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MK Yadav Sir

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THE HINDU Page 14

GFIN GREENWASHING

(Syllabus: GS Paper 3 - Economy)

RBI to join 12 other regulators to tackle 'greenwashing' risks

Businessline Bureau
MUMBAI

The Reserve Bank of India (RBI) said it will join 12 international regulators in the Global Financial Innovation Network (GFIN)'s first-ever Greenwashing TechSprint to develop a tool to help regulators and the market effectively tackle the risks of greenwashing in financial services.

The central bank noted the number of investment products marketed as 'green' was growing.

"Exaggerated, misleading or unsubstantiated claims about Environmental, Social and Governance credentials damage confidence in the products and the RBI wants to ensure consumers and firms can trust the products have the sustainability characteristics they claim," the RBI said in a statement.

The central bank would be participating in a virtual TechSprint, hosted on the Financial Conduct Authority's digital sandbox, to bring together international regulators, firms and innovators to address sustainable finance as a collective priority.

TechSprint would commence on June 5 and run for three months, ending in September.

Context: The Reserve Bank of India has opened the application window for all India based firms and innovators to participate in **Global Financial Innovation Network (GFIN)'s first ever Greenwashing TechSprint.**

- **Greenwashing** happens when a company makes an environmental claim about something the organization is doing that is intended to promote a sense of environmental impact that doesn't exist.

Global Financial Innovation Network (GFIN)

- **About**: GFIN was **formally launched in January 2019** by an international group of financial regulators and related organisations.
  - The GFIN is a **network of over 70 organisation**s committed to supporting financial innovation in the interests of consumers.
- **Objectives**: The GFIN aims to **create a new framework for co-operation between financial services regulators** on innovation related topics, sharing different experiences and approaches.

GFIN Greenwashing TechSprint

- **About**: The GFIN is launching its first ever **virtual greenwashing TechSprint.**
  - This will be hosted on the **UK FCA Digital Sandbox,** and will bring together 13 international regulators alongside firms and innovators to address GFIN's priority on environmental, social and governance (ESG) and sustainable finance.
  - **RBI will be among the 13 international regulators** taking part in GFIN's Greenwashing TechSprint.
- **Objectives**: The aim is to address a **GFIN priority on Environmental, Social and Governance (ESG)** by developing a tool or solution that could help regulators or the market more effectively tackle or mitigate the risks of greenwashing in financial services.

LIVE MINT

Page 1

DARK PATTERNS

(Syllabus: GS Paper 3 - Economy)

Consumer helpline to aid users tricked by online apps on prices

Puja Das &
Gireesh Chandra Prasad

NEW DELHI

Ever wondered if the price of your online food order has gone up between the menu and the checkout page? Or booked a costly air ticket following an alert that only two seats left at a low price?

Possibly, you just came across a deceptive practice at some digital economy firms that prompt customers to make unintended purchase choices. But you have a remedy: Lodge a complaint at the National Consumer Helpline, and the government will act against the company, a senior official said.

These practices, also known as 'dark patterns,' are in the nature of unfair trade practices and are covered under the Consumer Protection Act, which is punishable, according to Union consumer affairs secretary Rohit Kumar Singh. The government will act if it receives any complaint as there is no regulatory gap as far as dark patterns are concerned, he said.



'Dark patterns' seen on online platforms will be treated as unfair trade practices. ISTOCK

"Action would be taken under the existing provisions of the Consumer Protection Act 2019," Singh said.

Other similar practices include free trials of services changing into regular purchases without warning, pop-up messages blocking the intended action of a consumer, and promotional material disguising as independent reviews, according to information available from the Advertising Standards Council of India (ASCI), the advertising industry's self-regulator.

The term 'dark patterns' was coined by UK-based user experience designer Harry Brignull, known for his work in digital ethics and cognitive science. His website cites cases where large corporations had to pay hefty fines and penalties for the use of such practices in certain markets.

Such practices fall on the wrong side of the law because consumers are often led to make decisions based on inadequate or wrong information, which distorts the efficient functioning of markets that should otherwise ensure more choices at the best possible price to the consumer.

