

CLIMATE CHANGE

→ CC is the long term change in temperature and weather patterns that can occur due to natural reasons, but since the beginning of the industrial revolution in the 19th century it has been predominantly due to anthropogenic activities

→ World's biggest CO₂ emitters (1) China (2) USA (3) India

→ UNFCCC
Established an international environment treaty to combat climate change
COP is the highest decision making body of UNFCCC

→ COP-27 @ Sharm-El-sheikh, Egypt

KEY TAKEAWAYS

- Fund for L&D announced
- Program for Santiago, Network for L&D
- 'Early warning systems for all'
- 'Global shield against climate risks'
- Food & Agriculture for Sustainable Transformation (FAST)
- 'Koronivia Dialogue' Process
- Enhancing Nature based solution for an Accelerated climate Transformation (ENACT)
- 'Mangrove Breakthrough'
- Funding for Great Green wall initiative'
- Joint Energy Transition Partnership (JETP)
- Forest climate Leaders Partnership (FCLP)
- Carbon Border Adjustment Mechanism (CBAM)
→ EU, carbon tax, 'fit for 55 in 2030'

INDIA'S

↳ 'LIFE' movement

→ COP 26, 2021 @ Glasgow, England

outcomes

- Developed countries net zero by 2050
- Phase down unabated coal

↳ Global methane Pledge launched at COP 26 by USA & EU
↳ 'MARS'

↳ Clydebank declaration - green shipping corridors
↳ First movers coalition - USA + WEF (India joined); decarbonisation

→ Net zero targets G7C (2050), China (2060), India 2070

INDIAN INITIATIVES

MISSION LIFE

- LIFESTYLE FOR ENVIRONMENT (LIFE) movement
- introduced in COP 26,
- LIFE global movement launched on 5th June 2022
- Period (2022 - 2027)

ISA

- International Solar Alliance
- Indian Initiative @ COP 21
- HQ: Gurugram
- For solar energy adoption
- UN granted observer status to ISA

CDRI

- Coalition of Disaster Resilient Infrastructure
- Launched in 2019
- promote resilient infra

IRIS

- Infrastructure for Resilient Island States
- Launched @ COP 26
- Co-created by CDRI & SIDS
- It will contribute to 'SamoA Pathway'
(SIDS Accelerated Modalities of Action)

OSOWOG

- One Sun One World One Grid
- Launched by India & UK
- Green Grid Initiative - global interconnected solar powergrids
- First floated by India in 2018 during the first assembly of ISA

INNOVATION ROADMAP OF THE MISSION INTEGRATED BIOREFINERIES

- announced by India @ Global Energy Action Forum
- to identify the gaps and challenges in bio refining value chains
- UN Mission Innovation

MONTREAL PROTOCOL

- 1987, banned chemicals used in refrigerants & aerosols
 - ↳ Phase out CFC
- Kigali Agreement, 2016
 - ↳ Phase out HFC

CARBON PRICING

- Carbon tax
- Emission Trading systems
- Import Tariff on carbon content

CARBON SEQUESTRATION

- Capturing & storing CO₂ naturally or artificially
- Carbon capture & utilisation
- Bio energy with Carbon capture & storage
- 'Carbon sink'
- 'JOFI' programme

NET ZERO EMISSIONS

- Refers to a balance where emissions of GHG are offset by the absorption of an equal amount from the atmosphere imp step to tackle climate change and its effects

CARBON BOMBS

- coal, oil and gas projects

BLACK CARBON

- South Asian region adjacent to the Tibetan Plateau has among the highest levels of 'black carbon'

HEAT WAVE

- period of abnormally high temp
 - max temp 40°C for plains & 30° for hilly areas
 - departure from normal 4-5°C
- orange alert

URBAN HEAT ISLANDS

- when certain areas within city experience higher heat than surrounding areas due to trapped heat in concrete like locations (range of variation 3-5°C)

ARCTIC AMPLIFICATION

- greater increase in temp in the Arctic
- reduction in sea ice cover (Eg. Barents - Kara region)
- Permafrost

ZOMBIE ICE

- dead or doomed ice ; melting ice in Greenland

AZORES HIGH

- high pressure system that occurs in the Atlantic ocean around Azores
- 'Bermuda high'

OCEAN GREAT DYING 2.0

- mass extinction event occurring in oceans
- First event occurred in 'Permian period'
- Eg. Coral bleaching

FOOD SYSTEMS & CC

- food system emissions amount to 18Gt CO₂/year (2015)
- Biochar

IPCC

- Intergovernmental body for assessing the science related to the climate change
 - Estbd in 1988 by UNEP + WMO, HQ. Geneva
 - It shared the 2007 Nobel Peace Prize.
- It published 6th Assessment Report (2021-22)