

# CYNOSURE

## FINAL REPORT

Independent Final Evaluation of

**“Knowledge 4 Nature: Provisioning the Biodiversity  
Data Behind Global Goals for Nature (K4N)”**

**SUBMITTED TO**

**International Union for Conservation of Nature**

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## Acknowledgments

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## Executive Summary

The Knowledge for Nature (K4N) Project, supported by the Global Environment Facility (GEF) and implemented by the International Union for Conservation of Nature (IUCN), was designed to address persistent global challenges in the availability, accessibility, and use of high-quality biodiversity data. It aimed to strengthen global biodiversity knowledge infrastructure by improving the generation, standardization, and dissemination of key data products, while promoting their uptake across diverse stakeholders. The project targeted both technical and systemic barriers by enhancing core biodiversity indicators, expanding species assessment coverage, and facilitating the integration of biodiversity data into emerging global frameworks, including financial disclosure and risk assessment systems. It also emphasized transitioning toward more sustainable delivery models beyond grant-based financing to support the long-term provision of global biodiversity public goods.

The final evaluation of the K4N Project was undertaken to assess the overall performance, achievements, and added value of the project in relation to its objectives. It examined the extent to which the project contributed to strengthening global biodiversity data systems and enabling their application in policy and financial decision-making processes. The evaluation applied standard OECD-DAC criteria—relevance, coherence, effectiveness, efficiency, sustainability, and monitoring and evaluation—while also incorporating additional GEF-specific lines of inquiry. These included an assessment of additionality, co-financing, environmental and social safeguards, gender integration, stakeholder engagement, and knowledge management, thereby ensuring a comprehensive and multidimensional analysis of project performance.

### **K4N Project Performance Findings**



The evaluation found the K4N Project’s **relevance** to be **highly satisfactory**. At the global level, the project directly supported the Kunming-Montreal Global Biodiversity Framework (GBF) and contributed critical data for monitoring Sustainable Development Goals (SDGs) 14 and 15. Its design was closely aligned with the GEF-7 Biodiversity Focal Area—particularly objectives BD-1 and BD-2. The project’s alignment also extended to IUCN’s Nature 2030 Programme and to emerging private-sector requirements under the Taskforce on Nature-related Financial Disclosures (TNFD). Regionally, K4N complemented initiatives such as BIOPAMA and APAP by supplying standardized species information for planning tools. Nationally, it supported countries in meeting their obligations under the Convention on Biological Diversity (CBD), particularly in the development, tracking, and verification of National Biodiversity Strategies and Action Plans (NBSAPs).

The evaluation found the K4N project to be characterized by strong **coherence**, demonstrating a logical and practical approach to overcoming systemic barriers in global biodiversity conservation. **Internally**, the project leveraged a **synergistic relationship** between the generation of foundational species data for underrepresented taxa, such as goby fishes, fungi, and dung beetles, and the modernization of digital data services and metrics like the unified STAR layer and automated Red List Index (RLI). **Externally**, K4N was explicitly aligned with the GBF and the SDGs, evidenced by the successful embedding of the enhanced RLI into the 2025 SDG Annual Report. The project further maximized its impact through strategic engagement with the private sector via the TNFD and the IBAT, creating significant socioeconomic synergies by integrating biodiversity metrics into financial risk management.

The project’s **effectiveness** was overall **satisfactory** in modernizing global biodiversity monitoring and addressing systemic data gaps. **Component 1**, which focused on providing state-of-the-art data services, was rated **highly satisfactory** for successfully transitioning core indicators from manual processes to automated, policy-ready pipelines. Key achievements included the full operationalization of an automated RLI pipeline, now capable of serving real-time data via API and the development of a unified global STAR layer that integrates marine, terrestrial, and freshwater species. The adaptation of these metrics for the TNFD further extended impact, enabling more than 700 organizations to incorporate species extinction risk into financial decision-making.

**Component 2** was rated **satisfactory** for its success in addressing urgent knowledge needs by expanding the taxonomic and geographic coverage of the IUCN Red List. The project delivered over 2,000 new species assessments, focusing on historically underrepresented groups that provide essential ecological functions. This included the publication of 1,035 goby fish assessments, which significantly improved data for aquatic biodiversity hotspots like the Coral Triangle, as well as 500 fungi and 500 dung beetle assessments to guide soil and land health monitoring. While some outputs faced minor delays due to expert availability, the component was highly effective in filling critical gaps in the Barometer of Life.

**Component 3**, focused on strengthening sustainability through new technologies, received a **moderately satisfactory** rating, reflecting significant technical progress alongside ongoing efforts to finalize long-term financial planning. The project successfully modernized the technical foundations of the Red List by automating Area of Habitat (AoH) mapping, removing a major computational bottleneck, and enhancing the sRedList platform to streamline the work of global assessors. Additionally, the establishment of SIS Connect strengthened the interoperability between national and global Red Lists in countries such as Brazil, Cuba, Greece, New Caledonia, South Africa, and Turkey.



Although a comprehensive Sustainability Plan reached 90% completion and secured substantial co-financing, its ultimate effectiveness remains dependent on future institutional commitment.

The **efficiency** of the K4N project was rated **Satisfactory**. The Project Advisory Group (PAG) provided critical strategic oversight. A major driver of efficiency was the project's ability to leverage extensive "in-kind" technical and scientific expertise through the Red List Partnership and the IUCN Species Survival Commission (SSC), mobilizing over 1,000 volunteer experts to deliver more than 2,000 species assessments. Financially, the project achieved a 98.5% budget utilization rate, with total expenditure reaching USD 1,808,767 by closure. The K4N project also successfully mobilized USD 9.35 million **in co-financing**, achieving a robust leverage ratio of 5:1 relative to the USD 1.83 million GEF grant. Co-financing materialization was overall **satisfactory**. Most notably, co-financing from the IBAT reached USD 2.6 million (400% of its initial pledge) driven by higher-than-anticipated private-sector revenue for biodiversity data products. The project's efficiency was challenged by an initially slow disbursement rate due to the high technical complexity, structural budget restrictions, and difficulties in recruiting and retaining specialized technical personnel. However, the project demonstrated strong adaptive resource management, such as the strategic use of co-financing.

The evaluation rated the **sustainability** of the K4N project's results as **moderately likely**, primarily due to the successful institutional embedding of core technical infrastructures into IUCN's operating model. By transitioning from manual, one-off deliverables to automated, repeatable data pipelines and APIs for the Red List Index and STAR metrics, the project ensured that results are anchored within durable external demand drivers such as CBD/GBF reporting and corporate nature-risk disclosures. Financial sustainability includes revenue-generating services through the IBAT, which realized USD 2.6 million (400% of its initial pledge) and the procurement of CHF 3 million in philanthropic funding for the redevelopment of the Species Information Service (SIS 3.0). However, long-term sustainability faces risks, including a structural dependence on time-bound donor grants and the fact that the resource mobilization strategy for Red List remains under development. While replication pathways are already evident through national-global interoperability in countries such as Brazil, Cuba, Greece, New Caledonia, South Africa, and Turkey via SIS Connect, full scalability will require continued investment in institutional capacity and the finalization of the Sustainability Plan.

The **implementation and execution** of the K4N project were rated **satisfactory**, characterized by a multi-layered management structure that maintained a functional separation between the IUCN Multilateral Finance Unit (Implementing Agency) and the IUCN Science and Data Centre (Executing Agency). The Implementing Agency provided robust fiduciary oversight, quality control, and strategic guidance, ensuring the project remained aligned with GEF guidelines. The Executing Agency successfully led the technical modernization of the Red List infrastructure and coordinated a complex network of Red List partners and academic institutions to deliver over 2,000 species assessments. Operational success was driven by the Project Management Unit (PMU), which managed the day to do operations and adaptively navigated any challenges.