Keeping material information about packing and delivery charges from the con-

TURN TO PAGE 13

Context: The government said that 'Dark patterns' seen on online platforms will be treated as unfair trade practices and are covered under the Consumer Protection Act 2019, which is punishable.

Key Points

- The **Consumer Protection Act of 2019** led to the setting up of the Central Consumer Protection Authority (CCPA), which seeks to protect and enforce consumer rights.
- The authority is **empowered to make interventions** to prevent consumer detriment.
- The government will **act if it receives any complaint** as there is no regulatory gap as far as dark patterns are concerned.

Dark Patterns

- **About**: It is a **user interface** that has been crafted to trick or manipulate users into making choices that are detrimental to their interests.
  - **Dark patterns confuse users**, introduce online obstacles, make simple tasks time-consuming, have users sign up for unwanted services or products and force them to pay more money or share more personal information than they intended.
- **Types of dark patterns**: In India, The A**dvertising Standards Council of India (ASCI)** has recognised four dark patterns and these are the proposed areas of extension to the ASCI code on misleading ads.
  - **Drip pricing:** It is a pattern when the total price is only revealed at the very end of the buying process.
  - **Bait and switch:** It is a pattern that occurs when a user takes an action expecting one outcome, but instead is served an outcome they didn't want.
  - **False urgency**: It is a dark pattern that refers to misleading information on quantities of a particular product.
  - **Disguised advertising**: It is a pattern when an advertisement mimics editorial content.

ECONOMIC TIMES

Page 1

MSCI INDEX

(Syllabus: GS Paper 3 - Economy)

MSCI Drops Scrips of Two Adani Group Cos

Over $385m outflows from passive funds likely on Adani Transmission and Adani Total Gas exits

Our Bureau

Mumbai: Two Adani Group stocks — Adani Transmission and Adani Total Gas — have been removed from the MSCI Global Standard Index as part of its May rejig.

The exit is expected to trigger outflow of $201 million in the case of Adani Transmission and $186 million in the case of Adani Total Gas from overseas passive funds when the actual changes occur on June 1, according to a Nuvama Alternative & Quantitative Research report.

Last week, global index services provider MSCI Inc said it would reduce the foreign inclusion factor (FIF) for Adani Total Gas and Adani Transmission during the May index review process.

MSCI defines FIF of a security as the proportion of shares that are deemed to be available for purchase by international investors.

Cut Would Have Lowered Weightage ▸▸ 6

INs & OUTs

MSCI Global Standard Index: May rejig

Stock	Expected inflow/ outflow ($ m)
INCLUSION	
Max Healthcare	295
Hindustan Aeronautics	195
Sona BLW Precision	175
EXCLUSION	
Adani Transmission	-201
Adani Total Gas	-186
Indus Tower	-84

Source: Nuvama Research



Context: Two Adani Group stocks have been removed from the **MSCI Global Standard Index** as part of its May rejig.

- It would reduce the **foreign inclusion factor (FIF)** for Adani Total Gas and Adani Transmission during the May index review process.
- MSCI defines **FIF of a security** as the proportion of shares that are **deemed to be available for purchase by international investors.**

MSCI (Morgan Stanley Capital International)

- **About**: It is owned by the private international company **Morgan Stanley.**
  - The company **launches new indexes every year.**
- **Functions**: MSCI deals with **multinational investment management** and financial services.
  - MSCI is the **leading provider of critical decision support tools,** including stock indexes for the global investment Community.
  - MSCI has indexes for **countries, regions, emerging markets, developed markets, small cap, all cap and even Islamic indexes.**
- **Significance of MSCI Indexes:**
  - MSCI indexes are **widely tracked by foreign portfolio investors**, hedge funds and other sovereign wealth funds which allocate funds to various markets like India depending on the overall weightage and direction given by these indexes.
  - If India and its top listed companies get **good weightage in MSCI indexes**, foreign investors **pump in more funds** on that basis and vice versa.

