

SAMADHAN PT TRICKS



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PT TRICKS 2023 Environment Current-1

Covering: Basic concepts- current- terms and application

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Nuclear Waste Facility at the Kudankulam

- Kudankulam Village Panchayat passed a resolution against the construction of the 'Away From Reactor (AFR) facility for storing nuclear waste.
- Radioactivity is the phenomenon of spontaneous emission of particles or waves from the unstable nuclei of some elements.
- There are three types of radioactive emissions: Alpha, Beta and Gamma. Alpha particles are positively charged He (Helium) atoms, beta particles are negatively charged electrons and gamma rays are neutral electromagnetic radiations.
- Uranium, thorium and actinium are three NORM (Naturally Occurring Radioactive Materials) series that contaminate water resources.
- Radioactivity is measured in Becquerel (SI unit) or in Curie.

Sources of Radioactivity:

- Radium, a descendant of the NORM series, is one of the radiotoxic elements found in aquatic systems and can be penetrated into groundwater
- magma also releases radioactive gases into the environment.
- Percolation of NORM from the soil sediments
- Nuclear reactors produce radioisotopes (Cobalt-60, Iridium-192, etc) that hand out as sources of gamma radiation in radiotherapy and numerous industrial appliances
- The application of radioactive elements in nuclear weapons, X-rays, MRI and other medical equipment causes their exposure to human beings
- Mining activities of radioactive elements like uranium and thorium also pollute surface and groundwater

State of India's Environment Report 2022: CSE

- The Centre for Science and Environment (CSE), released the State of India's Environment Report 2022. The report is the annual publication of the Centre for Science and Environment, and Down To Earth.
- The report focuses on climate change, migration, health and food systems. It also covers biodiversity, forest and wildlife, energy, industry, habitat, pollution, waste, agriculture and rural development.

World Wildlife Day

- World Wildlife Day has been celebrated every year on the 3rd of March which coincides with signing of (CITES) in 1973
- Theme: Recovering key species for ecosystem restoration
- This aligns with UN Sustainable Development Goals 1, 12, 14 and 15, and commitments on alleviating poverty, ensuring sustainable use of resources, and on conserving life both on land and below water to halt biodiversity loss.

IPCC: Part Two of Sixth Assessment Report

- The Intergovernmental Panel on Climate Change (IPCC), released the second part of its sixth assessment report which talks about climate change impacts, risks and vulnerabilities, and adaptation options.
- The report identifies India as one of the vulnerable hotspots, with several regions and important cities facing very high risk of climate disasters such as flooding, sea-level rise and heat-waves.

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- It has found that climate change is increasing vector-borne and water-borne diseases such as malaria or dengue, particularly in sub-tropical regions of Asia. □
- It has also said deaths related to circulatory, respiratory, diabetic and infectious diseases, as well as infant mortality, are likely to increase with a rise in temperature

What is the Intergovernmental Panel on Climate Change?

- It is the international body for assessing the science related to climate change.
- It was set up in 1988 by the World Meteorological Organisation (WMO) and United Nations Environment Programme (UNEP) to provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation.
- IPCC assessments provide a scientific basis for governments at all levels to develop climate related policies, and they underlie negotiations at the UN Climate Conference – the United Nations Framework Convention on Climate Change (UNFCCC).

Fifth Session of the United Nations Environment Assembly

- Fifth UN Environment Assembly concluded with overall theme “Strengthening Actions for Nature to Achieve the Sustainable Development Goals”
- The world’s ministers for the environment agreed to establish an Intergovernmental Negotiating Committee (INC) with the mandate to forge an international legally binding agreement to end plastic pollution

Other Resolutions:

- Resolution to end Plastic Pollution
- Resolution on Management of Chemicals and Waste
- Resolution focused on Nature-based Solutions
- Resolution Prioritising Ecosystem Restoration
- Resolution on Minerals and Metals
- Resolution on Sustainable Lake Management
- Resolution on Animal Welfare among others
- Resolution to Reduce Nitrogen Waste

United Nations Environment Assembly

- It is the governing body of the UN Environment Programme.
- It is the world’s highest-level decision-making body on the environment.
- The Assembly is made up of the 193 UN Member States and convenes every two years to advance global environmental governance.
- It was created in June 2012, during the United Nations Conference on Sustainable Development, also referred to as RIO+20

Wet Bulb Temperature

- Wet bulb temperature is the lowest temperature to which air can be cooled by the evaporation of water into the air at a constant pressure.
- WBT is a limit that considers heat and humidity beyond which humans can not tolerate high temperatures.
- The Wet Bulb temperature is the temperature of adiabatic saturation. □
 - An adiabatic process is one in which no heat is gained or lost by the system.
- Wet Bulb temperature can be measured by using a thermometer with the bulb wrapped in wet muslin.

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- The Dry Bulb Temperature refers basically to the ambient air temperature. It is called “Dry Bulb” because the air temperature is indicated by a thermometer not affected by the moisture of the air
- Lucknow and Patna, were among the cities predicted to reach wet-bulb temperatures of 35°C if emissions continued to rise. This will have consequences such as a rise in heatwave linked deaths or reduced productivity.