The **Monitoring and Evaluation (M&E) design** for the K4N project was found to be **moderately satisfactory** while the **M&E implementation** was found to be **satisfactory**. The M&E plan was well-conceived, maintaining compliance with GEF requirements through consistent reporting, quarterly reviews, and robust financial monitoring. While the results framework was effective at tracking technically complex outputs, such as the delivery of species assessments and the development of automated data pipelines, a key limitation identified was that several indicators lacked SMART criteria,



missing quantified baselines or specific adoption thresholds for outcomes like the operationalization of the RLI mechanism and national-level integration. Consequently, while the results framework ensured high accountability and transparency in technical delivery, it lacked sufficient analytical depth to measure downstream changes, institutional uptake, or the long-term impact of data services on decision-making processes.

The K4N project demonstrated extensive and strategically targeted **stakeholder engagement**, leveraging a global network of over 1,000 volunteer experts through the IUCN SSC and establishing critical partnerships with the private sector (TNFD, IBAT), and civil society to ensure data credibility and policy uptake. Classified as low-risk, the project's **environmental and social safeguards** were found to be proportionate and appropriate to its digital scope, with significant upstream contributions made by integrating Indigenous Peoples and Local Communities (IPLCs) voices and the principle of Free, Prior and Informed Consent (FPIC) into emerging financial disclosure recommendations. While the project successfully promoted **gender-equitable participation** and elevated women into high-level technical leadership roles, the evaluation noted that certain taxonomic specialist pools remained male-dominated and that the 50/50 gender balance reported for direct beneficiaries was a methodological assumption necessitated by the technical limitations of IP-based website tracking. Overall, no project activities were identified as having disadvantaged women or exacerbated existing gender inequalities.

The table below presents a summary of the overall performance ratings of the K4N Project, based on the standard GEF evaluation criteria.

| Evaluation Criteria                 | Ratings                 |
|-------------------------------------|-------------------------|
| Relevance                           | Highly Satisfactory     |
| Coherence                           | Satisfactory            |
| Effectiveness                       | Satisfactory            |
| Component 1                         | Highly Satisfactory     |
| Component 2                         | Satisfactory            |
| Component 3                         | Moderately Satisfactory |
| Efficiency                          | Satisfactory            |
| Sustainability                      | Moderately Likely       |
| Project Implementation              | Satisfactory            |
| Project Execution                   | Satisfactory            |
| Project M&E (Design)                | Moderately Satisfactory |
| Project M&E (Implementation)        | Satisfactory            |
| Social and Environmental Safeguards | Satisfactory            |

The K4N project generated several interrelated **lessons** relevant to the scaling and sustainability of global biodiversity monitoring systems, as follows:

- Strategic collaboration across scientific institutions, governments, and private-sector actors is fundamental to scaling impact, enabling efficient data exchange and co-development of key metrics such as the RLI and STAR.
- Sustained and growing demand for credible biodiversity data, driven not only by scientific and policy needs but increasingly by private-sector uptake, with frameworks such as the GBF and TNFD create strong incentives for integration into decision-making.



- The transition to automated, technology-driven data systems highlighted the critical role of digital innovation in improving the efficiency, scalability, and real-time usability of biodiversity data services.
- While technological advancements are transformative, their long-term sustainability depends on securing diversified and predictable financing, alongside continued investment in institutional capacity.

## Recommendations:

### 1. Project Design:

- **Continue Expanding and Refining the Marine Layer:** Expand and refine the marine layer through a structured roadmap that increases species coverage, improves habitat and threat data precision, and strengthens integration into global frameworks.
- **Strengthen Institutionalization of SIS Connect Beyond Technical Deployment:** Institutionalize SIS Connect beyond technical deployment by embedding it within national systems through formal partnerships with governments, Red List Authorities, and regional bodies to ensure sustained uptake.  
**Accelerate Technological Integration by Defining Tech Roadmaps Early:** Define and operationalize technology roadmaps at the design stage, with clear timelines for development, piloting, and deployment, aligned with scientific outputs to enable adaptive implementation.
- **Build on Existing Technology and Partnerships:** Build on existing technologies and partnerships by leveraging collaborations (e.g., with academic and technical institutions) to enhance the accuracy, scalability, and application of biodiversity metrics.

### 2. Enhanced Institutionalization and Resource Mobilization:

- **Strengthen GEF uptake and institutionalization of Red List-derived metrics:** Strengthen GEF uptake of Red List-derived metrics by embedding automated RLI and STAR outputs into project screening, prioritization, and portfolio monitoring to improve decision-making and sustain demand for biodiversity data.
- **Diversified Funding Portfolio:** Establish a diversified and sustainable financing model by advancing innovative mechanisms (e.g., corporate, philanthropic, and blended finance), operationalizing the NDPF with clear governance and revenue pathways, and reinvesting proceeds into core Red List processes.

### 3. Leverage Uptake of Project Outputs:

- Implement targeted, in-country capacity-building programs in megadiverse countries to address technical and institutional gaps, focusing on data generation, analysis, and integration of biodiversity metrics into national policy and planning frameworks.

### 4. Gender and Social Inclusion:

- Develop dedicated capacity-building initiatives to strengthen women's participation in technical leadership roles related to biodiversity data systems, species assessments, and metrics development.





## Abbreviations and Acronyms

|         |                                                                                  |
|---------|----------------------------------------------------------------------------------|
| AI      | Artificial Intelligence                                                          |
| AoH     | Area of Habitat                                                                  |
| APAP    | African Protected Areas for People                                               |
| API     | Application Programming Interface                                                |
| ASU     | Arizona State University                                                         |
| AWP     | Annual Work Plan                                                                 |
| BAKT    | Biodiversity Assessment and Knowledge Team                                       |
| BD      | Biodiversity (GEF focal area code)                                               |
| BIOPAMA | Biodiversity and Protected Areas Management Programme                            |
| BLI     | BirdLife International                                                           |
| CBD     | Convention on Biological Diversity                                               |
| CHF     | Swiss Franc                                                                      |
| CMS     | Convention on Migratory Species                                                  |
| COP     | Conference of the Parties                                                        |
| DAC     | Development Assistance Committee                                                 |
| eDNA    | Environmental DNA                                                                |
| EOO     | Extent of Occurrence                                                             |
| EOP     | End of Project                                                                   |
| ESMS    | Environmental and Social Management System                                       |
| FGD     | Focus Group Discussion                                                           |
| FPIC    | Free, Prior and Informed Consent                                                 |
| GBF     | Kunming–Montreal Global Biodiversity Framework                                   |
| GDP     | Gross Domestic Product                                                           |
| GEF     | Global Environment Facility                                                      |
| GEF-7   | Global Environment Facility, Seventh Replenishment                               |
| GIS     | Geographic Information System                                                    |
| IBAT    | Integrated Biodiversity Assessment Tool                                          |
| ICCB    | International Congress for Conservation Biology                                  |
| IFRS    | International Financial Reporting Standards                                      |
| IIFB    | International Indigenous Forum on Biodiversity                                   |
| IPBES   | Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services |





