

Environmental DNA (eDNA) Workflows & Biodiversity Calls — Hands-on

Build end-to-end environmental DNA (eDNA) pipelines from field sampling to defensible biodiversity calls. Learn contamination-safe collection and extraction, marker/primer selection, sequencing and QC, ASV/OTU inference, taxonomic assignment against curated references, and decision-grade reporting with occupancy/detection models and uncertainty quantification.

Environmental DNA (eDNA) Workflows & Biodiversity Calls

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Session 1

Fee: Rs 8800 [Apply Now](#)

Field Sampling, Controls & Wet-Lab

Sampling design & logistics

[water/soil/air/sediment](#) [filtration \(Sterivex/filters\)](#)
[preservation & transport](#)

Contamination control & inhibitors

[field/kit blanks, negatives](#) [dedicated clean areas](#) [PCR inhibitor mitigation](#)

Markers & primers

12S/16S/18S/COI **amplicon vs capture** **qPCR/ddPCR assays**

Session 2

Fee: Rs 11800 Apply Now

QC, Denoising & Taxonomic Assignment

Read processing & ASV/OTU calling

cutadapt/fastp, merging **DADA2/UNOISE/VSEARCH**
chimera & LULU curation

Reference DBs & assignment

BOLD/MIDORI/PR2/SILVA **BLAST LCA / IDTAXA** **naive**
Bayes (q2-classifier)

Decontamination & tag-jump checks

decontam prevalence/freq **min read thresholds**
replicate concordance

Session 3

Fee: Rs 14800 Apply Now

Biodiversity Metrics & Occupancy Models

Diversity & community analyses

alpha/beta; Hill numbers **rarefaction & coverage**
indicator species tests

Detection/occupancy modeling

unmarked/occu (R) **false pos/neg handling** **replicate**
design power

qPCR/ddPCR quant & thresholds

std curves & LoD/LoQ **copy→abundance heuristics**
decision thresholds

Session 4

Fee: Rs 18800 Apply Now

Mapping, Standards & Reproducible Reporting

Geospatial outputs & dashboards

QGIS/leaflet maps **heatmaps & range overlays** **report-ready figures**

Standards & data submission

MIxS & metadata **ENA/SRA; GBIF/OBIS refs** **audit trails & SOPs**

Ethics, permits & sensitive taxa

endangered species privacy **biosecurity considerations** **stakeholder-ready summaries**