BUSINESS STANDARD

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CERC

(Syllabus: GS Paper 3 - Infrastructure)

PowerMin asks CERC to consult before drafting, changing rules

SHREYA JAI
New Delhi, 12 May

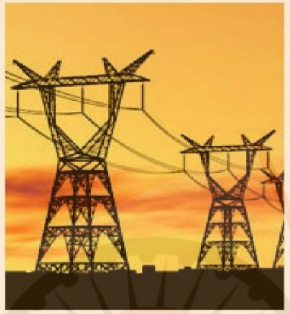
The power ministry has directed the quasi-judicial regulatory body, Central Electricity Regulatory Commission (CERC), to consult the government before drafting or amending any regulation.

The ministry's notice comes at a time when discussions are going on over the proposed Electricity Bill, which is set to bring sweeping changes in the sector.

In a letter dated May 8, the ministry has said the CERC should "consult with the ministry of power in the initial stages of regulation making".

The ministry has said it is issuing this as there have been several instances where it had to intervene to the CERC for change in regulations.

"In the recent past, the power ministry came across a number of critical issues to address which it had to issue policy directions to CERC necessitating amendments in its regulations. Frequent changes in regulations are not in interest of predictable and stable regulatory framework," the notice said.



THE NOTICE COMES AT A TIME WHEN DISCUSSIONS ARE GOING ON OVER THE PROPOSED ELECTRICITY BILL, WHICH IS SET TO BRING SWEEPING CHANGES IN THE SECTOR

agenda," said the notice.

Business Standard has reviewed a copy of the notice. The ministry has issued this notice under the Section 107 of the Electricity Act, 2003, wherein it can issue directions to the CERC.

Last year, bypassing any regulatory changes, the ministry invoked Section 11 of the Act during the coal supply shortage for allowing coal

Context: The power ministry has directed the quasi judicial regulatory body, **Central Electricity Regulatory Commission (CERC),** to consult the government before drafting or amending any regulation.

- In 2022, the Forum of Regulators (FOR), the collective apex body of all **Electricity Regulatory Commissions (ERCs),** in its special meeting on the proposed **Electricity (amendments) Bill, 2022,** had criticised the Centre for diluting the premise of the legislature which it said would hinder the functioning of the power sector.

Central Electricity Regulatory Commission (CERC)

