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Target 2024

HINDI / ENGLISH MEDIUM

1.CLIMATE CHANGE & INTERNATIONAL PROTOCOL

1.BASIC CONCEPT: Climate Change

- Global Warming
- Causes: Man Made & natural
- Green House Effect
- Green House Gases
- Carbon Emission
- Green House gas Potential
- Climate Adaptation & Climate Resilience
- Carbon Footprint & Ecological Footprint
- Carbon Fertilisation
- Impact of Climate Change
- Agriculture

- Water resource
- Cry sphere
- Geo engineering
- Carbon Capture / Carbon Sequestration:
 - Green Carbon, Blue Carbon
- Iron Fertilisation
- Ocean Acidification
- Aerosol Injection techniques
- Sun shade Geo-engineering
- Carbon Credit
- Carbon Offsetting
- 2. CLIMATE CHANGE & International Effort: 1972 to 2017
 - 1972 Conference
 - WCC
 - 1987: World Commission on Environment and Development (Our Common Future)
 - 1988: IPCC
 - National Green House Gas Inventories Programme
 - 1992 (United Nations Conference on Environment and Development)
 - UNCBD
 - o UNFCCC
 - o UNCCD
 - o Agenda 21
 - Rio Declaration
 - Forest Principle

- Commission on sustainable Development
- Green International
 1997 Kyoto (General Assembly Special Session on the Environment)
 - o LULUCF
 - o CDM
 - o JI
 - o AAU
 - o Certified emission reduction
 - Emission reduction unit
 - Annex Countries, Non Annex Countries
 - o Annex A, Annex B
- 2001 Marrakesh Accord
 - Adaptation Fund
 - Mitigation Fund

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- Special Climate Change Fund
- Least Developed Countries
 Fund
- 2002 (World Summit on Sustainable Development)
- 2005 Kyoto Enforcement
- 2008 REDD
 - Forest Investment Program
 - BioCarbon Fund Initiative for Sustainable Forest Landscapes
 - Forest Carbon Partnership Facility
 - Readiness Fund and the Carbon Fund
- 2010 GCF
- 2017: Bonn
- 2018: Katowice
- Madrid CoP (Santiago)

3. Other Protocol & Convention

- Basel
- Stockholm
- Aarhus Convention
- Espoo Convention
- CMS

4. Other Environmental Institution

World

- > IUCN
- > WWF
- > IMO
- FAOWCS
- Wetland International
- Birdlife International
- ➢ GEF
- > ITTO
- Global Green Growth Institute
- Arctic Council UNESCO
- > MFF
- ➤ The Economics of Ecosystems and Biodiversity
- > TRAFFIC
- > CA|TS
- One Planet Summit

- 2012 (UN Conference on Sustainable Development): Report The future we want"
- 2013 (Warsaw International Mechanism)
- 2015
 - o Paris Summit
 - o INDC
- 2016
 - o CORSIA
 - London on Shipping
 - Marrakesh
 - U.N. Conference On Housing And Sustainable Urban Development
- 2021 Glasgow: IMEO
- 2022: Sharm El Sheikh
 - ✓ MARS
- Convention on Long Range Trans boundary Air Pollution (CLRTAP)
- Ramsar
 - Montreux
 - Changwon declaration
- Snow Leopard
- Coalition against Wildlife Trafficking (CAWT)
- GIHAS
- UNEP
 - Absorb, Anticipate, Reshape (A2R)
 - Climate and Clean Air Coalition
 - GRID-Arendal
 - The Portfolio Decarbonisation Coalition (PDC).......

Various Indexes/ Reports

- Climate Change Performance Index: German watch and Climate Action Network Europe
- Emission Gap Report

- Environment Performance Index: WEF
- Sustainable Development Goal Index: Sustainable Development Solutions Network

2.INDIAN LAWS & INTERNATIONAL INSTITUTION

1.India Institutional Structure

Laws:

- **>** 1927
- **▶** 1972
- > 1974
- **>** 1980
- > 1981
- **>** 1986
- **>** 1991
- **>** 2002
- > 2006
- **2010**
- **2016**
- PPV&FRA

Pollution Rules

- The Plastic Waste Management Rules, 2016
- 1991 and Rules 1991
- Noise Pollution (Regulation and Control) Rules, 2000

2. National Policies

- National Wetland Policy 2017
- National Wildlife action plan 2017-31
- Draft National Forest policy 2018

3. SCHEMES:

- ➤ NAPCC
 - National Mission for Sustainable Agriculture
 - National Mission on Strategic Knowledge for Climate Change

- * The bio-injedical waste management Rules, 2016
- The Solid Waste Management Rules, 2016
- The e-waste (Management) Rules 2016
- The Construction and Demolition Waste Management Rules, 2016
- The Manufacture, Storage and Import of Hazardous Chemical (Amendment) Rules, 2000
- The Batteries (Management and Handling) Rules, 2010 with Amendments
- CRZ Rules
- The Public Liability Insurance Act
 - National Solar Mission
 - National Mission for Enhanced Energy Efficiency
 - National Mission on Sustainable Habitat
 - National Water Mission
 - National Mission for Sustaining the Himalayan Ecosystem
 - National Mission for a 'Green
 - National Air Quality Monitoring Programme



4. INDIAN INSTITUTIONS

- ➤ BNHS
- ➤ NGT
- Other Covered with Indian Laws
- **➢** EESL
- > TERI (lightning a Billion Lives, Urban Service Environmental Rating System))
- Madras Crocodile Bank Trust