Amazon Rainforest Nearing Tipping Point

- A study published recently says that a significant part of the Amazon rainforest has been heading towards a tipping point since the early 2000s.
- It may be losing its ability to bounce back from extreme events such as drought or fire, threatening to become a dry savanna like ecosystem. □
- A vicious cycle of damage could trigger “dieback”. - A condition in which a tree or shrub begins to die from the tip of its leaves or roots backwards, owing to disease or an unfavourable environment
- Comprising about 40% of Brazil’s total area, Amazon Rainforest is bounded by the Guiana Highlands to the north, the Andes Mountains to the west, the Brazilian central plateau to the south, and the Atlantic Ocean to the east

World Energy Transitions Outlook 2022

- International Renewable Energy Agency (IRENA) launched the World Energy Transitions Outlook 2022 at the Berlin Energy Transition Dialogue.
- The Berlin Energy Transition Dialogue (BETD) has become a leading international forum for key stakeholders of the energy sector
- It provides in-depth analysis of two areas particularly relevant for the decarbonisation of end-use sectors: electrification and bioenergy.
- The country’s installed Renewable Energy (RE) capacity stands at 150.54 GW (solar: 48.55 GW, wind: 40.03 GW, Small hydro Power: 4.83, Biopower: 10.62, Large Hydro: 46.51 GW) as on 30th Nov. 2021 while its nuclear energy based installed electricity capacity stands at 6.78 GW.
- This brings the total non-fossil based installed energy capacity to 157.32 GW which is 40.1% of the total installed electricity capacity of 392.01 GW
 - International Renewable Energy Agency (IRENA) is an intergovernmental organization officially founded in Bonn, Germany, in 2009.
 - It has 167 members and India is the 77th Founding Member of IRENA.
 - It has its headquarters in Abu Dhabi, United Arab Emirates.

Microplastics in Human Blood

- Tiny particles of plastics, called Microplastics, were detected in human blood for the first time, in a study by researchers in the Netherlands
- Microplastics are defined as plastics less than five millimeters in diameter.
- Primary Microplastics: They are tiny particles designed for commercial use and microfibers shed from clothing and other textiles.
- E.g. Microbeads found in personal care products, plastic pellets and plastic fibres. □
- Secondary Microplastics: They are formed from the breakdown of larger plastics such as water bottles

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Concerns related to Microplastics

- Microplastics can latch on to the outer membranes of red blood cells and may limit their ability to transport oxygen.
- The particles have also been found in the placentas of pregnant women, and they can pass rapidly through the lungs into the hearts, brains and other organs of the fetuses.
- Microplastics cause damage to human cells in the laboratory and air pollution particles are already known to enter the body and cause millions of early deaths a year.

'Sujalam 2.0' Grey Water Recycling Project

- On the World Water Day (22nd March), the Ministry of Jal Shakti launched a countrywide project to reuse grey water, or run-offs from kitchens, bathing and laundry.
- Grey water is defined as wastewater that is produced from household processes (e.g. washing dishes, laundry and bathing).
- The campaign would focus on the creation of institutional level greywater management assets in Panchayat Ghar, healthcare facilities, schools, Anganwadi Centres (AWCs), community centres and other government institutions.
- The funds to execute the activities for greywater management will be sourced from Swachh Bharat Mission Grameen Phase-II or through 15th Finance Commission tied-grants or MGNREGS or through convergence of all

Lead Poisoning

- Recently, high levels of lead were found in the blood of thousands of children living around the Kabwe mine in Zambia
- Lead exposure causes anaemia, hypertension, renal impairment, immunotoxicity and toxicity to the reproductive organs.
- People can become exposed to lead through Inhalation of lead particles generated by burning materials containing lead, for example during smelting, recycling, stripping leaded paint and using leaded aviation fuel etc
- The Ministry of Environment, Forest and Climate Change (MOEFCC) has passed "Regulation on Lead contents in Household and Decorative Paints Rules, 2016" and has prohibited manufacture, trade, import as well as export of household and decorative paints containing lead or lead compounds in excess of 90 Parts Per Million (PPM)

State of India's Solar Capacity

- India has now surpassed 50 GW of cumulative installed solar capacity, as on 28th February 2022.
- Of the 50 GW installed solar capacity, 42 GW comes from ground-mounted Solar Photovoltaic (PV) systems, and only 6.48 GW comes from Roof Top Solar (RTS); and 1.48 GW from off-grid solar PV.
- India's capacity additions rank the country 5th in solar power deployment, contributing nearly 6.5% to the global cumulative capacity of 709.68 GW.
- In 2021-22, India imported USD 76.62 billion worth of solar cells and modules from China, accounting for 78.6% of India's total imports that year

World Meteorological Day

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- Every year, World Meteorological Day is celebrated globally on 23rd March. Earlier (WMO) released the State of Climate Services report 2021.
- Theme for 2022: Early warning and early action - it emphasises the critical necessity of hydro-meteorological and climate information for disaster risk reduction.
 - World Meteorological Organization (WMO) is an intergovernmental organization with a membership of 192 Member States and Territories. □ India is a member of WMO.
 - WMO is a specialized agency of the United Nations for meteorology (weather and climate), operational hydrology and related geophysical sciences.' headquartered in Geneva, Switzerland.

