

# ENVIRONMENTAL STUDIES

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# Syllabus for 2018-2019

- First Semester
- 1) Environment & Ecosystems
- 2) Natural Resources and Sustainable Development
- 3) Population and Emerging Issues of Development
- 4) Urbanization and Environment
- 5) Reading and filling of Thematic Maps

# 1.Environment and Ecosystem

- Meaning, definition, scope, and its components; concept of an ecosystem: Definition,Characteristics, components and types,functioning and structure; Food Chain and Food Web, Ecological Pyramids, Man and Environment relationship; Importance and scope of Environmental studies.

# Definition of Environment

- Environs =to be around.
- Webster's multilingual dictionary defines:
- 1)'The circumstances, objects, conditions by which one is surrounded is Environment.'
- 2)'The complex of physical, chemical and biotic factors that act upon an organism or an Ecological community & determine its form and survival,
- 3)'The aggregate of social , cultural factors that influence the life of an individual or community.'
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# Importance of Environmental studies

- A. To understand relation between society and environment
- B. To appreciate the Eco-friendly practices in our culture.
- C. To make people understand the complexities of protection of the environment.
- D. To look into issues and movements of Environmental importance.
- E. To impart education to all classes of society .

# Aims of Environmental studies

- 1. To develop an indepth understanding of various environmental issues.
- 2.To develop a balanced view of the relationship between environment and development.
- 3. To understand the concept of Sustainable Development.
- 4. To appreciate the role of individual, community, national & international agencies.
- 5. Respect Eco-friendly traditions and customs.
- 6 . To participate in activities dealing with Environmental studies.

# Focus of Environmental studies

- To understand relation between society and environment .
- To appreciate the good customs and traditions and forget the superstitions.
- To know the complex role of an individual to protect the environment.
- To look into issues related to environment and development .
- To impart education to all for taking responsible decisions.

# QUESTIONS

- 1. Define Environment . Explain the relationship between man and environment.
- Define environment. Briefly explain the importance of Environmental studies.
- What is the aim of environment studies? Explain .
- Describe the home , college and society as you are aware of the environment there.



# Chapter 2: Components AND Types of Environment

- Components of Environment

The Environment is divided into 2 parts

1. Physical Or Natural Environment
2. Human or Anthropogenic

The Physical Environment is again subdivided in 2 parts

- A. Biotic or Living Environment
- B. Abiotic or Non-living Environment

# Abiotic ENVIRONMENT

- **Location : Absolute & Relative**

Relative Location can be

Associated with  
waterbodies

- 1) Insular
- 2) Peninsular
- 3) Isthmian
- 4) Littoral

- **Relative Location :**  
**a) Continental**

**Location:**

Interior parts of  
continents

Example : Poland,  
Afghanistan, Nepal etc.

Delhi, Nagpur, Kolhapur

# Relative location :with Transport routes

## A. Focal Location

- **Definition**: A point where two or more than two trade routes converge or cross.
- Example: Nagpur, Thane , Pune

## Portal Location:

Definition: The location of a coastal site possessing a harbour, or port where ships load or unload cargo

Example: Mumbai, New York, Hong kong, Singapore

# Vicinal Location :

- **Definition** : Location with reference to two immediate neighbouring countries

## **Examples:**

1) United states in the neighbourhood of Cuba  
Brazil, Columbia, Chile, Peru.

2) India in the neighbourhood of Nepal,  
Bangladesh, Sri Lanka

# Topography: Physical FEATURES

- Mountains:
  - \*Economically Backward Regions
  - Human Settlements are limited and life is difficult
  - \*Limited Opportunities
  - No INDUSTRIES
  - \* Limited transport
- \*Plains:55% LAND AREA
- \*Support 90 % of world Population
- \*Density more
- \*Great Agricultural areas
- \*Most DEVELOPED REGIONS
- \*Cradels of civilization  
Indus culture developed

# Climate: Fundamental Factor

## 1)Climate :

**Definition:**Climate is the sum total of the atmospheric conditions experienced over any region during a long period( 35 yrs) of time.

