**Guidelines for Applicant Institutions**
**Red List Assessment of Ecosystems (RLE) – Kerala**

**1) Background & Rationale**
Kerala hosts a wide range of ecosystems, including montane shola–grassland mosaics, evergreen and moist deciduous forests, rivers and riparian systems, floodplains and wetlands, mangroves and estuaries, and coastal and marine habitats such as beaches and dunes. These ecosystems are increasingly threatened by land-use change, urbanization, invasive species, pollution, and climate change. The IUCN Red List of Ecosystems (RLE) provides a globally accepted framework for synthesizing evidence on ecosystem distribution, ecological integrity, function, and risk of collapse. It enables the use of comparable categories across ecosystem types and informs spatial planning, restoration priorities, protected area expansion, and policy development. Accordingly, the Kerala State Biodiversity Board (KSBB) invites Expressions of Interest (EOIs) to undertake a pilot-level RLE assessment for Kerala, aimed at generating policy-relevant outcomes with a particular focus on ecosystem-based biodiversity conservation.

**2) Objectives**
- Assess the status of selected ecosystem types using **IUCN RLE Categories & Criteria, Version 2.0 (2024)***, producing Kerala-specific ecosystem descriptions, maps, integrity indicators and risk categories.
- Evaluate relative risk of ecosystem collapse using Criteria A–E and establish a defensible baseline for repeat assessments.
- Prioritize conservation, restoration, and protection-gap measures to strengthen ecosystem resilience.
- Inform SBSAP/LBSAP updates, spatial planning and sectoral policy instruments.

**3) Geographic Scope**
Selected regions representing Western Ghats uplands, midland river–wetland systems, and coastal–marine environments. The final ecosystem set, scales and sampling frames will be finalized at inception with KSBB and partners to ensure ecological representativeness and feasibility.

**4) Eligible Institutions**
- Academic/research institutions with experience in ecosystem/landscape assessment, biodiversity survey, remote sensing/GIS, and application of RLE or analogous risk frameworks.
- Consortia are encouraged (letters of commitment required).

**5) Spatial Data Support & Integration (Mandatory)**
Provider: Kerala State Land Use Board (KSLUB) will provide authoritative spatial datasets, standards, and where feasible, access to geoservices for analysis/visualization.

Obligations of the Implementer:

- Align all geospatial work with KSLUB data standards, projections and metadata.
- Use KSLUB base layers (LU/LC series, administrative boundaries, coastal regulation layers where available) and document transformations.
- Coordinate on data governance, Quality Assurance and Quality Control (QA/QC), and hosting of final layers via KSBB platform.
- Provide reproducible scripts/workflows for all spatial analyses.

**6) Scope of Work**
1. Inception & Governance: finalize ecosystem typology (aligned to the IUCN Global Ecosystem Typology), study areas, data standards, QA/QC; constitute a Kerala RLE Working Group (KSBB, KSLUB, KFD, KFRI, DoE CC and relevant stakeholders).
2. Knowledge Synthesis: compile ecosystem descriptions, process models, current/past extent.
3. Data Assembly & Mapping (with KSLUB): harmonize Remote Sensing datasets (e.g., multi-date LU/LC), historical cartography, field records; build geodatabases for current/past (and where feasible, projected) states.
4. Field Surveys: targeted sampling to fill data gaps (biotic/abiotic integrity; pressures), with ecosystem-specific SOPs.
5. RLE Risk Assessment: apply Criteria A–E (A: decline in distribution; B: restricted geographic distribution; C: environmental degradation; D: disruption of biotic processes; E: quantitative risk analysis) across appropriate timeframes (as specified in v2.0), assign categories (CO, CR, EN, VU, NT, LC, DD, NE), and provide transparent justifications.
6. Threat Diagnosis & Prioritization: identify drivers (e.g., land-use transitions, invasive species, hydrological alteration, coastal squeeze, warming/acidification), map under-protected ecosystems and high-integrity areas, and propose priority actions.

7. Stakeholder Validation: workshops with line departments, BMCs, local experts; document consensus and dissent and adjust assessments where evidence warrants.
8. Deliverables: Kerala RLE report, risk maps and statistics (e.g., proportion threatened), indicator baselines and policy briefs.

**7) Technical Standards & Methods (Mandatory)**

1. Standard of Record: IUCN (2024). Guidelines for the application of IUCN Red List of Ecosystems Categories and Criteria, Version 2.0*. All assessments must conform strictly to definitions, datasets, timeframes, thresholds, plausibility checks, and documentation requirements in v2.0.
2. Typology: align ecosystem types to the Global Ecosystem Typology to enable national and global roll-ups.

**8) Deliverables**

1. Inception Pack: Working Group constituted; finalized methodology mapped to v2.0; ecosystem list; sampling/QA/QC plan; permits/ethics.
2. Kerala Ecosystem Baseline Atlas: descriptions, current/past distribution maps, integrity datasets, and threat models (all with KSLUB-aligned metadata).
3. Field Survey Dossier: SOPs, geo-referenced observations, data dictionary and uncertainty treatment.
4. Draft RLE Assessments: per ecosystem—criteria justifications; category assignment; uncertainty and sensitivity analyses.
5. GIS Layers & Services: risk categories, high-integrity areas, under-protected ecosystems; packaged with KSLUB-compliant metadata and styles; service endpoints where feasible.
6. Kerala RLE Report (print-ready) and Policy Briefs (GBF links; restoration priorities; 30×30 implications).

**9) Community & Stakeholder Engagement**
Plan for inclusive engagement and validation (women, marginalized communities, Indigenous Peoples and Local Communities.), draw on local ecological knowledge where appropriate, and build adoption pathways into SBSAP/LBSAP, district plans and urban planning.

**10) Data Management, IP & Access**

- All primary data, code and GIS layers produced are the property of KSBB; open access will be enabled post-acceptance, except for sensitive localities.
- Deliver complete metadata, processing scripts and readme files; coordinate hosting with KSBB.

**11) Compliance**
Comply with applicable permissions and ethical standards (forest/wildlife access, coastal/CRZ considerations, biosecurity, personal data protection). Obtain documented consent for private lands.

**12) Proposal Format**

- Technical : rationale; objectives; detailed v2.0-aligned methods (criteria, indicators, sampling, statistics); KSLUB integration; data management; workplan (milestones only); risk management; team CVs; institutional strengths; stakeholder plan.
- Financial: itemized budget and justifications; cost-effectiveness; any co-financing/leveraging.

## An EOI with the proposal shall be submitted to the Member Secretary, Kerala State Biodiversity Board, on or before 30/09/2025.

* IUCN (2024). Guidelines for the application of IUCN Red List of Ecosystems Categories and Criteria, Version 2.0. Keith, D.A., Ferrer-Paris, J.R., Ghoraba, S.M.M., Henriksen, S., Monyeki, M., Murray, N.J., Nicholson, E., Rowland, J., Skowno, A., Slingsby, J.A., Storeng, A.B., Valderrábano, M. &Zager, I. (Eds.). Gland, Switzerland: IUCN