

## Open Elective: Natural Resource Management

**COURSE CODE: U24ES3E01**

**COURSE CREDIT: 02 (Theory)**

**1 credit - 15 lectures**

**1 lecture is 60 minutes**

### Course Objectives:

- 1. To introduce students to the classification and distribution of natural resources at both national and global levels.**
- 2. To examine the human impact on natural resource demand due to population growth and changing lifestyles.**

### Course Outcomes:

**CO1: Define and classify natural resources and explain their national and global distribution.**

**CO2: Identify and propose conservation strategies for mineral resources, including emerging opportunities in ocean mining and resource recycling.**

<b>Sr. No</b>	<b>Syllabus</b>	<b>No. of lectures</b>	<b>Credits</b>
Unit-I: Introduction to Natural Resources	Definition, Classification of natural resources, Distribution of natural resources (National and Global), Importance and application of natural resources, Demands of Natural Resources due to Population, lifestyle, Need for natural resource management.  Agricultural practices in India, exploitation of agricultural land, development of wasteland Land use changes in India (case studies), future demand of forest land, Forest management practices: Afforestation, Joint Forest Management, Agroforestry, social forestry, urban forestry, protected forest area management. (Case studies)	<b>15</b>	<b>1</b>
Unit II: Water and Mineral Resource	Water and Mineral Resources Management - Concept and classification Management Practices: Integrated water resource management; Watershed development; Rainwater harvesting. National Lake and River Conservation Programmes.  Wetland management. Coastal zone	<b>15</b>	<b>1</b>

	management- concept, scope, issues and strategies. Implications of National River linking programme on environment.		
	Conservation of Mineral resources of India. Oceans as new areas for exploration of mineral resources. Oceans ore and recycling of resources. Case studies.		

## References:

- Shiklomanov, I. A. (1993). *World Fresh Water Resources*. In Gleick, P. H. (Ed.), *Water in Crisis*. Oxford University Press.
- FAO. (2010). *Global Forest Resources Assessment*.
- Central Ground Water Board, India – Reports on groundwater management.
- Government of India. (2005). *National Environmental Policy*.