

Wildlife Institute of India Syllabus

WII Project Personnel Syllabus - General ecology and conservation

- General wildlife conservation issues in India.
- Losses and threats to biodiversity and climate change.
- Role of protected areas in conservation.
- Conservation outside Protected Areas.
- Translocation and reintroduction projects.
- Major conservation projects like Project Tiger, Elephant, Lion etc.
- Human-wildlife interactions.
- Village relocation and compensation schemes for conservation.
- Legal instruments for conservation: Wildlife (Protection) Act, 1972; Indian Forest Act, 1927; Forest (Conservation) Act, 1980; and Environmental (Protection) Act, 1986. International agreements and conventions (CITES, CMS, CBD, and Ramsar).

Wildlife Institute of India Ecology Syllabus

- General ecology, Basic concepts of ecosystems. Energy flow, nutrient cycles, and trophic levels. Definitions of plant and communities, populations and individuals. Species interactions: competition, predation, and mutualism. Population demography and dynamics. Carrying capacity. Metapopulation concept. Nature and structure of biological communities. Niche concept. Succession. Factors governing species diversity. Vertebrate biology. Bio-molecules (DNA, RNA, and proteins); Conservation applications of genetics (loss of genetic diversity, inbreeding depression, and bottleneck). Population and Habitat Viability Analysis. Small and declining population paradigms. Ecological restoration.
- Probability theory and distributions. Parametric and Non Parametric tests of difference. ANOVA, Correlation and regression analysis. Population enumeration techniques.
- Major wildlife habitats in India: forests, grasslands, wetlands, and deserts. Bio-geographic zones and affinities of flora and fauna in the Indian subcontinent. Protected Area network. Losses and threats to biodiversity. Habitat fragmentation, barriers, and isolation. Climate change. In situ and ex situ conservation. Management of small and insular populations. Role of protected areas in Conservation. Conservation outside Protected Areas. Translocation and reintroduction projects. Project Tiger, Elephant and Snow Leopard. Human wildlife interactions. Concepts of eco-development, village relocation, and compensation schemes for conservation

wii.gov.in Project Personnel GIS & Remote Sensing Syllabus

- Basic principles of remote sensing and aerial photo interpretation. Fundamental laws governing the remote sensing science, Concept of Electro Magnetic Spectrum and Energy interactions with the atmosphere and with earth surface features. Platforms and Sensors, Resolution, Image and False-color composite, introduction to digital data,

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Digital Image processing, elements of visual interpretation techniques. Advance Remote sensing techniques.

- Geographic Information System-Basics, Components of GIS, Coordinate systems and Map Projections, Data Models-Raster and Vector. GIS data and its structure Geospatial Data and GIS operations, attribute data, thematic layers, and query analysis, Global positioning systems.
- Basic concepts of ecology, Major wildlife habitats in India, Protected Area network. Project Tiger, Impacts of developmental projects on wildlife.