distribution of Fossils: identical species of plants and animals adapted to living on land or in freshwater are found on either side of the marine barriers. For example remains of Mesosaurus, a freshwater crocodile-like reptile that lived during the early Permian (between 286 and 258 million years ago), are found solely in Southern Africa and Eastern South America.

MCQs

1. Consider the following Statements:

1. The Parliament of India can place a particular law in the Ninth Schedule of the Constitution of India.
2. The validity of a law placed in the Ninth Schedule cannot be examined by any court and no judgment can be made on it.

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 of the following statements about Municipal Bonds is/are incorrect?

1. Municipality bonds can be issued by the city corporations to fund developmental projects.
2. Institutional investors cannot buy Municipal Bonds.
3. Municipal bonds are not permitted for public offering.

Correct answer code is:

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

3. Consider the following statements with respect to CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) gene editing:

1. The Cas9 enzyme is used to identify specific DNA sequences for editing.
2. CRISPR can be used to edit genes in temperature-sensitive crop varieties.
3. CRISPR is a short DNA sequence found in the genome of prokaryotic organisms.

Which of the statements given above is/are correct?

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

4. Consider the following statements with reference to the CRISPR

1. CRISPR-CAS9 was adapted from a naturally occurring genome editing system in bacteria.
2. CRISPR-Cas9 technology behaves like a cut-and-paste mechanism on DNA strands that contain genetic information.

Select the correct statement.

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

5. Which one of the following best describes the term "greenwashing" recently seen in news?
- Conveying a false impression that a company's products are eco-friendly and environmentally sound**
 - Non-inclusion of ecological/environmental costs in the Annual Financial Statements of a country
 - Ignoring the disastrous ecological consequences while undertaking infrastructure development
 - Making mandatory provisions for environmental costs in a government project/programme
6. Which of the following is Collins Dictionary's word of the year for 2022 and why?
- Permacrisis : is a word that describes living in an age of continued upheaval and it "sums up quite succinctly how truly awful 2022 has been for so many people"**
 - Kyiv: The capital of Ukraine, the word Kyiv signifies the determination and solidarity shown by the Ukrainian population amid the Russian invasion
 - Quiet Quitting: the phrase quiet quitting has been around for decades, it took social media and Gen Z content by storm as the pandemic contributed to changing perceptions of work-life balance.
 - Sportswashing: The word 'sportswashing' becomes relevant as the Qatar FIFA World Cup is just around the corner
7. With reference to Reservation in India, consider the following statements
- Article 15 and 16 of the Constitution empower the State to make special provisions in education and jobs respectively for the socially and educationally backward section of society and for the economically weaker section.
 - The provisions under article 15 and 16 are binding on the government
 - Supreme Court observed that the Right to Reservation is not a fundamental Right
- Which of the statements given above is / are correct?
- 1 only
 - 2 and 3 only
 - 1 and 3 only**
 - 1, 2 and 3
8. Climate Finance Delivery Plan (CFDP) initiative is related to which of the following?
- G20 group
 - OECD group**
 - UNDP
 - World Bank
9. With reference to two non-conventional energy sources called 'coalbed methane' and 'shale gas' consider the following statements:
- Coalbed methane is the pure methane gas extracted from coal seams, while shale gas is a mixture of propane and butane only that can be extracted from fine-grained sedimentary rocks.
 - In India, abundant coalbed methane sources exist, but so far no shale gas sources have been found.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2**
10. Consider the following Countries
- Australia
 - Canada
 - Russia
 - Sweden
 - Norway
- Which of the above Countries is/are a part of the Inter-Parliamentary Alliance on China (IPAC)?
- 1, 2 and 4 only
 - 1, 3, 4 and 5 only
 - 1, 2, 4 and 5 only**
 - 1, 2, 3, 4 and 5