State of Early Warning System in India

- Ministry of Earth Sciences with Municipal Corporation of Greater Mumbai, launched the Integrated Flood Warning system for Mumbai, referred to as iFLOWSMUMBAI. □
- Uttarakhand launched the 'Uttarakhand Earthquake Alert' app to provide early warning of earthquakes in the state. □
- The Indian Tsunami Early Warning System (ITEWS) was established in 2007 and is based at & operated by INCOIS, Hyderabad. □
- 'Ocean Services, Modelling, Application, Resources and Technology (O-SMART)' Scheme is a government scheme that aims at promoting ocean research and setting up early warning weather systems.

Mercury Pollution

- Indonesia has introduced a global declaration under Minamata Convention to tackle illegal trade of mercury
- The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury & covers all aspects of the life cycle of mercury, controlling and reducing mercury across a range of products, processes and industries.
- India has ratified the Convention.
- People are mainly exposed to methylmercury, (an organic compound) when they eat fish and shellfish and are more vulnerable to Minamata disease

Sources of Mercury Pollution:

- Volcanic eruptions and emissions from the ocean.
- Artisanal and Small-Scale Gold Mining (ASGM) is the largest source of anthropogenic mercury emissions (37.7%), followed by stationary combustion of coal

Other sources are nonferrous metals production (15%) and cement production (11%).

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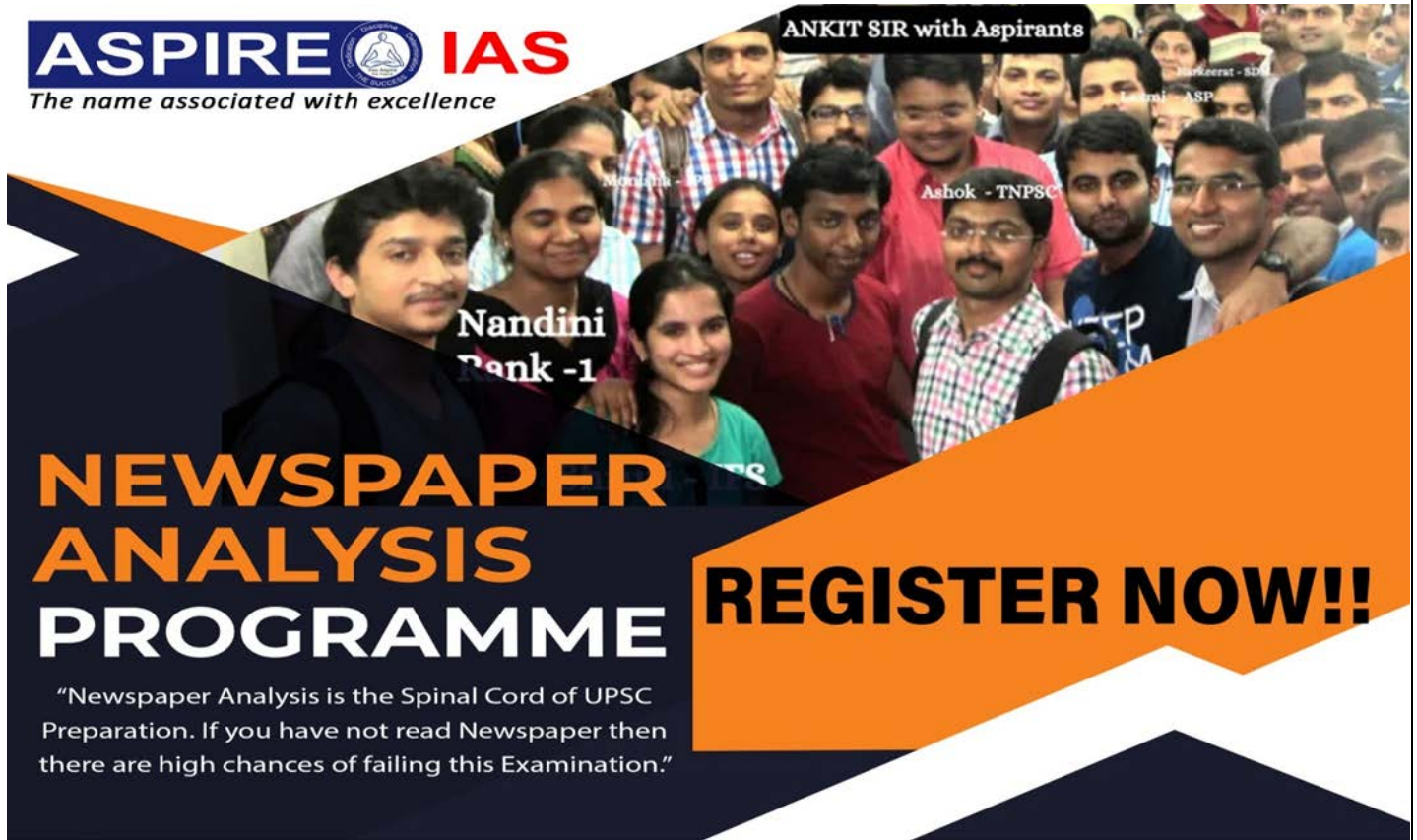
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India's Arctic Policy

