

Implementing the MLR Methodology

The multivocal literature review (MLR) offers a disciplined yet expansive framework for synthesizing both academic research and non-traditional sources—policy briefs, corporate disclosures, technical dashboards, and institutional reports. Essentially, the objective is to utilise multiple “voices” or perspectives to draft a coherent narrative for dataset selection and subsequent procurement. Unlike conventional systematic reviews that stipulate a rigid inclusion criteria that often treat grey literature as noise, the MLR treats it as essential domain knowledge, but only if curated through transparent and replicable filters. This is critical: grey literature must be selected through rigorous, replicable rules—documented and justified—as the aim is not abundance but reliability.

Ergo, MLR may legitimise non-academic sources, but requires quality control through auditable methodology—which this paper aims to introduce and demonstrate.

In biodiversity finance, leading empirical data often resides in practitioner ecosystems, not journals, wherein real-world organisations—NGOs, consultancies, policy consortia—become the centrefold source of the most up-to-date data generated. The field concerns itself with key funding mechanisms and investment flows to underpin biodiversity results—for instance: green bonds, blended finance, TNFD disclosures. Academic publishing can prove to be slow and often disconnected from the frontlines of biodiversity finance. Thus, this MLR does not merely catalog sources—it directly informs variable selection, modeling design, and policy inference.

Accordingly, the MLR framework becomes indispensable in a rapidly evolving data landscape, especially: if real empirical depth is to be executed—implemented in this paper equipping the methodology:

1. Tiered inclusion protocol—prioritize datasets with structured variables, clear provenance, retrievability, and time series integrity.

The tiered inclusion protocol is incorporated in the methodology due to the prioritisation of comprehension and discipline—ergo, it brings forth a structured hierarchy to evaluate sources that “make the cut”—thereby, categorised as: primary (most reliable), secondary (less structured), and tertiary (contextual) tiers.

These levels are allocated using the four aforementioned criteria: The first being the rigidity of ensuring structure variables, that is, datasets that are not only narrative or descriptive, and rather tables with clearly defined columns and data types (e.g. “Species_Count”, “Carbon_Price”). Secondly, there must be clear provenance, to be able to trace the source—who produced it, when, and how—anonymous sources are excluded by default. Then, it must be ensured that the data is publicly accessible or available upon request—private, unverifiable content will not be included—thus, the data must be retrievable. The final condition of the quality of data is time series integrity, meaning, simply: it must be able to be valid for time series analysis—data over time must be complete, consistent, and methodologically stable—no random gaps or changing definitions are permissible.

For the purposes of this study, this inclusion is not ad hoc, it’s a data quality filter to ensure empirical depth and technical usability.

2. Deliberate grey-literature integration—only include sources that add clarity to empirical modeling (e.g. TNFD, BIC standards, GBIF data architecture).

Grey sources are included only when they offer meaningful clarity to modeling biodiversity finance outcomes (e.g. how nature risk affects firm value)—it must serve to bring clarity to empirical modelling. The examples elaborated:

- *TNFD*: Taskforce on Nature-related Financial Disclosures—offers a reporting structure for biodiversity risk.
 - *BIC*: Biodiversity Indicators Consortium—standardizes biodiversity metrics.
 - *GBIF*: Global Biodiversity Information Facility—provides high-quality occurrence data with geospatial resolution.
3. Rigorous documentation, a metadata sheet or data inventory log—every dataset will be logged with type, source, accessibility, metadata quality, and modeling potential.

The logs are strictly constrained with the following definitions to treat datasets similar to academic sources—record everything to maintain auditability and reproducibility:

- *Type*: Is it observational, administrative, modeled, remote sensing, etc.?
- *Source*: The institution or author, including publication year and retrieval URL.
- *Accessibility*: Open, restricted, API-based?
- *Metadata quality*: Does it describe variable definitions, units, geographic/time coverage, methodology?
- *Modeling potential*: Can the data be used for econometric, simulation, or valuation modeling?

The objective may not be to include *all* sources, but to assemble a list of usable, coherent, well-understood bodies of evidence. Therefore, whilst not a scoping review including every document ever written, it presents a curated corpus based on deliberate selection of sources that work together. The final product should not be encyclopedic, but rather lean, empirically robust, and practically valuable for economic modeling, valuation, and scenario-building in biodiversity finance.