|          |                                                                               |
|----------|-------------------------------------------------------------------------------|
| IPLCs    | Indigenous Peoples and Local Communities                                      |
| ISSB     | International Sustainability Standards Board                                  |
| IUCN     | International Union for Conservation of Nature                                |
| K4N      | Knowledge for Nature                                                          |
| KEQs     | Key Evaluation Questions                                                      |
| KII      | Key Informant Interview                                                       |
| Km       | Kilometer                                                                     |
| LIFE     | UOC's Biodiversity metric referenced alongside STAR; project-specific acronym |
| M&E      | Monitoring and Evaluation                                                     |
| MEL      | Monitoring, Evaluation and Learning                                           |
| NBSAP    | National Biodiversity Strategy and Action Plan                                |
| NDPF     | Nature Data Public Facility                                                   |
| Npj      | Nature Partner Journals                                                       |
| OECD     | Organization for Economic Co-operation and Development                        |
| ODU      | Old Dominion University                                                       |
| PAG      | Project Advisory Group                                                        |
| PIR      | Project Implementation Report                                                 |
| PMU      | Project Management Unit                                                       |
| PSC      | Project Steering Committee                                                    |
| RHINO    | Rapid High-Integrity Nature-Positive Outcomes                                 |
| RLI      | Red List Index                                                                |
| RLU      | Red List Unit                                                                 |
| SDGs     | Sustainable Development Goals                                                 |
| SIS      | Species Information Service                                                   |
| sRedList | IUCN Tool for rapid and effective Red List assessments                        |
| SSC      | Species Survival Commission                                                   |
| STAR     | Species Threat Abatement and Restoration                                      |
| STAR-R   | Species Threat Abatement and Restoration – Restoration component              |
| TNFD     | Taskforce on Nature-related Financial Disclosures                             |
| ToC      | Theory of Change                                                              |
| ToR      | Terms of Reference                                                            |
| UAE      | United Arab Emirates                                                          |

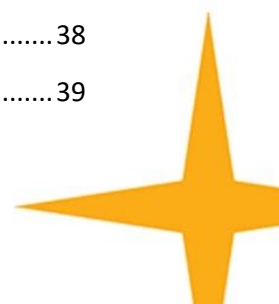


|       |                                                     |
|-------|-----------------------------------------------------|
| UK    | United Kingdom                                      |
| UN    | United Nations                                      |
| UNCCD | United Nations Convention to Combat Desertification |
| USD   | United States Dollar                                |
| UoC   | University of Cambridge                             |
| WEF   | World Economic Forum                                |
| WCC   | World Conservation Congress                         |



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## 1. Introduction and Background

This report presents the findings of the independent final evaluation of “*The Knowledge for Nature (K4N): Provisioning the Biodiversity Data Behind Global Goals*” (commonly referred to as the K4N Project). Commissioned by the International Union for Conservation of Nature (IUCN), this Evaluation assesses the performance, achievements, and lessons of the K4N Project. The Evaluation covers project implementation and aims to inform future decision-making around advancing delivery of global biodiversity species data, and to strengthen ongoing and future global efforts under the K4N Project.

The world is facing an accelerating biodiversity crisis, with current extinction rates estimated to be tens to hundreds of times higher than the average rate over the past 10 million years.<sup>1</sup> The IPBES Global Assessment (2019) reported that approximately 25 percent of species are already threatened with extinction in most animal and plant groups studied.<sup>2</sup> Moreover, of an estimated 8 million animal and plant species, nearly one million species are threatened with extinction, driven largely by land and sea-use change, overexploitation, climate change, pollution, and invasive species.<sup>3</sup> **Addressing this crisis requires reliable, up-to-date, and accessible biodiversity data to inform conservation action, policy decisions, and financial disclosures.** Yet, persistent knowledge gaps remain: many taxa are poorly studied, global monitoring systems lack interoperability, and decision-makers often struggle to access credible, usable information in time to guide action.

**Biodiversity loss is not only a conservation issue but also a profound development and economic challenge.** The degradation of ecosystems undermines food systems, water security, disaster risk reduction, and human health - while undermining progress toward the Sustainable Development Goals (SDGs). The World Economic Forum’s *Global Risks Report 2023* ranked biodiversity loss and ecosystem collapse among the top global risks in terms of likelihood and impact over the next decade.<sup>4</sup> In many low-income countries, natural capital constitutes a significant share of national wealth (close to one third in some cases) and models suggest that ecosystem service collapse could cut real GDP substantially — disproportionately affecting poorer economies.<sup>5,6</sup> Therefore, for many developing countries, the erosion of natural capital could directly threaten livelihoods, exacerbate poverty, and heighten vulnerability to climate change. **Despite these risks, biodiversity continues to be undervalued in economic and policy decision-making, often due to the absence of accessible, trusted, and policy-relevant biodiversity data.**<sup>7,8</sup>

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<sup>1</sup>[https://files.ipbes.net/ipbes-web-prod-public/files/inline/files/ipbes\\_global\\_assessment\\_report\\_summary\\_for\\_policymakers.pdf](https://files.ipbes.net/ipbes-web-prod-public/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf)

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

<sup>4</sup> [https://www3.weforum.org/docs/WEF\\_Global\\_Risks\\_Report\\_2023.pdf](https://www3.weforum.org/docs/WEF_Global_Risks_Report_2023.pdf)

<sup>5</sup> [https://www.worldbank.org/en/topic/environment/publication/changing-wealth-of-nations?utm\\_source](https://www.worldbank.org/en/topic/environment/publication/changing-wealth-of-nations?utm_source)

<sup>6</sup> <https://openknowledge.worldbank.org/bitstreams/9f0d9a3a-83ca-5c96-bd59-9b16f4e936d8/download>

<sup>7</sup>[https://assets.publishing.service.gov.uk/media/602e92b2e90e07660f807b47/The Economics of Biodiversity The Dasgupta Review Full Report.pdf](https://assets.publishing.service.gov.uk/media/602e92b2e90e07660f807b47/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf)

<sup>8</sup> <https://openknowledge.worldbank.org/bitstreams/9f0d9a3a-83ca-5c96-bd59-9b16f4e936d8/download>



A critical barrier to action is the **uneven availability of biodiversity information** across taxa, regions, and ecosystems.<sup>9</sup> While some vertebrate groups have relatively comprehensive assessments, vast gaps persist for invertebrates, fungi, and plants, many of which are fundamental to ecosystem functioning. Similarly, terrestrial ecosystems are better studied than marine and freshwater systems, where biodiversity is declining at alarming rates but remains insufficiently documented. These **asymmetries limit the ability to set effective conservation priorities, assess ecosystem services, and design monitoring systems capable of tracking progress against global and national biodiversity targets.**

Another dimension of the problem is the challenge of **interoperability and timeliness** in biodiversity data systems.<sup>10</sup> Existing datasets are often siloed, use inconsistent methodologies, or lack the technological infrastructure to support integration with emerging policy and financial frameworks.<sup>11</sup> For example, **while the IUCN Red List of Threatened Species is globally recognized as the most authoritative source on species extinction risk, translating its data into metrics usable for businesses, investors, and governments requires substantial technical work.**<sup>12</sup> Without streamlined, automated pipelines and service delivery platforms, the lag between data production and its uptake in decision-making can undermine urgent action on biodiversity loss.

Finally, there are pressing concerns about the **long-term sustainability of global biodiversity knowledge systems** themselves.<sup>13</sup> Maintaining high-quality assessments and updating them at regular intervals requires significant financial and human resources, yet funding has historically been project-based and short-term. At the same time, the conservation science community relies heavily on volunteer experts whose capacity is stretched thin. **Without reliable financing models, expanded use of digital technologies, and systematic investment in capacity, there is a risk that biodiversity data infrastructure will fail to keep pace with the demands** of the Kunming–Montreal Global Biodiversity Framework (GBF), the SDGs, and global disclosure frameworks.<sup>14</sup> Addressing these systemic gaps is therefore fundamental to ensuring that biodiversity knowledge can truly underpin global commitments to halt and reverse nature loss.