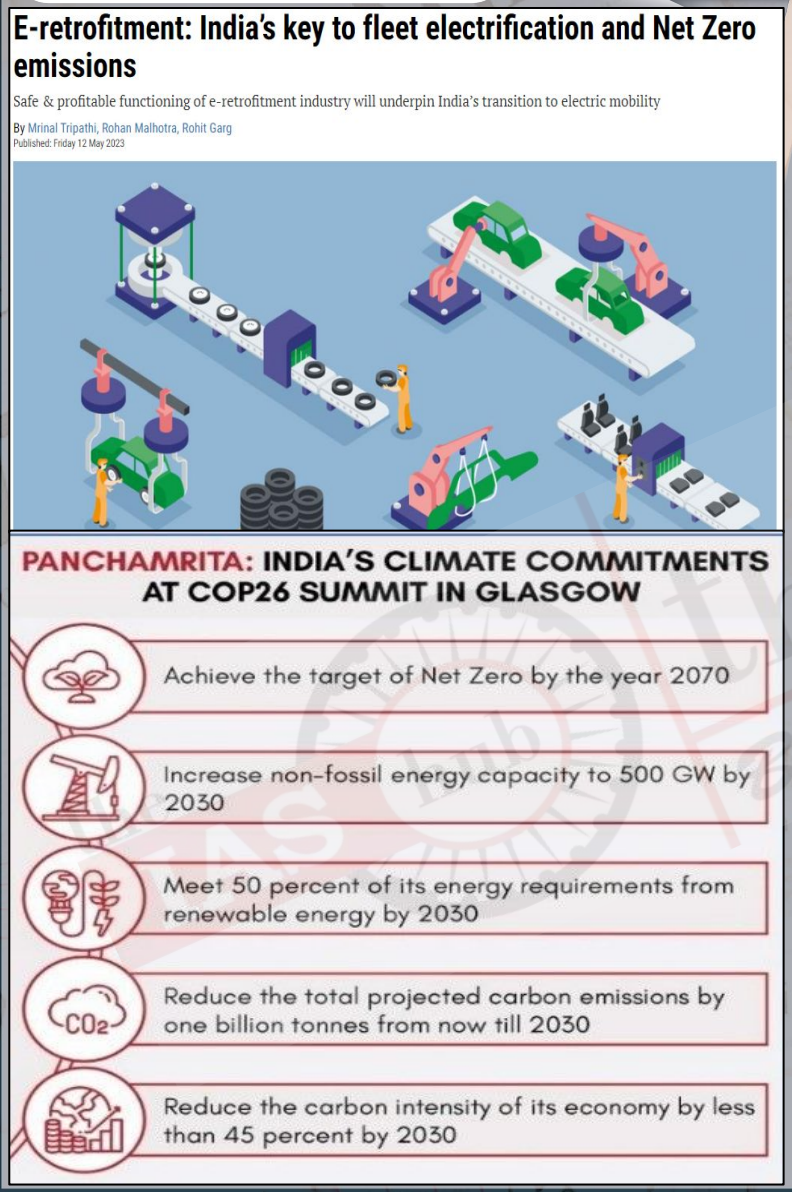
- **About**: CERC is a statutory body functioning with quasi-judicial status under sec - 76 of the **Electricity Act 2003.**
- **Origin**: CERC was initially constituted on 24 July 1998 under the **Ministry of Power's Electricity Regulatory Commissions Act, 1998** for rationalization of electricity tariffs, transparent policies regarding subsidies, promotion of efficient and environmentally benign policies, and for matters connected Electricity Tariff regulation.
  - The Central Government has also implemented the **Electricity Regulatory Commission Act of 1998** that mandates forming the Central Electricity Regulation Commission.
    - This commission will set the tariff of centre owned and controlled power generation companies.
  - This **Electricity Regulatory Commission Act of 1998** has also come up with a provision to allow all the states to form their State Electricity Regulation Commission.
    - These SERCs have the authority to determine tariffs.
- **Key Functions**: The **CERC determines tariff** or electricity prices in India.
  - Electricity tariffs in India are based on provisions in Tariff Policy notified by the Government of India and **Electricity Act 2003.**

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E-RETROFITMENT INDUSTRY

(Syllabus: GS Paper 3 - Infrastructure)



Context: The Indian government has set itself an ambitious target of 30 per cent sales penetration of electric passenger cars by 2030 which s a step towards **India's mission to achieve Net Zero emissions by 2070.**

- In this light, it is impossible to ignore the **e-retrofitment industry** that is emerging in the country.

E-retrofitment

- E-retrofitment refers to the **process of replacing the internal combustion engine (ICE)** of a vehicle with an electric powertrain to convert it into an electric vehicle (EV).
- The industry remains **largely unregulated** despite the central government set regulations for vehicle and retro fitment kit certification.
- Some state governments like Delhi, Tamil Nadu and Andhra Pradesh have come up with **retrofitment guidelines.**
- The major concern is the **goods and services tax levied on the auto components at a rate of 18 per cent,** which makes retrofitment costly and unviable in comparison to a new EV.
- To complement the addition of new EVs, **retrofitting existing ICE vehicles** is a potentially viable requirement. The measure increases the useful lifespan of existing vehicles by 5-7 years and allows them to not fall in the trap of the scrappage policy.
- The central government has released **AIS 123 regulations** for certification of retrofitment kits and retrofitted vehicles.
- However, the policymakers must plan for a smooth onboarding of retrofitters into the testing and certification ecosystem.

PIB

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POSHAN BHI PADHAI BHI PROGRAMME

(Syllabus: GS Paper 2 - Health)

Union WCD Minister , Smt. Smriti Zubin Irani launches "Poshan Bhi, Padhai Bhi", an Early Childhood Care and Education program under Mission Saksham Anganwadi and Poshan 2.0; says Government committed to ensuring holistic development of children under age of 6 years, with focus on building skills in key development domains identified under NEP

Context: The Union Ministry of Women and Child Development (MoWCD) launched the **Centre's flagship programme 'Poshan Bhi, Padhai Bhi'**, which will focus on **Early Childhood Care and Education (ECCE)** at anganwadis across the country.