- Ministry of Earth Science has unveiled India's Arctic Policy, titled 'India and the Arctic: building a partnership for sustainable development'
- India holds one of the 13 positions as the Observer in the Arctic Council.
- It seeks to enhance understanding of the impact of climate change in the Arctic region on India's climate, economic and energy security among others

[Everything about Arctic - AspireIAS](#)

Project Dolphin

- Project Dolphin is one of the activities planned under Arth Ganga, an inter-ministerial initiative of the government approved in 2019
- It is implemented by the Ministry of Environment, Forest and Climate Change.
- Gangetic Dolphin live in the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh.
- The Ganges river dolphin can only live in freshwater and is essentially blind and hunt by emitting ultrasonic sounds
- It is a reliable indicator of the health of the entire river ecosystem
 - Indian Wildlife (Protection), Act 1972: Schedule I.
 - International Union for the Conservation of Nature (IUCN): Endangered.
 - Convention on International Trade in Endangered Species (CITES): Appendix I (most endangered).
 - Convention on Migratory Species (CMS): Appendix II
 - Dolphin Sanctuary: Vikramshila Ganges Dolphin Sanctuary has been established in Bihar.

PROJECT DOLPHIN
PRESERVING OUR UNDERWATER FRIENDS

- 10-YEAR PROJECT TO FOCUS ON BOTH RIVER AND SEA DOLPHINS
- AIM TO STRENGTHEN BIODIVERSITY, CREATE EMPLOYMENT OPPORTUNITIES AND ATTRACT TOURISM
- KILLING, HABITAT FRAGMENTATION BY DAMS AND BARRAGES AND INDISCRIMINATE FISHING HAS REDUCED THE GANGES RIVER DOLPHIN POPULATION FROM TENS OF THOUSANDS TO AROUND 3,700 OVER THE LAST CENTURY
- GANGES RIVER DOLPHIN, A SPECIES OF FRESHWATER DOLPHINS, IS PRIMARILY FOUND IN GANGA AND BRAHMAPUTRA RIVERS, AND THEIR TRIBUTARIES IN INDIA, BANGLADESH AND NEPAL
- IN INDIA, THESE DOLPHINS ARE SIGHTED IN DEEP RIVERS IN ASSAM, BIHAR, JHARKHAND, MADHYA PRADESH, RAJASTHAN, UTTAR PRADESH AND WEST BENGAL
- GANGES RIVER DOLPHIN, OFFICIALLY DISCOVERED IN 1801, CAN LIVE ONLY IN FRESHWATER

Himalayan Griffons

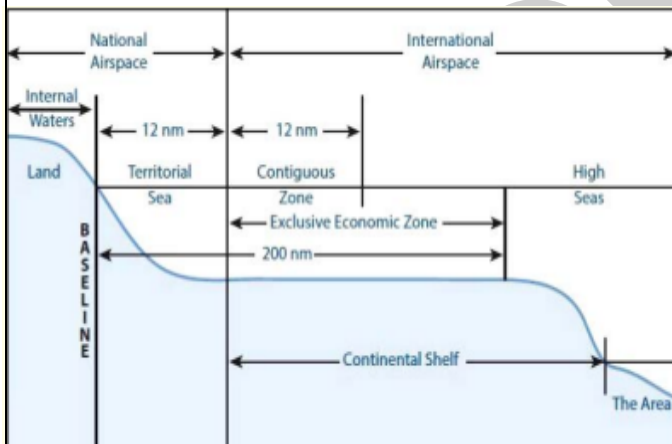
- Himalayan Griffons were found dead of suspected poisoning in Assam.
- The Himalayan vulture mostly lives in the Himalayas on the Tibetan plateau (India, Nepal and Bhutan, central China and Mongolia).
- They act an important function as nature's garbage collectors and help to keep the environment clean of waste. Vultures also play a valuable role in keeping wildlife diseases in check
- India is home to 9 species of Vulture namely the Oriental white-backed, Long-billed, Slender-billed, Himalayan, Red-headed, Egyptian, Bearded, Cinereous and the Eurasian Griffon

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- Bearded, Long-billed, Slender-billed, Oriental white-backed are protected in the Schedule-1 of the Wildlife Protection Act 1972. Rest are protected under 'Schedule IV'

Biological diversity in areas Beyond National Jurisdiction (BBNJ) Treaty

- The "BBNJ Treaty", also known as the "Treaty of the High Seas", is an international agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction
- This is being developed within the framework of the UNCLOS & encompasses the high seas, beyond the exclusive economic zones or national waters of countries.
- these areas account for "almost half of the Earth's surface."
- The high seas are extremely biodiverse and have been exploited without even knowing its impacts.
- The United Nations Convention on the Law of the Sea (UNCLOS), 1982 is an international agreement that establishes the legal framework for marine and maritime activities. It is also known as Law of the Sea.
- It divides marine areas into five main zones namely Internal Waters, Territorial Sea, Contiguous Zone, Exclusive Economic Zone (EEZ) and the High Seas.
- It is the only international convention which stipulates a framework for state jurisdiction in maritime spaces. It provides a different legal status to



different maritime zones

World Water Day 2022

- World Water Day is celebrated on 22nd March Every Year to highlight the importance of water.
- Theme: Groundwater: making the invisible visible.