## 1.1.About the K4N Project

In response to these pressing challenges, *The Knowledge for Nature (K4N): Provisioning the Biodiversity Data Behind Global Goals For Nature project (GEF ID 10897)* **officially commenced in November 2022 with implementation activities launching in April 2023.** The project is implemented by IUCN, which also serves as one of the executing agencies in collaboration with a consortium of **executing partners** including BirdLife International, Sapienza University of Rome, Re:wild, Old

<sup>9</sup>[https://files.ipbes.net/ipbes-web-prod-public/files/inline/files/ipbes\\_global\\_assessment\\_report\\_summary\\_for\\_policymakers.pdf](https://files.ipbes.net/ipbes-web-prod-public/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf)

<sup>10</sup> [https://tnfd.global/wp-content/uploads/2025/09/250918\\_TNFD-Status-Report\\_DIGITAL.pdf?v=1758808860](https://tnfd.global/wp-content/uploads/2025/09/250918_TNFD-Status-Report_DIGITAL.pdf?v=1758808860)

<sup>11</sup> <https://www.vliz.be/imisdocs/publications/302080.pdf>

<sup>12</sup> <https://www.iucnredlist.org/>

<sup>13</sup>[https://www.researchgate.net/publication/259085247\\_Strategies\\_for\\_the\\_sustainability\\_of\\_online\\_open-access\\_biodiversity\\_databases](https://www.researchgate.net/publication/259085247_Strategies_for_the_sustainability_of_online_open-access_biodiversity_databases)

<sup>14</sup> <https://www.cbd.int/gbf/targets>





Dominion University, Simon Fraser University, and Arizona State University. With **total financing of USD 11.18 million<sup>15</sup>**, K4N was conceived as a systems-level intervention to modernize biodiversity knowledge production, close critical taxonomic and geographic gaps, and ensure that global data infrastructures—most notably the IUCN Red List of Threatened Species—remain scientifically credible, technologically current, and financially sustainable. By tackling these systemic barriers, K4N positioned itself as a cornerstone initiative for the delivery of the GBF, the SDGs, and emerging disclosure frameworks in the finance sector.

K4N’s design was structured around **three interlinked components** that directly targeted the knowledge, interoperability, and sustainability issues outlined earlier.

1. **Component 1: Providing State of the Art Data Services:** aimed to strengthen biodiversity data services by automating and scaling the delivery of core indicators. Key activities include: i) automating the Red List Index (RLI), ii) pioneering the extension of the Species Threat Abatement and Restoration (STAR) metric into marine environments; and iii) tailoring biodiversity metrics for the Taskforce on Nature-related Financial Disclosures (TNFD).
2. **Component 2: Addressing Urgent Knowledge Needs:** focused on filling critical knowledge gaps in under-represented taxa. The project planned to conduct and publish comprehensive Red List assessments for key ecological groups, including goby fishes, chanterelle fungi, and dung beetles, thereby expanding the taxonomic coverage of the IUCN Red List.
3. **Component 3: Strengthening Sustainability:** emphasized the long-term viability of biodiversity knowledge systems. This component focused on: i) investing in digital innovations (such as Artificial Intelligence (AI) and remote sensing), ii) improving tools for assessors (e.g., Species Information Service (SIS) Connect); and crucially, iii) developing a comprehensive resource mobilization strategy to ensure the financial sustainability of the IUCN Red List and its associated data infrastructure.

Therefore, the K4N project aimed to achieve a targeted and strategic response to the systemic shortcomings that undermine global biodiversity action. By enhancing the accessibility, interoperability, and sustainability of biodiversity knowledge, K4N intended to ensure that policymakers, conservation practitioners, and financial institutions alike have access to credible, decision-grade data.

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<sup>15</sup> The K4N project is financed through a GEF project grant of USD 1.83 million and USD 9.35 million in co-financing from partners.



## 1.2. Evaluation Report Structure

Based on the primary and secondary data collection and analysis, and feedback received in the presentation of initial findings, the Evaluation Team has prepared a comprehensive **Draft Evaluation Report** for submission to IUCN and other agencies - with a clearly defined approach, objectives, framework, sampling procedure, work schedule, data collection tools, components evaluated, results, recommendations, conclusions, lessons learned for K4N Project and good practices.

The report begins with preliminary sections, including an **executive summary**, which offers a concise overview of the evaluation's findings, conclusions, and recommendations. The main body of the report starts with an **introduction and background**, providing context on the K4N Project, their objectives, and the broader environmental challenges they aim to address. This is followed by a section detailing the **purpose and scope of the evaluation**, outlining the areas assessed, the geographic and project focus, and the key stakeholders who will use the findings. The **evaluation methodology** is then presented, describing the data collection techniques, stakeholder consultations, sampling strategies, and analytical approaches employed. Additionally, the methodology section highlights key limitations encountered during the evaluation process.

The **findings of the report are structured based on the** OECD/DAC evaluation criteria, covering **relevance, coherence, effectiveness, efficiency, sustainability, and monitoring and evaluation**, as well as additional GEF-specific lines of inquiry, including additionality, co-financing, environmental and social safeguards, gender, stakeholder engagement, and knowledge management. These findings are further organized according to the Key Evaluation Questions in the approved Evaluation Matrix.

Following the findings, the report includes a section on **lessons learned and recommendations** from the implementation of the evaluated initiative, drawing insights into the successes and challenges observed throughout the Project's implementation. The final section of the report consists of **annexes, which provide supporting documentation**.

## 2. Purpose and Scope of the Evaluation

The Final Evaluation, commissioned by IUCN and Global Environment Facility (GEF)<sup>16</sup>, sought to provide an independent and comprehensive assessment of the results and impacts of the K4N Project over its full implementation period, including its no-cost extension through to December 2025. In line with best practices, the Evaluation adhered to the GEF Evaluation Policy (2019)<sup>17</sup> and the IUCN Evaluation Policy (2023)<sup>18</sup>, employing the widely recognized OECD DAC Evaluation criteria: relevance, coherence, effectiveness, efficiency, impact, and sustainability as well as additional GEF-specific lines of inquiry, including additionality, co-financing, environmental and social safeguards, gender, stakeholder engagement, and knowledge management.

<sup>16</sup> The Evaluation was undertaken by a three-member team at Cynosure ([www.cynosure-intl.com](http://www.cynosure-intl.com)), including Ms. Umm e Zia (Team Lead), Ms. Elena Kreuzberg (International Biodiversity Specialist), and Ms. Mahrukh Murad (Evaluation Analyst).

<sup>17</sup> [The GEF Evaluation Policy \(2019\)](#)

<sup>18</sup> [IUCN Evaluation Policy \(2023\)](#)



## 2.1. Project Scope

The Evaluation comprehensively assessed the **project achievements** of the K4N Project, with a focus on its **effectiveness** in strengthening the global delivery of biodiversity data through the IUCN Red List of Threatened Species. Specifically, it examined the project's success in enhancing state-of-the-art data services, such as the automated RLI and the marine STAR metric for conservation decision-making, addressing urgent biodiversity knowledge gaps by expanding datasets for underrepresented species and ecosystems, and ensuring the long-term sustainability of biodiversity data systems through innovative technologies and strategic planning.

In addition, the Evaluation assessed how the project's approach fostered **synergies** among IUCN, executing partners, and global initiatives such as the TNFD, the Integrated Biodiversity Assessment Tool (IBAT), and national Red List initiatives via SIS Connect, and how these collaborations have enhanced the project's **contribution to global policy frameworks**, including the GBF, National SDGs and the Biodiversity Strategies and Action Plans (NBSAPs).

Furthermore, the Evaluation explored how technical innovations, institutional partnerships, and knowledge management mechanisms have reinforced both the quality of biodiversity data and its uptake in policy, finance, and conservation action.