- ECCE is an important component of Mission Saksham Anganwadi and Poshan 2.0 (Mission Poshan 2.0) and envisaged under the National Education Policy 2020.

Poshan Bhi Padhai Bhi Programme

- Under Poshan Bhi Padhai Bhi Programme, the government will **target children's development in every domain mentioned** in the National Curriculum Framework, viz., physical and motor development, cognitive development, socio-emotional-ethical development, etc.
- The aim is not only to **make anganwadi centres nutrition hubs** but also education-imparting centres - providing at least two hours of high-quality preschool instruction on a daily basis.

Mission Saksham Anganwadi and Poshan 2.0

- **About**: It is an **Integrated Nutrition Support Programme** approved for implementation during the 15th Finance Commission period 2021-22 to 2025-26.
- **Objectives**: It seeks to **address the challenges of malnutrition in children**, adolescent girls, pregnant women and lactating mothers through:
  - A strategic shift in nutrition content and delivery, and
  - Creation of a **convergent eco-system** to develop and promote practices that nurture health, wellness and immunity.
- **Components**: The **existing components (of the ongoing nutrition programme)** have been re-organised (to improve implementation) under Poshan 2.0 into the primary verticals given below:
  - **Nutrition Support through Supplementary Nutrition Programme (SNP)** for children (06 months to 6 years), pregnant women and lactating mothers (PWLM); and for Adolescent Girls (14 to 18 years) in Aspirational Districts and North Eastern Region (NER);
  - **ECCE [3-6 years]** and early stimulation for (0-3 years);
  - **Anganwadi Infrastructure** including modern, upgraded Saksham Anganwadi; and
  - **Poshan Abhiyan**, launched in 2018, focuses on nutritional status of adolescent girls, pregnant women, lactating mothers and children from 0-6 years age.

DTE

MAY 13

UNITED NATIONS FORUM ON FORESTS

(Syllabus: GS Paper 3 - Env & Eco)

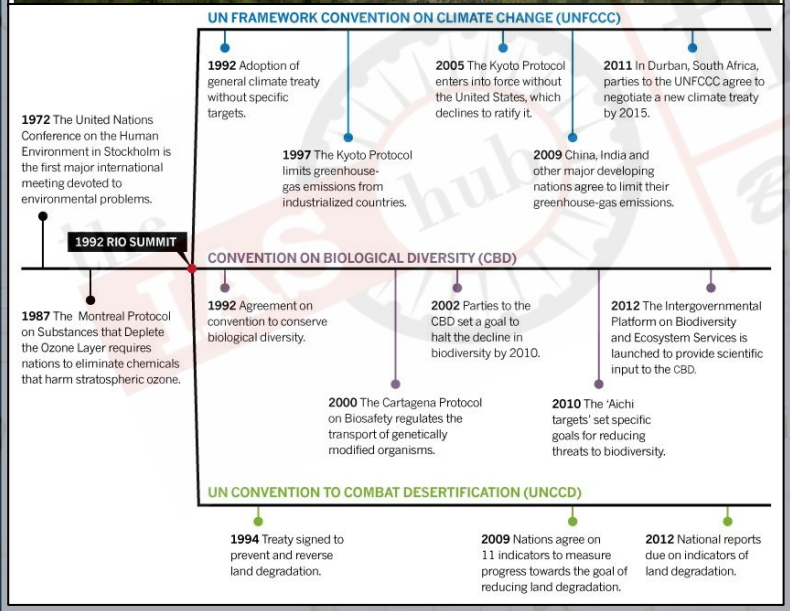
UNFF18: Sustainable forest management takes centre stage

Forests have the potential for reducing 5 gigatonnes of emissions, says delegates

By Himanshu Nitnaware

Published: Friday 12 May 2023





Context: Discussions on integrated policies on sustainable forest management (SFM) and energy to meet the United Nations-mandated Sustainable Development Goals (SDG) took centre stage on the fourth day of the **United Nations Forum on Forests (UNFF 18).**

- The delegates at the **18th session of UNFF 18**, held from May 8-12, 2023, in New York, discussed the contributions of SFM to energy, livelihoods and the SDGs.

