Statistical Analysis of Ecological Parameters

Online course for skill building

September, 14 – 17, 2020

Platform: WEBEX

G B Pant National Institute of Himalayan Environment (NIHE)
Kosi-Katarmal, Almora, Uttarakhand

BACKGROUND

With the ever increasing availability of ecological data across various landscapes, there is a growing demand for appropriate data management, statistical analyses, and visualization tools for better analytics. The demand is often acutely realized by the early graduate students for coherent analyses of data for their dissertations, and researchers of GBPNIHE are no exception. Consequently, this online course is aimed at introducing sampling and exploring of ecological data, and avenues for suitable application of descriptive as well inferential statistical theory by means of class room lectures and hands-on lab work. Subsequently, this course is aimed at elaborating various types of sampling methods, and discuss how such methods can impact the scope of inference. A variety of exploratory data analysis techniques would also be elaborated with basic data visualization methods using *R* and *R-Studio* software. The concepts and techniques to be elaborated in this course is expected to be beneficial for analysis and comprehension of ecological parameters.

Meet your Speakers

Dr. R S Rawal
Director, GBPNIHE, Almora
Specialization: Floristic Ecology & Conservation Biology

Key-Note Lecture
Prof. Subimal Ghosh
Prof. IIT – Bombay
Specialization: Hydrology, Hydro climatology and Regional modeling

Guest Lecture
Dr. Rajiv Pandey
Scientist, ICFRE, Dehradun
Specialization: Vulnerability and adaptation assessment of communities

Guest Lecture
Dr. Rajesh Joshi
Scientist, GBPNIHE
Specialization: Hydrological modeling and climate variability

Course coordinator
Dr. I D Bhatt
Scientist, GBPNIHE
Specialization: Plant physiology & Medicinal plant propagation

Meet your Mentors

Dr. Sandipan Mukherjee, Sci-D, GBPNIHE

Dr. Suresh Rana Sci-C, GBPNIHE LRC, Leh

Mr. Rupesh Dhyani Senior Researcher GBPNIHE

Ms. Shinny Thakur Senior Researcher GBPNIHE

Mr. Rajendra Rawat Researcher GBPNIHE

Convener
Dr. Vikram Negi, Sci-E, GBPNIHE

Course Objectives

➤ To provide basic idea of sampling techniques, descriptive statistics, and inferential statistics with their physical significance

➤ To elucidate the ecological diversity indices and ordination techniques for linking species-environmental relationship

➤ To elaborate the ecological data management techniques for user-friendly data ingestion in any statistical software/platform
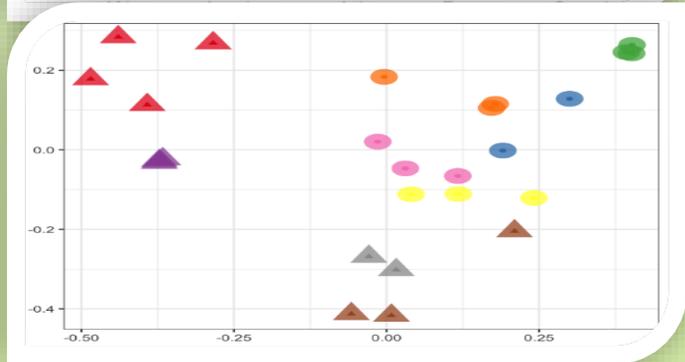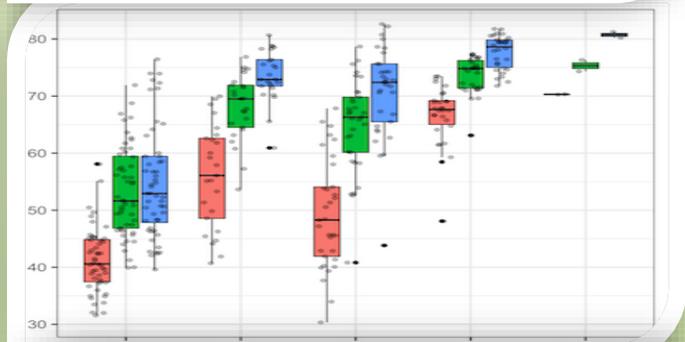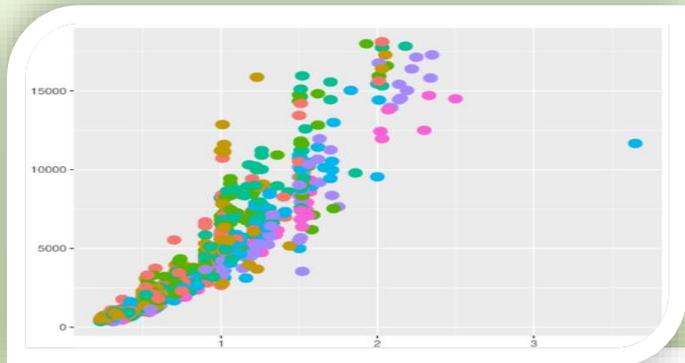
Training Focus

Class Room Lectures

Statistical theories

Sampling methods

Ecological indices

Ordination methods

Hands on Training

Basic statistical analysis of ecological data

Computation of ecological indices

Application of ordination methods to ecological data

Expected Outcomes

- Improved understanding of descriptive and inferential statistics for application to ecological data

- Availability of ready –to-use tools for ecological data analysis

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