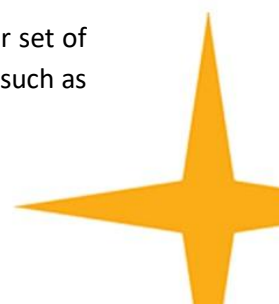
## 2.2. Geographic Scope

The K4N Project was global in scope, with implementation spanning both international-level biodiversity data systems and targeted national applications. The project is implemented through a network of executing partners based in **Switzerland**, the **United States**, **Canada**, the **United Kingdom**, and **Italy**, and has supported national-level engagement focused on strengthening the interoperability of national Red Lists with the global system in countries including **Brazil**, **Cuba**, **Greece**, **New Caledonia**, **South Africa**, and **Turkey**. The Evaluation Team conducted a thorough assessment across these contexts, where project activities such as Red List assessments, STAR metric development, national Red List interoperability, and biodiversity data integration into policy and finance frameworks have been advanced. In doing so, the Evaluation accounted for the diverse ecological, institutional, and socio-economic contexts of these countries, while contributing to international biodiversity targets.

## 2.3. Intended Users of the Evaluation

The **primary intended users** of the final Evaluation are the **project's governance and management bodies**, including IUCN, particularly the Multilateral Finance Unit, the K4N executing partners— IUCN Science team, BirdLife International, Sapienza University, Re:wild, Old Dominion University, Simon Fraser University, and Arizona State University, University of Cambridge, Newcastle University, Species Survival Commission (SSC), and SSC Dung Beetle Specialist Group—and the GEF Secretariat. The Evaluation results will inform their future decision-making regarding the continuation, scaling up, or replication of biodiversity data-related interventions, and will provide lessons to strengthen the design of future GEF project proposals. Additionally, the findings will contribute to enhancing the implementation and sustainability of global biodiversity data systems, including the IUCN Red List and associated tools.

**Secondary users**, who will benefit from the Evaluation findings and lessons, include a broader set of stakeholders including national and local government representatives, private sector entities such as



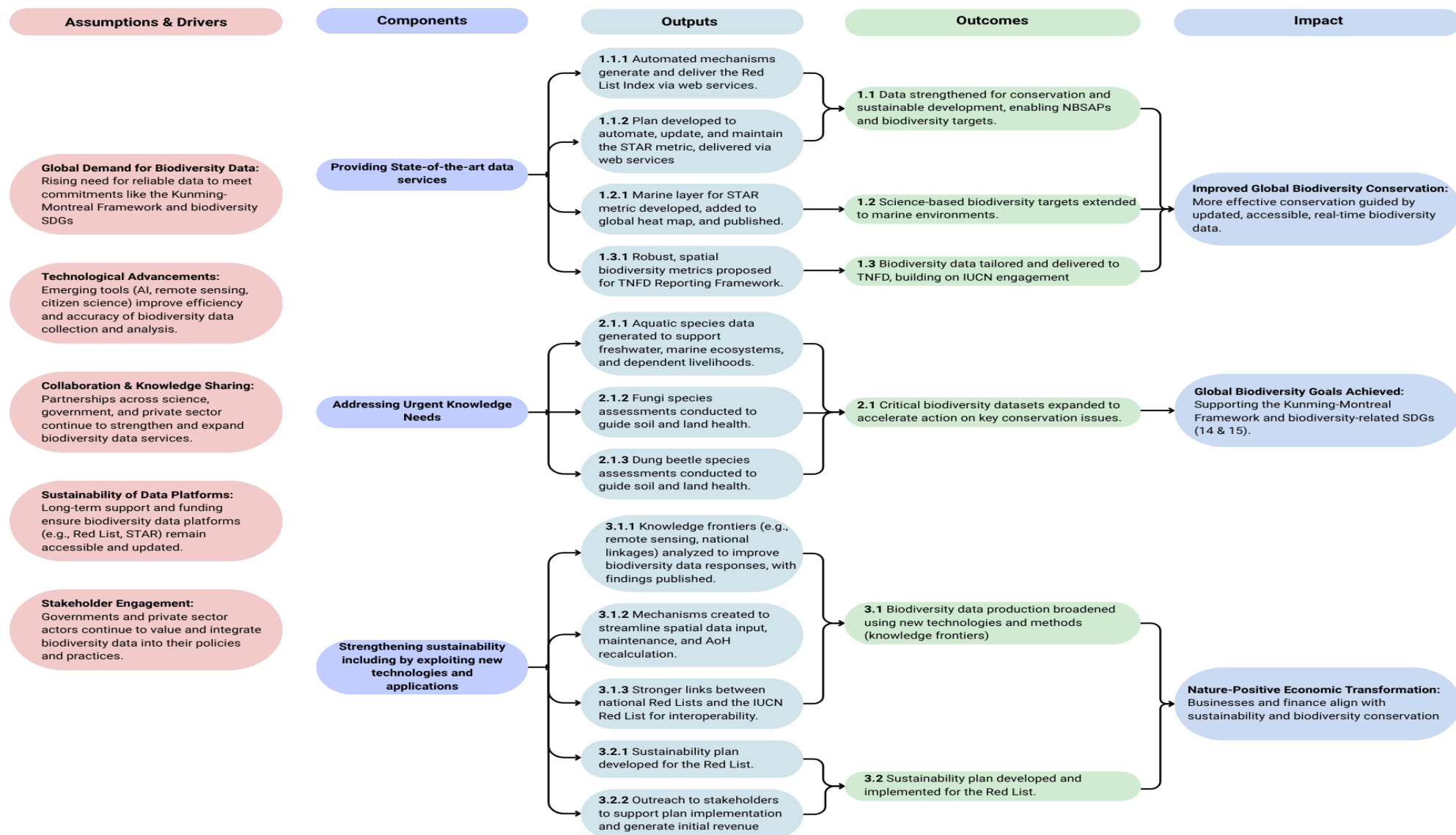
IBAT subscribers and TNFD stakeholders, civil society organizations, and the broader conservation and research community that benefits from the project's outputs.

### 3. Theory of Change

The project documents do not contain a fully articulated Theory of Change (ToC); therefore, this Evaluation has used a reconstructed ToC to test the causal pathways and underlying assumptions of the project's design. The reconstructed ToC diagram for the K4N Project, as illustrated in Figure 1, has been created by the Evaluation Team after carefully reviewing project documentation.



Figure 1: K4N Project Theory of Change



The K4N project was **designed in response to** the urgent need for comprehensive, accessible, policy-relevant biodiversity data to guide global conservation and sustainable development agendas. The project's core logic responds to several **critical barriers**:

- **Limited accessibility and robustness of biodiversity data:** Existing biodiversity metrics and platforms are often outdated, fragmented, or difficult to access. With fewer than 25% of assessed species having undergone repeat assessments, decision-makers cannot rely on consistent evidence for planning or reporting.
- **Underrepresentation of key taxonomic groups and ecosystems:** Taxa such as fungi, invertebrates, and many freshwater and marine species remain poorly assessed, creating blind spots in global and national biodiversity strategies.
- **Weak integration into policy and financial frameworks:** Although biodiversity data exist, they are insufficiently mainstreamed into decision-making by governments, financial institutions, and the private sector. Mechanisms like the Red List Index and STAR metric require automation and dynamic updating to meet policy and investment needs at scale.
- **Technical and financial sustainability challenges:** Maintaining and expanding the Red List requires significant and recurring investment, yet funding has historically relied heavily on philanthropy and volunteer labor. Without a long-term resource mobilization strategy, the Red List risks being underfunded.
- **Insufficient uptake of new technologies:** Tools such as remote sensing, AI, and environmental DNA hold great potential for scaling biodiversity assessments but remain underutilized in Red List operations.