United Nations Forum on Forests

- **About**: The UNFF is a **high-level intergovernmental policy forum.**
  - The forum includes **all United Nations member states** and permanent observers, the UNFF Secretariat, the Collaborative Partnership on Forests, Regional Organizations and Processes and Major Groups.
- **Origin**: In 2000, the **United Nations Economic and Social Council (ECOSOC)** established the UNFF.
- **Objectives**: The primary goal is **promoting "the management, conservation, and sustainable development of all types of forests** and to strengthen long-term political commitment to this end" based on the **Rio Declaration, the Forest Principles, Chapter 11 of Agenda 21, and the Intergovernmental Panel on Forests (IPF) report.**
  - Agenda 21 is a **non-binding action plan** of the United Nations with regard to sustainable development.
  - It is a product of the **Earth Summit (UN Conference on Environment and Development)** held in Rio de Janeiro, Brazil, in 1992.

PIB MAY 13

WLP AMENDMENT ACT 2022

(Syllabus: GS Paper 3 - Env & Eco)

Notification of Rules framed under Section 49N and 49-O of the Wild Life (Protection) Act, 1972 (as amended in 2022)

Context: The Ministry of Environment, Forest and Climate Change has notified the Rules under **Section 49 N of of the Wild Life (Protection) Amendment Act, 2022** vide Gazette Notification dated 24th April 2023.

- As per the **Section 49 N of the Act**, person engaged in breeding in captivity or artificially propagating any scheduled specimen listed in **Appendix I of Schedule IV** are required to make an application for a licence within a period of ninety days of the commencement of the **Wild Life (Protection) Amendment Act, 2022.**
- All persons engaged in breeding in captivity or artificially propagating any scheduled specimen listed in Appendix I of Schedule IV of the Act are requested to make an application for licence as per the Rules framed under **Section 49 N of the Wild Life (Protection) Act, 1972** in the prescribed form on or before 29th June, 2023.

Key provisions of the Wild Life (Protection) Amendment Act, 2022

- **Rationalising schedules:** Currently, the Act has six schedules for specially protected plants (one), specially protected animals (four), and vermin species (one). Bill **reduces it to four** by:
  - Reducing the number of schedules for specially protected animals to two (one for greater protection level)
  - Removes the schedule for vermin species
  - Inserts a new schedule for specimens listed in the Appendices under CITES (scheduled specimens).
- **Obligations under CITES**: The Bill authorizes the **central government to designate:**
  - **Management Authority**: which grants export or import permits for the trade of specimens, and
  - **Scientific Authority**: This gives advice on aspects **related to the impact on the survival of the specimens** being traded.
    - It **prohibits any person from modifying or removing** the identification mark of the specimen.
    - Every person **possessing live specimens of scheduled animals** must obtain a registration certificate from the Management Authority.
- **Invasive alien species**: It empowers the central government to **regulate or prohibit the import, trade, possession, or proliferation** of invasive alien species.
- **Control of sanctuaries:** The Present Act entrusts the **Chief Wildlife Warden** to control, manage and maintain all sanctuaries in a state.
  - The Chief Wildlife Warden has been **appointed by the state government.**
  - The **Bill specifies that the actions of the Chief Warden** must be in accordance with the management plans for the sanctuary.
  - These plans will be **prepared as per the guidelines of the central government,** and as approved by the Chief Warden.
- **Conservation reserves:** Under the Act, **state governments may declare areas adjacent to national parks and sanctuaries** as a conservation reserve, for protecting flora and fauna, and their habitat.
  - The Bill **empowers the central government** to also notify a conservation reserve.
- **Surrender of captive animals**: The Bill **provides for any person to voluntarily surrender any captive animals or animal products** to the Chief Wildlife Warden.
  - **No compensation** will be paid to the person for surrendering such items. The surrendered items become the property of the state government.
- **Penalties**: Bill has **increased the fines** for violating the provisions of the Act.

INDIAN EXPRESS

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DATING OF NON-LIVING THINGS

(Syllabus: GS Paper 3 - Sci & Tech)

WHAT IS CARBON DATING, ALLOWED BY HC ON 'SHIVLING' FOUND IN KASHI?