- 3)Climate & transpot
- 4)Climate & populqation

- 2)Various types of climate: Koppen & Trewartha did classification
- Influences all activities of human being: Agriculture : Different crops

# Size & shape of a country

## Larger countries

- **Example:** USA, AUSTRALIA
- Wider Resources
- Scope for development

## Small Countries

- Japan, U.K., Sri Lanka
- Lack of resources
- Depend on Imports
- Less scope for development
- **Shapes:**
  - **1) Elongated: Chile, Peru**
  - **2) Fragmented: Japan**
  - **3) Compact: France**

# Minerals & Soils

- **Minerals:**
- Uneven Distribution
- Direct impact on population & trade
- Areas having more resources have attracted more people.
- Coal & Oil: USA
- Oil: Middle East countries
- **Soils:**
- Influences Agriculture
- Alluvial soil: Fertile
- Permafrost: Non-fertile
- Black : Cotton, wheat
- Sandy: Rice& Paddy
- Irrigated: Sugarcane
- Slopy and Mountainous:
- Tea, Coffee



# Coastlines

## **Related with Water Transport**

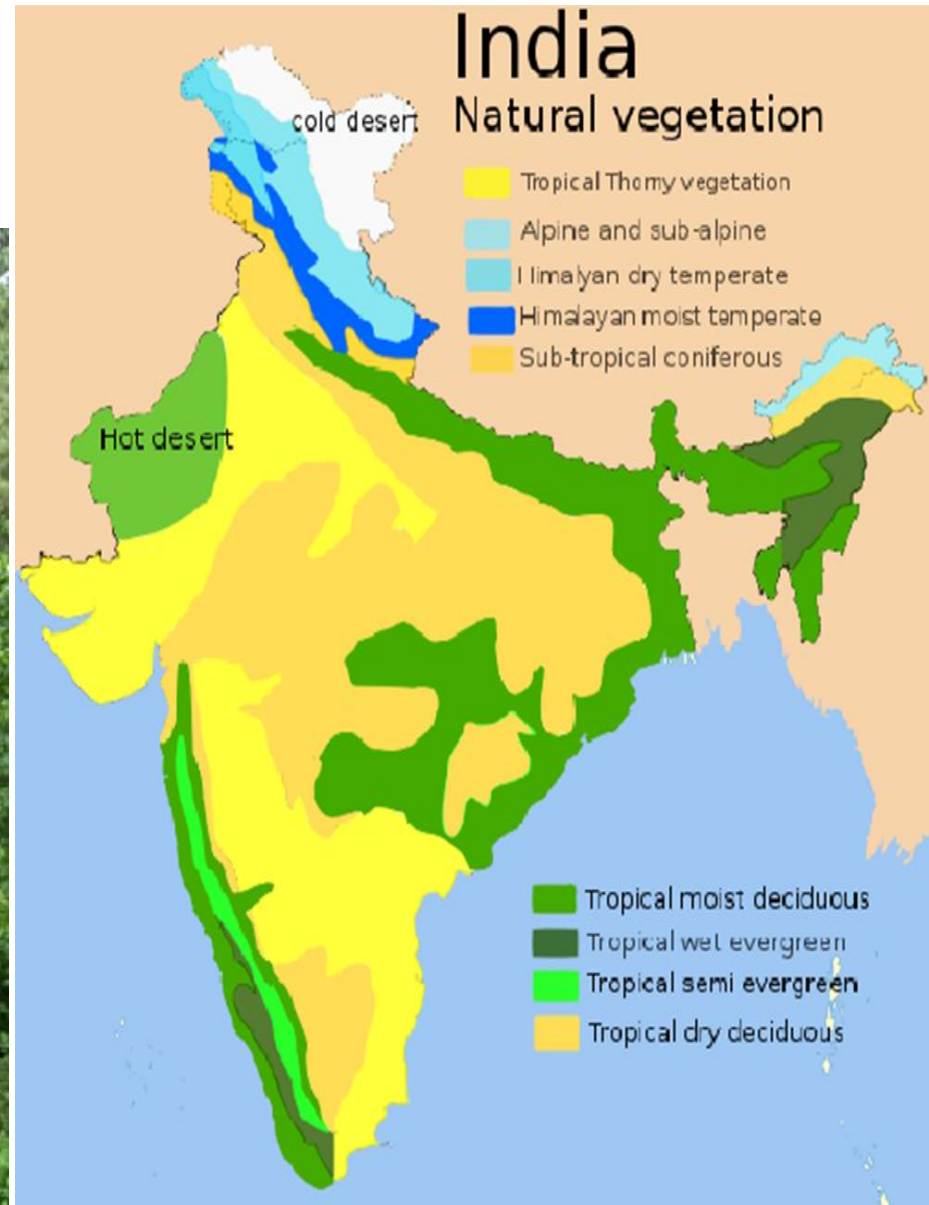
- Cheapest transport
- International Trade
- 2 Types of Coastlines:
  - Broken or Indented
  - Regular or smooth
- Good coastlines have good harbours and improved trade
- Development is fast
- Eg. Japan, Great Britain