The K4N ToC **envisioned** a world where biodiversity data is up-to-date, scientifically robust, and readily available for integration into decision-making across policy, finance, and practice. To achieve this, the K4N project was structured around three mutually reinforcing components, each with specific outputs designed to produce nature positive outcomes.

## Pathway 1: Providing State-of-the-Art Data Services (Component 1)

The first component aimed to provide state-of-the-art data services by **modernizing and automating the delivery of biodiversity data**, thereby ensuring it was timely, accessible, and reliable for decision-makers. This pathway was designed to achieve three key outcomes. **Outcome 1.1** focused on strengthening data availability for decision making, supported by outputs that automate the generation of the **RLI and STAR metrics**. To broaden the applicability of these tools, **Outcome 1.2** extended science-based targets to marine environments by developing a **marine layer for the STAR** metric. Finally, **Outcome 1.3** tailored these biodiversity metrics for the **TNFD**, facilitating the integration of biodiversity data into financial decision-making. By successfully achieving these outcomes, this component aimed to directly contribute to the overall project objective of making biodiversity data more convenient and interoperable for key platforms and users, empowering them with the accurate, up-to-date information needed for informed conservation and financial investments.

## Pathway 2: Addressing Urgent Knowledge Needs (Component 2)





The second component addressed urgent knowledge needs by **expanding and completing critical biodiversity datasets**, which is captured in **Outcome 2.1**. The project's activities focused on conducting and publishing Red List assessments for underrepresented but ecologically vital taxonomic groups, specifically goby fishes, fungi, and dung beetles. By filling these significant knowledge gaps, this pathway ensured the IUCN Red List becomes a more comprehensive and representative tool for global biodiversity monitoring. This directly supported the project's overall objective by strengthening the core dataset that underpins all other data services. A more complete Red List allows for more targeted and effective conservation actions, enhancing the ability of governments and conservation organizations to address biodiversity loss in ecosystems that have historically been overlooked.

### **Pathway 3: Strengthening Sustainability through New Technologies and Applications (Component 3)**

The third component was designed to ensure the long-term sustainability and scalability of biodiversity data systems by leveraging emerging technologies and developing a comprehensive sustainability plan for the IUCN Red List. This pathway pursued two primary outcomes. **Outcome 3.1** broadened the production of high-quality data by exploring new "knowledge frontiers" such as **AI and remote sensing**, and by enhancing the **interoperability between national and global Red Lists**. Building on this, **Outcome 3.2** focused on developing and implementing a long-term **sustainability plan for the Red List**, which secured financial and institutional support for its ongoing operation. Together, these outcomes ensured the project provided a reliable and lasting solution for biodiversity data, securing its future as a critical tool for global monitoring and contributing to the overall objective of a sustainable and comprehensive data delivery system.

These pathways were underpinned by several critical **assumptions** that were proven true during the Evaluation:

1. **Global Demand for Biodiversity Data:** Governments, organizations, and the private sector will continue to recognize the need for reliable and up-to-date biodiversity data to meet international commitments such as GBF and SDGs.
2. **Technological Advancements:** Emerging technologies like AI, remote sensing, and citizen science will significantly enhance the efficiency, accuracy, and scalability of biodiversity data collection and analysis.
3. **Collaboration and Knowledge Sharing:** Strong partnerships with scientific institutions, governments, and the private sector will be essential in expanding and strengthening biodiversity data services and ensuring their integration into global conservation efforts.
4. **Sustainability of Data Platforms:** The Red List and other biodiversity data platforms will secure long-term funding and support to maintain their relevance, accessibility, and continued updates.
5. **Stakeholder Engagement:** Ongoing engagement from key stakeholders, including national governments, conservation organizations, and private sector actors, will ensure that biodiversity data is integrated into decision-making processes across sectors.

The K4N ToC outlined a clear pathway to achieving global conservation impact by improving biodiversity data. By providing reliable, up-to-date data, the project enabled governments, the private sector, and civil society to make informed, science-based decisions.



## 4. Evaluation Methodology

The Evaluation employed a **theory-based, consultative, and participatory approach** designed to assess the Project's intervention logic within the framework of its theory of change. This approach integrated both **qualitative and quantitative data** (where available), entailing a thorough analysis of the Project's **relevance, coherence, effectiveness, efficiency, impact, and sustainability**. Throughout the Evaluation, stakeholders representing a range of organizational levels — including implementing agency, lead executing agency, executing partners, and beneficiaries — were actively involved. Given the Project's global scope, data collection was conducted primarily through remote methods.

The Evaluation was conducted in accordance with the ethical standards of GEF and IUCN. Key ethical considerations, including informed consent, confidentiality, inclusivity, and independence, are detailed in [Annex 1](#).

### 4.1. Sampling and Data Collection

Stakeholder consultation was central to the Evaluation process. The Evaluation Team collaborated closely with IUCN to identify a comprehensive list of informants, ensuring representation from key Project beneficiaries, executing partners, donors, and project coordination units.

A **purposive sampling strategy** was employed to capture diverse perspectives from the wide range of stakeholders involved in the K4N Project. The sampling approach, developed in close consultation with IUCN, ensured balanced representation across the Project's diverse stakeholder groups spanning governance, implementation, and beneficiaries. **Interviewee selection criteria** prioritized depth of involvement and organizational variety, ensuring that feedback reflected the full spectrum of participants and stakeholders.

To capture this breadth of perspectives, the Evaluation Team also employed several **data collection methods: a comprehensive desk review, Key Informant Interviews (KIIs), and beneficiary interviews**. The **data collection tools** used for these methods are provided in [Annex 2](#). A desk review of core Project documents provided essential background and context, drawing on PIRs, Monitoring and Evaluation (M&E) frameworks, and work plans. This review was instrumental in identifying key themes and informing the design of data collection tools. A detailed list of documents reviewed are provided in [Annex 3](#).

KIIs formed a core part of the data collection, with a total of **15** interviews with **21** participants conducted remotely ensuring representation across all stakeholder categories, including the donor, implementing agency, lead executing agency and key executing partners. These interviews, conducted with a semi-structured format, allowed for in-depth exploration of stakeholder perspectives on Project implementation and outcomes. These discussions enabled beneficiaries to share their experiences, challenges, and perceived Project benefits, exploring themes such as stakeholder engagement and the sustainability of interventions. The table below provides a summary of the number of participants interviewed, categorized by the stakeholder group.

Table 1: Stakeholder Interview Summary

| Stakeholder Group | Stakeholders | No. of Interview(s) |
|-------------------|--------------|---------------------|
| Donor             | GEF          | 1                   |





| Stakeholder Group                   | Stakeholders                                             | No. of Interview(s) |
|-------------------------------------|----------------------------------------------------------|---------------------|
| <b>Project Advisory Group (PAG)</b> | K4N Project Advisory Group                               | 1                   |
| <b>Lead Executing Agency</b>        | IUCN – Biodiversity Assessment and Knowledge Team (BAKT) | 1                   |
|                                     | IUCN - Science                                           | 1                   |
|                                     | IUCN – Business and Nature                               | 1                   |
|                                     | IUCN – Economy and Finance                               | 1                   |
| <b>Implementing Agency</b>          | IUCN – Multilateral Finance Unit                         | 1                   |
| <b>PMU</b>                          | PMU                                                      | 1                   |
| <b>Executing Partners</b>           | BirdLife International (BLI)                             | 1                   |
|                                     | Old Dominion University (ODU)                            | 1                   |
|                                     | University of Cambridge (UoC)                            | 1                   |
|                                     | Newcastle University                                     | 1                   |
| <b>Additional Partners</b>          | IBAT                                                     | 1                   |
|                                     | Support to National Governments via SIS                  | 1                   |
| <b>Beneficiaries</b>                | TNFD                                                     | 1                   |
|                                     | <b>Total</b>                                             | <b>15</b>           |

A detailed list of people interviewed is provided in [Annex 4](#).