1.	Oriental White-backed Vulture (Gyps Bengalensis)	Critically Endangered	
2.	Slender-billed Vulture (Gyps Tenuirostris)	Critically Endangered	
3.	Long-billed Vulture (Gyps Indicus)	Critically Endangered	
4.	Egyptian Vulture (Neophron Percnopterus)	Endangered	
5.	Red-Headed Vulture (Sarcogyps Calvus)	Critically Endangered	
6.	Indian Griffon Vulture (Gyps Fulvus)	Least Concerned	
7.	Himalayan Griffon (Gyps Himalayensis)	Near Threatened	
8.	Cinereous Vulture (Aegypius Monachus)	Near Threatened	
9.	Bearded Vulture or Lammergeier (Gypaetus Barbatus)	Near Threatened	

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- The World Water Day 2022 theme sets the focus for the annual World Water Development Report.
- The Asia-Pacific region is the largest groundwater abstractor in the world, containing seven out of the ten countries that extract most groundwater (Bangladesh, China, India, Indonesia, Iran, Pakistan and Turkey).

International Day of Forests

- Every year 21st March is celebrated as the International Day of Forests (IDF) by the United Nations (UN).
- The theme for 2022 is 'Forests and sustainable production and consumption'.

[India State of Forest Report 2021 - AspireIAS](#)

World Air Quality Report 2021

- The 2021 World Air Quality Report was released by IQAir, a Swiss group that measures air quality levels based on the concentration of Particulate Matter (PM) 2.5.
- Common chemical constituents of PM_{2.5} include sulphates, nitrates, black carbon, and ammonium.
- The most common human-made sources include internal combustion engines, power generation, industrial processes, agricultural processes, construction, and residential wood and coal burning.
- The most common natural sources for PM_{2.5} are dust storms, sandstorms, and wildfires.
- India was home to 11 of the 15 most polluted cities in Central and South Asia in 2021.
- In 2019, India's Ministry of Environment, Forest and Climate Change (MoEF&CC) enacted the National Clean Air Program (NCAP) which seeks to reduce PM concentrations by 20% to 30% by 2024 in all identified nonattainment cities