5.MISC

- ➤ NAPCC
- Namami Gange
- Eco Mark
- Bee Rating
- Ganga Action Plan
- ➤ NGRB

- ➢ BEE
- National Afforestation and Eco development Board
- ➢ GRIHA
- ➤ LEED
- PAT Scheme
- Eco Mark

3. ENVIRONMENT POLLUTION

Environment Pollution

- 1. Type:
 - Primary & Secondary
 - Qualitative & Quantitative,
 - Biodegradable & Non Biodegradable

2. AIR POLLUTION

- Sources
- Control Measures
- Smog
- > Fly Ash
- India Indexes (AQI, NAQI, CEPI etc)
- Ozone Layer
 - Montreal to Kigali
 - ✓ Article 5 Group 1
 - ✓ Article 5 Group 2
 - ✓ Non Article 5
 Countries
- Acid Rain
- Freezing Year
- Baseline Year
- 3. Water Pollution
 - Point Sources & Non Point Sources
 - Eutrophication
 - Red Algal Bloom
 - Dead Zones

- Pollution Check (BoD & CoD)
- Ocean Acidification
- 4. Noise Pollution
- 5. Water pollution
 - a. Types and sources of water pollution
 - b. Indian standards for drinking water
 - c. Impact on humans, plants and animals
 - d. Eutrophication
 - e. Red Algal Bloom
 - f. Dead Zones
- 6. Soil Pollution
- 7. Marine Pollution
- 8. Thermal Pollution
- 9. E-Waste

10. Solid Waste

- a. Solid Waste types and sources
- b. Causes and effects
- c. Control measures of urban and industrial wastes
- d. Bio-methanation of solid waste
- 11. Land degradation
- 12. Biodiesel
 - BS Standard
 - Methanol & Ethanol

- PM JI VAN
- Biofuel Policy 09,18
- National Biofuel Coordination
- Committee

Sustainable Alternative Towards Affordable **Transportation**

4. BIODIVERSITY

1. Definition

2. Biodiversity

Levels of Biodiversity

- Genetic,
- **Species**
- Ecological

Measurement of Biodiversity

- Alpha
- Beta
- Gama diversity
- 3. Distribution: Terrestrial, Marine

4. Types of Species

- Concept of 'r' and 'k' species
- **Keystone Species**
- **Indicator Species**
- **Umbrella Species**
- Indigenous Species
- **Edge Species**
- Cenospecies
- Cryptic Species
- Sibling Species
- Sibling Species
 Invasive Alien Species

5. Threat to biodiversity 6.Other Concepts

- Concept of Ecotone
- Edge Effect
 - Biodiversity Conservation (In Situ, Ex Situ)
 - ➢ Bio Prospecting & Bio Piracy
 - CBD (Cartagena & Nagoya)
 - > CBD Law 2002, TKDL

7. Bio Diverse Area

- Biosphere Reserve
- Man & Biosphere Reserve
- Biodiversity Hot Spot
- World Heritage sites
- **IUCN & Red Data Bok**

5. SPECIES

1.India Conservation Effort

- Integrated Development of Wildlife Habitat: 22 Species
- Project Tiger 1973
- Project Elephant 1992
- Project Hangul
- Vulture Conservation
- Crocodile Conservation

2. Other Species

- Blackbuck
- > Irrawaddy Dolphin
- > Turtle
 - **Batagur Species**
 - Hawksbill
 - Black Soft Shell
 - Green Turtle

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- Turtle Sanctuary
- Turtle Conservation Fund
- Snow Leopard
- One Horn Rhino

- Ganges Dolphin
- Olive Ridley
- White Tiger
- Cheetah

6. BASIC CONCEPTS

1.ECOLOGY & Its Component

- Biotic
- Abiotic
- Energy

2. Biotic Factors & Interaction with Environment

- Amensalism
- 7 (11101150115
- Predation
- Parasitism
- CompetitionCommensalism
- Mutualism
 - √ Facultative
 - ✓ Obligate

3. Adaptation

- Homeostasis
- Allen's Rule
- Conformer
- Regulator
- HibernationAestivation
- Diapause

4. Ecological Principles & Properties

- Hierarchy Principle
- Basic terminology of ecology
 - Species
 - Population
 - Bioceonosis
 - Geobioceonosis
 - Aute-ecology vs. Syn-ecology
 - Biome/Biochore/Formations
 - Ecades/Ecophene/Habitat Forms
 - Ecotypes/Ecological races/Physiological races
 - Natural Capital

- Ecological equivalence
- Ecological amplitude

5. Ecosystem Dynamism

- Ecological Production & Productivity
- Food Chain: Grazing & Detritus
- Food Web
- Ecological Pyramid
- Energy Flow
- Ecological Niche
- Ecological Efficiency
- ➤ Gause's rule
- Sere
- ➢ Bio Accumulation
- Bio Magnification
- Biological Succession
- Ecological Services

6. Bio Geochemical cycle

- Nitrogen
- Carbon
- Phosphorus
- Sulphur

7 Basis of Ecosystem classification

→Introduction, types, characteristic features, structure and function of the following ecosystem:-

- Forest ecosystem
- Grassland ecosystem
- Desert (Hot and Cold) and Desertification-causes
- Aquatic ecosystems and its types (Fresh Water & Marine and Lotic & Lentic)
 - : Mangroves-
 - characteristics; Coral reefs-

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types, threat and Coral bleaching; Wetlands-types, national wetland conservation program

- Techno-ecosystem
- River Continuum Concept

Scan to watch PYQ Analysis Environment & Ecology:



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