# Other Abiotic Factors

- Lithosphere : Solid Crust Of Earth
- Hydrosphere: Water Bodies
- Atmosphere: 4 Layers
- Troposphere
- Stratosphere contains Ozone Layer
- Ionosphere
- Exosphere

# BIOTIC COMPONENTS

- Natural Vegetation



# Biotic Components

- Animals:
  - 1: Terrestrial - Domestic & wild
  - 2. Amphibians
  - 3. Aquatic
- Birds
- Insects
- Micro- organisms

# Human or Anthropogenic Environment

- 1. : Social
- 2: Economic
- 3: Political
- 4: Cultural
- The development of any country depends on the combination of all these factors.

# ECOSYSTEM

- Coined by Roy Calpham in 1930.
- Eugene Odum , founder of Ecology stated that, “ Any unit that includes all of the organisms in a given area interacting with the physical environment so that the flow of energy leads to clearly defined trophic structure, biotic diversity and material cycles within the system is an Ecosystem.”

# Classification of Ecosystem

- 2 types of Ecosystems
- 1) Terrestrial
- 2) Aquatic: a) Marine b) Fresh Water
- Terrestrial: Tundra region
- Grassland Region
- Desert Region
- Forest Region etc.

# Structure of an ecosystem

- The ecosystem is divided basically in 2 parts.
  - 1) Producers
  - 2) Consumers
- Producers are Auto- trophs ( self Feeders).
- Plants are **Primary Producers**.
- All other animals are called consumers or heterotrophs.



# Consumers

## 4 Types

- 1) Herbivores ( plant eaters)
- 2) Carnivores( Flesh Eaters)
- 3) Omnivores ( Everything Eaters)
- 4) Detrivores / Decomposers : Dead and decomposed material eaters: They are known as the sweepers of the environment.

# QUESTIONS

- Q:..Show the areas of Acid rain
- A:North America: USA
- 2.Europe & CIS:U.K.,Germany,

**Scandinavian** Countries

- Q :Scandinavian Countries:
- 1.Norway, Sweeden, Finland
- Q.Longest river –Nile
- Q. Largest river: Amazon

# Map questions...

- Q. Any river from China: Amur, Huhang, Yangtze
- Q. Major river of India : Ganges
- Q. Show westward flowing river: Narmada
- Q. AIR-Route: Mumbai-London, Delhi- Moscow
- Q. An island Continent : Australia
- Q. A country with high deforestation : Brazil, Mexico, Sudan, etc
- Q. An earthquake prone area in India
- Q. a biodiversity hotspot :

# QUESTIONS

- A CARIBBEAN ISLAND RICH IN BIODIVERSITY

# Unit II:Tourism

- Introduction: Tourism is the fastest growing industry.It is largely based on geographical factors like topography,natural beauty,culture,traditions and lot more.It is a highly labour intensive industry.In India, because of high diversity , tourism plays an imp.role in growth & development.

# History, Definition & scope

- 1910 :Australian economist Hermann V. Schullard
- 1942 :Swiss Professor Hunzikerand Krapf
- 1963 :Tourism Conference on International Travel & Tourism
- 1976 :Tourism Society of London
- 1994 :Theobald

# Ch.4:Environmental Problems associated with Agriculture

- Agriculture is one of the most imp.primary activity just like mining, forestry, lumbering, live stock rearing, fishing etc.
- Agricultural land is the most imp. Resource which gives us food , shelter and clothes.
- 3 imp.factors affect agriculture
- 1:Physical:climate, soil, steepness of land
- 2:Economic: distance from market, govt.control,subsidies
- 3:Human : Knowledge,skill and preference for perticular crop and livestock

# Problems associated with agriculture

- 1:Loss of Productivity
- Following are the causes of decline of Productivity:
- Population explosion + majority of land to be under residential & industrial areas
- Continuous cultivation has reduced agricultural Productivity.
- Heavy mining & quarrying has destroyed agricultural land.



# Continued.....

- Frequent floods have led to siltation of land.



# Problems associated with Agriculture

- There are various problems associated with agriculture; they are –over cultivation, over grazing, deforestation, over use of chemical fertilizers, over use of pesticides, weedicides, over irrigation, infertility of land, loss of productivity, land degradation & desertification are major problems.