The Gyanvapi mosque stands close to the Kashi Vishwanath Temple. *Archive*

THE ALLAHABAD High Court on Friday ordered a "scientific survey", including carbon dating, of a structure discovered in the Kashi Vishwanath Temple-Gyanvapi mosque complex in Varanasi last year, which the Hindu side said was an ancient "Shivling", and the Muslim side said was a "fountain".

The Hindu petitioners claim that the Gyanvapi mosque was built on an ancient Hindu temple — the purported "Shivling" is being cited as evidence for the existence of the temple.

Carbon dating

Carbon dating is a widely-used method to establish the age of organic materials, things that were once living. Living things have carbon in them in various forms. The dating method is based on the fact that Carbon-14 (C-14), an isotope of carbon with an atomic mass of 14, is radioactive, and decays at a well known rate.

C-14 reduces to one half of itself in about 5,730 years — known as its 'half-life'. The changing ratio of C-12 to C-14 in the remains of a plant or animal after it dies can be measured, and can be used to deduce the approximate time when the organism died.

Non-living things

Carbon dating cannot be used to determine the age of non-living things like rocks. But there are other methods to calculate the age of inanimate things, many of which are based on the same principle as carbon dating. So, instead of carbon, decays of other radioactive elements that might be present in the material become the basis for the dating method.

Two commonly employed methods for dating rocks are potassium-argon dating and uranium-thorium-lead dating.

EXPRESS NEWS SERVICE

Context: The Allahabad High Court ordered a "scientific survey", including **carbon dating, of a "Shivling"** said to have been found at the **Gyanvapi mosque complex** in Varanasi after setting aside a lower court order on the issue.

- In 2022. a court-ordered videographic survey of the **Kashi Vishwanath temple-Gyanvapi mosque** was completed by a Commission appointed by a local court.
- During the survey proceedings, a structure - claimed to be a "Shivling" by the Hindu side and a "fountain" by the Muslim side - was found inside the mosque premises.

Carbon dating

- **About**: It is a widely-used method to **establish the age of organic materials,** things that were once living.
  - **Living things** have carbon in them in various forms.
- **Working Mechanism**: The carbon dating method makes use of the fact that a particular isotope of carbon called **C-14,** with an atomic mass of 14, is radioactive and decays at a rate that is well known.
  - When **living things** such as plants and animals die, the radioactive carbon that they have accumulated begins to change.
  - Carbon dating **uses the decay of carbon-14** to estimate how long something has been dead.
- **Limitations**:
  - Carbon dating **cannot be used for samples older than 60,000 years.**
  - The material being dated must have measurable amounts of the **parent or the daughter isotopes.**
  - It **cannot be used to determine the age of non-living things** like rocks, for example.
  - Samples can be **contaminated by other carbon-containing materials.**
  - The dates obtained from radiocarbon dating are **not infallible,** that is, in general, single dates should not be trusted. Thus, multiple samples need to be collected and dated.
- **Methods to calculate the age of non-living things**: Two commonly employed methods for dating rocks are **potassium-argon dating and uranium-thorium-lead dating.**
  - The radioactive isotope of potassium decays into **argon**, and their ratios can give a clue about the age of rocks.
  - **Uranium and thorium** have several radioactive isotopes, and all of them decay into the stable lead atom.
  - The ratios of these elements present in the material can be **measured and used to make estimates about age.**

TIMES OF INDIA

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NGT panel seeks penal action to save groundwater

Priyangi.Agarwal
@timesgroup.com

New Delhi: A joint committee of the Jal Shakti ministry has suggested in a report that Delhi should have a penal provision for contamination of groundwater due to faulty recharge.

The committee was formed on the direction of the National Green Tribunal (NGT) to look into installed rainwater harvesting systems.

A plea was filed before the NGT on deficiencies in rainwater harvesting systems that said it results in polluted water mixing with the groundwater. The matter initially pertained to 40 societies in Dwarka. The tribunal, while disposing of the matter, considered the need for a joint inspection of rainwater harvesting systems in all areas of Delhi to ensure proper functional design, depth of the borewell and use of gravel and coarse sand in filter media.