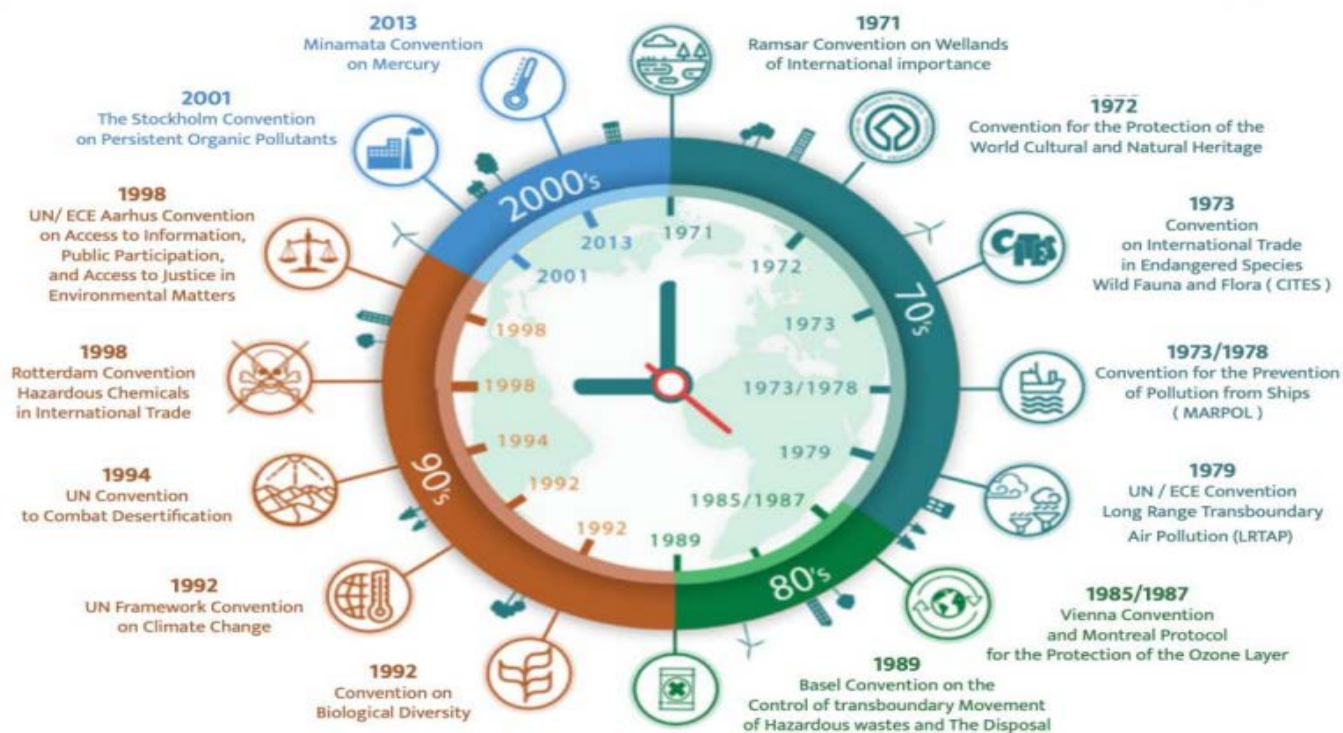
50 YEARS OF STOCKHOLM CONFERENCE

- Recently, Stockholm+50 meeting was held at Stockholm, Sweden to commemorate the 50 years since the 1972 United Nations Conference on the Human Environment (also known as the Stockholm Conference)
- Stockholm+50 theme: A healthy planet for the prosperity of all — our responsibility, our opportunity
- UNEP was created as a result of the conference in 1972.



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Multilateral Environment Agreements (MEAs) under UNEP



FOREST (CONSERVATION) RULES, 2022

- Recently, Ministry of Environment, Forest and Climate change has notified the Forest Conservation Rules 2022 under the Forest (Conservation) Act, 1980

The rules establish certain committees to perform various functions:

- Non-mining projects between 5-40 hectares to be reviewed within 60 days.

Committees	Features
Project screening committee	<ul style="list-style-type: none"> To be constituted by State or UT. It shall meet atleast twice every month to recommend projects to State/UTs administration. It shall examine the proposal received from the State Government or Union territory Administration, except proposals involving forest land of five hectares or less.
Regional Empowered Committee	<ul style="list-style-type: none"> To be setup by Central govt in each of the regional offices. To meet atleast twice every month to examine every referred project for approval or rejection.
Advisory Committee	<ul style="list-style-type: none"> To be setup by the Central govt consisting 6 members to meet every month. The role of the Advisory Committee is to advise with regards to grant of approval under various

- Mining projects between 5-40 hectares to be reviewed within 75 days.
- For projects involving a larger area 120 days for non-mining projects involving more than 100 hectares & 150 days for mining projects involving more than 100 hectare
- In- Principle' approval after considering the recommendation of the Advisory Committee.
- Land for compensatory afforestation shall be provided which is neither notified as forest under the Indian Forest Act, 1927 or any other law nor managed as forest by the Forest Department.
- Rules states that only the state government will now be responsible to ensure that the rights of the forest dwellers are secured after the union government has given its final approval

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ECO-SENSITIVE ZONES (ESZ)

- The Supreme Court has directed that every protected forest, national park and wildlife sanctuary in the country should mandatorily have a minimum 1 km ESZ, from their demarcated boundaries.
- The directions were passed in reference to applications filed under the TN Godavarman Thirumalpad versus Union of India case

Other Directions:

- Extended boundary shall prevail if the existing ESZ goes beyond 1 km buffer zone or if any statutory instrument prescribes a higher limit.
- No new permanent structure will be allowed within the ESZ.
- Mining within national wildlife sanctuary or national park is not permitted.
- Activity already being undertaken, within the 1km or extended ESZ, but lying outside the ambit of prohibited activities may continue with permission.
- The Principal Chief Conservator of Forests of each State/UT has been directed to make a list of subsisting structures at the ESZs and submit a report to the court within 3 months.
- The requirements could be diluted if there is “overwhelming public interest”.
 - Eco-sensitive zones (ESZs) is notified by Central Government, i.e. Ministry of Environment, Forest and Climate Change (MoEFCC), under Environment Protection Act, 1986.

Identification of activities undertaken within an ESZ, generally classified under 3 categories:

Prohibited	Commercial mining, setting of saw mills, polluting industries, major hydroelectric projects etc.
Regulated (Restricted with safeguards)	Felling of trees, Establishment of hotels and resorts, drastic change of agriculture system, widening of roads, introduction of exotic species etc.
Permissible	Rainwater Harvesting, Organic farming, Ongoing Agricultural and Horticulture practices by local communities, Adoption of green technology for all activities etc.

Geneva Water Dialogue

- The first Geneva Water Dialogue co-organized by the Permanent Missions of the Netherlands, Tajikistan and Egypt took place in Geneva, Switzerland.
- The event was supported by the WMO, UN-Water, UNDRR, OHCHR, and the Geneva Water Hub
- Objective: To identify and propose concrete solutions to accelerate the achievement of SDG 6, also beyond 2030

WATER CONVENTION

- 2022 marks the 30th anniversary of the Water Convention (Convention on the Protection and Use of Transboundary Watercourses and International Lakes 1992)
- It is an international legal instrument and intergovernmental platform which aims to ensure the sustainable use of transboundary water resources.

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- In 2022, Water Convention organized the first ever transboundary pavilion at World Water Forum in Dakar, Senegal.
- World Water Forum is the world's largest event on water and has been organized every three years since 1997 by the World Water Council (a think tank), in partnership with a host country.
- Forum provides a unique platform where the international water community and key decision makers can collaborate on global water challenge

MAJOR ECONOMIES FORUM (MEF) ON CLIMATE AND ENERGY

- MEF, launched in 2009 by US President Obama, is aimed at facilitating dialogue among major emitting countries, both developed and developing, to advance efforts against climate change.
- Major economies participating in MEF (Australia, Brazil, Canada, China, EU, France, Germany, India, Japan, UK etc) together account for roughly 80 percent of global GDP and global greenhouse gas emissions.