This mix of consultation formats enabled stakeholders to provide insights into the challenges and successes of Project implementation, contributing critical perspectives that informed the Evaluation's findings. The diverse input gathered was instrumental in identifying key issues, validating preliminary results, and refining the evaluation conclusions.

## 4.2. Data Management and Analysis

The Evaluation Team applied a structured and secure approach to data management, ensuring that the quality and integrity of data collected through various channels were maintained. Following each Key Informant Interview and Beneficiary Interview, data was promptly transcribed, anonymized, and securely stored on a centralized platform accessible only to the Evaluation Team. To facilitate comprehensive analysis, qualitative data was categorized by themes aligned with the Evaluation criteria.

Qualitative analysis followed a thematic approach, where responses were systematically coded and categorized according to the Evaluation questions. Triangulation was employed as a key method to validate findings across multiple data sources, ensuring reliability and accuracy in the interpretation of results. This process enabled the Evaluation Team to cross-check insights from the desk review, KIs and beneficiary interviews, identifying recurring themes, unique insights, and any outliers.

## 4.3. Key Limitations

The Evaluation encountered several limitations that may have impacted the findings presented in this report. These limitations are detailed below and should be considered when interpreting the Evaluation findings.



1. **Interview Modality:** The data collection was **remote**, limiting the ability to conduct in-person interviews and directly observe project contributions. Nonetheless, this limitation had a minimal impact on the comprehensiveness of the findings, as a wide range of stakeholder perspectives were captured across regions.

2. **Limited Response from Indirect Beneficiaries:** The project implementation did not directly engage beneficiaries, such as institutions and those at the country-level. This constrained the Evaluation's ability to directly capture beneficiary perspectives on project implementation, ownership, and contextual relevance. To address this challenge, the Evaluation Team relied on project documentation, reports, and interviews with implementing partners to infer country-level engagement and outcomes. In addition, the Evaluation Team interviewed stakeholders involved in providing support to indirect beneficiaries, e.g. TNFD and IBAT (supporting private sector) and experts responsible for supporting national governments via the SIS, which offered insights into country-level engagement and use of project outputs. The Evaluation Team also examined the utilization trends of the project outputs, for instance the availability of national Red Lists and the integration of national Red Lists into the global system, as proxies for country-level involvement.

## 5. Evaluation Findings – K4N Project

This section presents the detailed findings from the evaluation of the K4N Project, structured around the key evaluation questions. The findings of the report are structured based on the **OECD/DAC** evaluation criteria, covering relevance, coherence, effectiveness, efficiency, impact, sustainability, and monitoring and evaluation, as well as additional **GEF-specific lines of inquiry**, including additionality, co-financing, environmental and social safeguards, gender, stakeholder engagement, and knowledge management. Additionally, key lessons learned from the Project are discussed, and recommendations are provided accordingly. [Annex 5](#) provides a detailed Evaluation Matrix used in the assessment of the K4N Project.

### 5.1 Additionality

#### KEQ 1: To what extent has the project demonstrated additionality as a result of GEF support?

The K4N Project delivered clear additionality through its structure, financial inputs, and institutional coordination. While IUCN and its partners had longstanding mandates to maintain the Red List and related biodiversity knowledge products, **GEF financing enabled a step-change in scope, speed, and systemic integration that would not have occurred otherwise**. While many of the project's workstreams existed as research-based academic exercises, GEF support provided the continuity and strategic impetus needed to institutionalize these tools into production-ready digital services.

#### KEQ 2: In which specific areas has GEF support contributed to additional results beyond what would have occurred otherwise?

**GEF support was additional in three critical areas. First**, it enabled the transformation of core global indicators, most notably the RLI and the STAR metric, from largely manual, expert-driven products into automated, reproducible, and policy-embedded data services, including APIs and on-demand recalculation pipelines. Stakeholders confirmed that this “back-office” automation and systems modernization was not fundable through routine institutional budgets and required catalytic, risk-tolerant financing. **Second**, GEF financing allowed the expansion of Red List coverage into



systematically underrepresented domains, including marine species (via the first global marine STAR layer), fungi, dung beetles, and gobioid fishes, substantially advancing taxonomic and realm completeness beyond business-as-usual trajectories. **Third**, GEF support enabled direct alignment of biodiversity data with global policy and finance frameworks, including SDG reporting and the TNFD, embedding Red List-derived metrics into decision-making processes that would otherwise have relied on proxies or incomplete data.

Furthermore, GEF support contributed to the **first-ever sustainability and resource mobilization strategy** for the IUCN Red List by addressing the structural preconditions that had previously constrained long-term financial planning. Prior to the project, Red List operations were characterized by fragmented, short-cycle funding tied to assessments rather than to core data infrastructure, limiting the feasibility of articulating a credible sustainability model. These changes enabled IUCN to move from reactive fundraising toward strategic financial planning, underpinning the development of a dedicated sustainability and resource mobilization strategy with diversified revenue streams. In this sense, the sustainability strategy represents a downstream institutional outcome of GEF-funded risk reduction and capacity building, rather than a stand-alone planning exercise.

Importantly, GEF support to the project directly reinforces the GEF's operational architecture under the **GEF-8 cycle**. Through automation of the RLI, harmonization of AoH layers, and development of a recalculable, multi-realm STAR infrastructure, K4N equips the GEF with **spatially explicit, policy-ready biodiversity metrics** for investment screening, prioritization, and portfolio-level monitoring. The GEF Secretariat has already initiated processes to generate polygon-level spatial data for supported projects and to calculate STAR values for each project footprint, an approach that explicitly builds on K4N outputs. This strengthens the GEF's capacity to quantify extinction-risk reduction potential, systematically compare investment options using standardized biodiversity metrics, and aggregate measurable contributions toward GBF implementation. In this regard, the GEF is not only a funding partner but a direct institutional beneficiary of K4N's enhanced data infrastructure.

### KEQ 3: What quantitative and qualitative evidence supports the assessment of additionality

Quantitative evidence of additionality includes: the establishment of automated RLI and STAR pipelines nearing full operationalization; the completion of over 1,000 new goby fish assessments, 500 fungal assessments, and 500 dung beetle assessments; publication of knowledge products in peer-reviewed literature; and formal uptake of RLI outputs into SDG global reporting and associated databases. Qualitatively, stakeholders emphasized that GEF support provided the integrating platform that linked fragmented partner efforts, mobilized over USD 9.4 million in co-financing, and de-risked innovations (e.g., automation, multi-realm STAR integration) that partners could not have advanced independently or sequentially.

In sum, GEF financing was limited yet but **catalytic**, enabling systemic improvements in global biodiversity knowledge infrastructure, accelerating coverage of neglected taxa and realms, and embedding biodiversity metrics into international policy and finance architectures in ways that would not have occurred, or would have occurred far more slowly and partially, in the absence of GEF support.



## 5.2 Relevance

**KEQ 4: To what extent are the K4N project's objectives and design responsive to the environmental and development priorities of the participating stakeholders (GEF, IUCN, executing partners, beneficiaries etc.)?**

The Evaluation assessed the Relevance of the K4N Project by examining its alignment with global, regional, and national priorities, as well as its responsiveness to the needs of key stakeholders, including donor, implementing and lead executing agency, executing partners and intended beneficiaries.