Heeding the NGT order, the ministry formed the committee headed by the chairperson of the Central Ground Water Board (CGWB). It inspected random sites in five states, including Delhi.

In Delhi, the committee inspected four sites and saw that rainwater harvesting pits were clean and working. The terraces of the building blocks were also found to be clean, the report said.

"Rainwater harvesting guidelines of the Delhi Jal Board (DJB) advise that 'only non-polluted rainwater from the rooftops and other catchment areas has to be diverted to the recharge structure through connection of (the) downpipe'. However, there is no penal provision for contamination of groundwater due to faulty recharge," said the report of the ministry, which was submitted to the NGT.

MINISTRY SAYS

Rainwater harvesting guidelines of Delhi Jal Board advise that 'only non-polluted rainwater from the rooftops and other catchment areas has to be diverted to the recharge structure through connection of (the) downpipe'. However, there is no penal provision for contamination of groundwater due to faulty recharge

The committee said that in the other states it visited — Haryana, Rajasthan, Karnataka, Tamil Nadu — rainwater harvesting in urban areas has been made mandatory under building rules or other state acts or rules. "However, penal provisions for ground water contamination due to faulty design or due to lack of proper and timely maintenance are missing. Overall, rainwater harvesting systems were found as per design under the norms of the central/ state agencies at all the visited sites," the report said.

The report added that legal provisions should be introduced in state government rules, according to the Environment (Protection) Act, 1986, to tackle contamination of groundwater because of faulty rainwater harvesting designs or due to poor maintenance. Penal provisions may be applied as the last resort.

The other suggestions made by the committee are that all rainwater harvesting sites should be geo-tagged for better visibility for monitoring and as water quality may not be strictly checked, the water stored in harvesting structures may be used for non-potable purposes.

RAINWATER HARVESTING
(Syllabus: GS Paper 1 - Geography)

Context: A joint committee of the Jal Shakti ministry has suggested in a report that Delhi should have a penal provision for contamination of **groundwater due to faulty recharge**.

- The committee was formed on the direction of the National Green Tribunal (NGT) to look into installed **rainwater harvesting systems.**

Rainwater harvesting

- **About**: It is the **process of accumulation and storage of rainwater** for reuse rather than allowing it to runoff.
- **Different methods of rainwater harvesting:**
  - **Rooftop rainwater harvesting:** The rooftop becomes the **catchments, and the rainwater from the building and houses** are collected. The components of the rooftop rainwater harvesting are:
    - Flush.
    - Transportation.
    - Catchment.
    - Filter.
  - **Surface runoff harvesting**: It is the system that **collects rainwater**, which flows away as surface runoff.
    - The **runoff rainwater** is caught and used to recharge aquifers by adopting appropriate techniques.
- **Traditional water harvesting techniques:**
  - **Kuls**: Often spanning long distances, with some over 10 km long, kuls have been around for centuries. They are present in mountain areas **Jammu, Himachal Pradesh.**
  - **Tanka system:** it is used in **Rajasthan**, which is a cylindrical ground pit that receives rainwater from the nearby catchment area.
  - **Virdas**: Virdas are shallow wells dug in low depressions called jheels (tanks) , they are found in Runn of Kutch area in **Gujarat**.
  - **Madaka**: It is a unique structure constructed on the upper reaches of undulating topography.
  - **Khadin**: A very long (100-300 m) earthen embankment built across the **lower hill slopes lying below gravelly uplands.**
  - **Bamboo drip irrigation:** Used in the **northeast**, suitable for irrigation in hilly terrains.
  - **Tanks in Karnataka**: These are artificial reservoirs to store water taking advantage of depression.
  - **Zing -Tanks:** for collecting water from melted ice in **Ladakh**.
  - **Stepwell**: These are found in **Rajasthan and Gujarat.**
  - **Baoris / bers**: They are community wells in **Rajasthan**.
  - **Apatani:** Terraced plots connected by inlet and outlet channels in **Arunachal Pradesh.**
  - **Pyne-ahar**: System of south **Bihar** on which the cultivation of paddy depends.

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