New initiatives that were announced

- Global Methane Pledge Energy Pathway: Tackling methane leaks, venting, and flaring from the oil and gas sector.
- Collective 2030 Zero-Emission Vehicle Goal and Green Shipping Challenge to reduce emissions in transport sector.
- Clean Energy Technologies Demonstration Challenge to break dependence on fossil fuels.
- Efforts to Enhance Food Security by increasing fertilizer efficiency

LEADERS IN CLIMATE CHANGE MANAGEMENT (LCCM)

- National Institute of Urban Affairs (NIUA) and World Resources Institute (WRI) jointly announced LCCM
- LCCM envisions capacitating 5,000 professionals and preparing them to champion climate change adaptation and mitigation solutions

GLOBAL ENVIRONMENT FACILITY (GEF) COUNCIL

- The 62nd meeting will be the final council of GEF Trust Fund (GEF-7), closing four-year funding cycle, and commencing GEF-8 cycle.
- GEF-7 safeguard the world's forests, land, water, climate, and oceans, build green cities, protect threatened wildlife, and tackle marine plastic pollution
- GEF was established during 1992 Rio Earth Summit and is only multilateral fund working across all aspects of environmental health.
- It is financial mechanism for five major international environmental conventions: UNCBD, UNCCD, UNFCCC, Minamata Convention on Mercury, and Stockholm Convention on Persistent Organic Pollutants.

GEF Council

- It is GEF's main governing body, comprises 32 members appointed by constituencies of GEF member countries (14 from developed countries, 16 from developing countries, and two from economies in transition).
- Its members rotate at different intervals determined by each constituency.
- India is presently a member of a constituency comprised of the following countries: Bangladesh, Bhutan, India, Maldives, Nepal, Sri Lanka.
- It meets twice annually, develops, adopts and evaluates the operational policies and programs for GEF-financed activities.
- It reviews and approves the work program making decisions by consensus.

ENVIRONMENT PERFORMANCE INDEX (EPI)

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- India ranked at 180th with a score of 18.9 EPI in EPI 2022.
- EPI, a biennial index, was started in 2002 as Environmental Sustainability Index
- Prepared by World Economic Forum (WEF) in collaboration with Yale Center for Environmental Law and Policy and Columbia University Center for International Earth Science Information Network.
- EPI ranks 180 countries on climate change performance, environmental health, and ecosystem vitality.

LIVING LANDS CHARTER

- All 54 Commonwealth members have agreed to voluntarily dedicate a 'living land' in their respective countries to future generations.
- It aims to support member countries to deliver their commitments under the three Rio conventions i.e., UN Convention on Biological Diversity, UN Convention to Combat Desertification, UN Framework Convention on Climate Change.
- India is part to the Commonwealth nations.

UN OCEAN CONFERENCE

- The 5-day UN Ocean Conference took off with the Governments of Kenya and Portugal being the cohosts.
- Leaders from over 130 countries from across the world will deliberate for five days to find an international agreement on protecting the world's oceans, seas and marine resources.

CARBON PRICING LEADERSHIP REPORT 2021-22

- The report was prepared by the Secretariat of Carbon Pricing Leadership Coalition (CPLC) to review global developments in carbon pricing.
- Carbon pricing curbs greenhouse gas emissions by placing a fee on emitting and/or offering an incentive for emitting less.
- CPLC is a voluntary initiative that brings together leaders from government, business, civil society and academia to enhance global understanding of carbon pricing
- Several countries increased their carbon tax rates and adopted more ambitious trajectories but still Less than 4% of global emissions are currently covered by a carbon price

CARBON DIOXIDE (CO₂) LEVELS ARE NOW COMPARABLE TO WHAT THEY WERE 4 MILLION YEARS AGO

- CO₂ measured at Mauna Loa Atmospheric Baseline Observatory (MLABO), Hawaii, run by US National Oceanic and Atmospheric Administration (NOAA), peaked for 2022 at 421 parts per million
- MLABO is a benchmark site for measuring CO₂ on the slopes of Mauna Loa volcano, world's largest active volcano
- Named after Dr. Charles David Keeling, it is the longest uninterrupted instrumental record of atmospheric CO₂ in the world.
- CO₂ measured at MLABO this year is about the same level as 4.1 to 4.5 million years ago in the Pliocene era, when temperatures were 3.9 degrees Celsius hotter and sea levels were 5 to 25 meters higher than now.

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COMMISSION FOR AIR QUALITY MANAGEMENT (CAQM) BANS USE OF COAL IN DELHI, NEARBY CITIES FROM JANUARY 2023

- The Commission for Air Quality Management (CAQM) has issued directions to ban the use of coal in industrial, domestic and other miscellaneous applications to bring down greenhouse gas emission.
- However, use of low-sulphur coal in thermal power plants has been exempted from the ban
- CAQM is a statutory body established under the Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021
- Headed by Chairperson with at least 15 years' experience in the field of environment and pollution or 25 years of administrative experience.
- Appeal: CAQM orders, directions etc. can be challenged at the National Green Tribunal

ZOOS EXEMPTED FROM PERMISSIONS UNDER FCA

- FCA considers zoos, rescue centres etc as a non-forestry activity and makes forest clearance from Centre mandatory.
- Now, zoos will be exempted from taking multiple permissions under FCA
- Non-forestry purpose means clearing of any forest land or portion for any purpose other than reforestation.
- Cultivation of tea, coffee, spices, rubber, palms, oil-bearing plants, horticultural crops or medicinal plants are also non-forestry purpose.

INDIA ACHIEVED 10% ETHANOL BLENDING TARGET IN PETROL

- An ethanol blend is defined as a blended motor fuel containing ethyl alcohol that is at least 99% pure, derived from agricultural products, and blended exclusively with gasoline.
- Since it is plant-based, it is considered to be a renewable fuel.
- Central government has set the target of 20% ethanol blending in petrol (also called as E20), by 2025. The original target for 10% ethanol blending in petrol was November 2022.
- India is world's fifth largest producer of ethanol after the US, Brazil, EU and China.

REN21'S RENEWABLES 2022 GLOBAL STATUS REPORT

- REN21 is the only global community of actors from science, governments, NGOs and industry working collectively to drive the rapid uptake of renewables.
- It was created in 2004 as an outcome of the Bonn2004 International Conference on Renewable Energy.
- India is now the third-largest market in the world for new solar PV capacity and ranked fourth in the world for total solar energy installations (60.4 GW) following China (305.9 GW).
- India ranked 2nd in new Solar Water Heating Capacity addition, 3rd in Hydropower capacity addition and 5th in Ethanol production addition in 2021.

ELECTRICITY (PROMOTING RENEWABLE ENERGY THROUGH GREEN ENERGY OPEN ACCESS) RULES, 2022

- Ministry of Power has notified Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022

Key highlights

- Reduction in the limit of Open Access Transaction from 1 MW to 100 KW for green energy

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- OA approvals will be granted in 15 days or else it will be deemed to have been approved subject to fulfilment of technical requirements through national portal.
- Uniform renewable purchase obligation on all obligated entities in the area of a distribution licensees.
- Green certificates for consumers if they consume green power.
- Cross subsidy surcharge and additional surcharge shall not be applicable if green energy is utilized for production of green hydrogen and green ammonia.

11TH WORLD URBAN FORUM (WUF), 2022

- Held at Katowice, Poland, the WUF is the premier global conference on sustainable urbanization coorganized by UN-Habitat.
- WUF was established in 2001 by the UN to examine rapid urbanization and its impact on communities, cities, economies, climate change and policies. First WUF was held in Nairobi, Kenya in 2002.
- At 11th WUF, the National Institute of Urban Affairs (NIUA) Climate Centre for Cities (NIUA C-Cube), World Resources Institute India (WRI India) etc. launched India's first national coalition platform for urban nature-based solutions (NbS).

CDRI

- Cabinet approved Categorization of the CDRI as an 'International Organization'.
- It also approved signing of Headquarters Agreement (HQA) with Coalition for Disaster Resilient Infrastructure (CDRI) for granting it the exemptions, immunities and privileges under Section-3 of United Nations (Privileges & Immunities) Act, 1947.
- The United Nations (Privileges & Immunities) Act was enacted in India to give effect to the Convention on the Privileges and Immunities of the United Nations, adopted by the UN General Assembly in 1946.
- It will provide CDRI an independent and international legal persona, allowing it to carry out its functions on a global scale efficiently and effectively
- CDRI was launched in 2019 by the Indian PM at the UN Climate Action Summit (New York) to promote the resilience of infrastructure systems to climate and disaster risks, thereby ensuring sustainable development.
- Since its launch, 31 Countries, 6 International Organizations and 2 private sector organizations have joined CDRI as members.

AZOOXANTHELLATE CORALS

- Zoological Survey of India (ZSI) recorded four species of azooxanthellate corals from waters of Andaman and Nicobar (A&N) Islands
- Azooxanthellate corals are a group of corals that do not contain zooxanthellae and derive nourishment not from the sun but from capturing different forms of plankton.
- These groups of corals are deep-sea representatives, with the majority of species reporting from between 200 m to 1000 m.
- Their occurrences are also reported from shallow coastal waters.
- Corals share less than 1% of the earth's surface but they provide a home to nearly 25% of marine life.
- Gulf of Mannar, Palk-bay, Gulf of Kutch, A&N Islands and Lakshadweep islands have major reef formations in India.

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NUN CHO GA

- The baby mammoth's remains were discovered during excavation through the permafrost south region in Canada's Yukon territory.
- It has been named Nun cho ga, which means "big baby animal."
- It is believed to be female and would have died during the ice age, more than 30,000 years ago.

BAMBOO DWELLING BAT IN MEGHALAYA

- A new species of bamboo-dwelling bat (named *Glischropus meghalayanus*) was discovered in Meghalaya near Nongkhylllem Wildlife Sanctuary
- Meghalaya harbours the highest bat diversity in the country.
- They live in the internodes of bamboo.

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All the Best to all my Economics students...
Hope this material will help you.
God bless...
Jai Hind

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