The K4N Project was found to be **highly relevant to global biodiversity priorities**. By strengthening the delivery, quality, and accessibility of data derived from the IUCN Red List of Threatened Species, K4N worked towards improved evidence-based decision-making that is essential for the effective implementation and monitoring of major global biodiversity commitments. Notably, the project design was responsive to the needs of the Convention on Biological Diversity (**CBD**), the Post-2020 **GBF** - particularly Goals A and B and targets aimed at reducing threats to biodiversity and halting species decline, and the **Paris Agreement** and emerging disclosure mechanisms including the **TNFD**. In addition, the project outcomes contributed to indicator needs under the UN Convention to Combat Desertification (**UNCCD**) and support reporting systems linked to the Convention on Migratory Species (**CMS**) and the **Ramsar Convention**. The project also supported needs associated with the Sustainable Development Goals (SDGs), particularly **SDG 14** (Life Below Water) through improved marine and freshwater species data and **SDG 15** (Life on Land), including indicator 15.5.1 derived from the Red List Index.

The project is aligned with the strategic priorities of the **GEF** under the **GEF-7 Biodiversity Focal Area**, particularly BD-1 and BD-2. K4N directly responds to the GEF's mandate to generate **global environmental benefits** by strengthening the world's most authoritative dataset on species extinction risk, the **IUCN Red List of Threatened Species**, and by improving derivative knowledge products such as STAR and Area of Habitat (AoH) layers. These advances also support the implementation of **IUCN's Nature 2030 Programme**, which calls for digital platforms to track contributions to global biodiversity targets, and strengthen IUCN's institutional capacity to provide authoritative, accessible biodiversity data to a broad community of users.

Although global in scope, the project holds significant relevance at the **regional level**. The improved data supports and complements ongoing regional initiatives, including those facilitated by IUCN (such as **BIOPAMA** and **APAP**), by providing standardized and updated species information that can be incorporated into regional analyses and planning tools. At the **national level**, K4N is directly relevant to helping countries meet their biodiversity planning and reporting obligations under the **CBD**, particularly through support for the establishment, tracking, and verification of **NBSAPs** and national reports.

**KEQ 5: Do the project's objectives and intended results remain relevant at the time of project completion?**

The objectives and intended results of the K4N project remain **highly relevant** at the time of project completion.

The continued demand for core project outputs, such as Red List data and the STAR metric, underscores the enduring utility of K4N's intended results. The STAR metric has matured into a



dynamic tool for assessing conservation impact, attracting growing interest from both national governments and private sector actors for informing spatial prioritization and threat abatement strategies. Demand from the market is quantified by the substantial co-financing generated through the private sector's use of Red List and STAR data via the IBAT, which generated \$833,000 for the IUCN Red List in 2024 and 2025. Moreover, the project enhanced the relevance of STAR by publishing the marine STAR methodology, extending science-based targets to marine environments and leading to the development of a new unified layer that incorporates marine, terrestrial, freshwater, and reptile species, ensuring comprehensive global coverage.

In addition to the continued relevance of its data products, K4N remains highly relevant due to its contributions to improving the methodological quality and sustainability of IUCN Red List assessments and derived metrics. The project supported systematic methodological advances, including improved backcasting procedures to distinguish genuine from non-genuine category changes, more consistent application of Red List criteria across taxa, and the standardization of AOH workflows across terrestrial, freshwater, and marine realms. These advances have increased the accuracy, comparability, and transparency of extinction risk assessments, while reducing methodological bias that previously limited the interpretability of trends such as the RLI.

In conclusion, the K4N Project demonstrated strong relevance across global, regional, national, and institutional levels. The Project aligns global biodiversity priorities with key international frameworks, including the CBD, GBF, and the SDGs, with strategic priorities of the donor, implementing and lead executing agency, and executing partners. By strengthening the quality, accessibility, and methodological robustness of core biodiversity datasets and metrics (notably the IUCN Red List, RLI, and STAR), the Project has addressed critical gaps in biodiversity monitoring and decision support. K4N's ongoing impact is further solidified through its integration into financial frameworks, advancing global biodiversity conservation efforts.

### 5.3 Coherence

**KEQ 6: How coherent is the K4N Project design, demonstrating both internal alignment through a practical and logical approach to addressing targeted environmental concerns and external compatibility by incorporating lessons from past interventions and aligning with the activities and strategies of participating stakeholders, relevant sectors, institutions, and development partners to ensure effective targeting for global environmental benefits?**

The K4N Project exhibited strong overall coherence, rooted in a practical and logical approach to overcoming systemic barriers hindering effective global biodiversity conservation and monitoring.

The project's results framework was generally well aligned with its activities and intended outcomes, providing a coherent structure linking the three components to the overall objective of strengthening the delivery of global biodiversity data. The internal coherence was ensured by the **synergistic relationship** between data generation and technological enhancement across Components 1 and 3. The newly published global freshwater fauna assessment (Component 2) provides the foundational data necessary to create a new unified Species Threat Abatement and Restoration (STAR) layer that incorporates marine, terrestrial, freshwater species, and reptiles (Component 1). Furthermore, Component 3 focused on leveraging cutting-edge technologies to ensure the efficiency and scalability of these data products. While the results framework was sufficiently robust to guide implementation and monitor progress, a limitation of the results framework was that some indicators were either not





SMART, primarily output-focused, and/or did not systematically measure downstream data uptake or use.

The project demonstrated strong **external coherence** by aligning its core functions with global policy frameworks and cross-sectoral development strategies. K4N is explicitly positioned to advance goals and targets of the GBF, including Goal A (reducing extinction risk) and Target 15 (disclosure), as well as supporting SDGs 14 and 15. The success in embedding the enhanced RLI, which now features national and regional disaggregation, into the 2025 SDG Annual Report and Database highlights this direct policy uptake and credibility. Moreover, the work is intrinsically linked to the broader IPBES Nexus Assessment, demonstrating the critical role of biodiversity data in addressing interconnected challenges related to water, food, health, and climate change, thereby maximizing synergistic outcomes for multiple global goals. A key aspect of external compatibility was also the project's strategic engagement with the private sector through the TNFD (Outcome 1.3), which tailors biodiversity data for non-state actors focused on nature-related financial risks.

The project was strategically targeted at both a taxonomic and geographic level to maximize global environmental benefits. **Taxonomically**, it prioritized filling critical gaps in the Barometer of Life by assessing underrepresented and highly threatened groups, such as freshwater fish (gobies), fungi (chanterelles), and dung beetles. These groups are not only significantly under-assessed in the IUCN Red List but also provide essential ecological functions and indicators for freshwater and soil ecosystem health, thereby strengthening the comprehensiveness and policy relevance of global biodiversity indicators. **Geographically**, while the scope was global, the project purposefully engaged several countries including Brazil, Cuba, Greece, New Caledonia, Turkey, South Africa, and Uganda to refine national-to-global data interoperability through **SIS Connect**. Importantly, the project's targeting was also user-driven rather than location-bound. By prioritizing globally applicable data products, such as automated RLI pipelines, the STAR metric, and API-enabled data services, the project ensured that outputs could be used across multiple policy and decision-making contexts, including NBSAPs, SDG reporting, and private-sector disclosure frameworks such as TNFD.

The K4N design was influenced by lessons learned from decades of Red List maintenance and previous pilot initiatives. A pre-project strategic review identified that while IUCN data was the "gold standard," it suffered from a computational bottleneck and fragmented delivery mechanisms<sup>19</sup>; this lesson directly shaped the project's heavy emphasis on automation and centralized informatics. The design of TNFD engagement (Outcome 1.3) builds on IUCN's strategic collaboration with emerging nature-related disclosure frameworks, contributing scientifically robust biodiversity metrics (e.g., Red List and STAR) to inform corporate reporting<sup>20</sup>. Additionally, the inclusion of a formal Sustainability Plan (Outcome 3.2) reflects learning from the historically fragmented and project-based financing of the IUCN Red List, characterized by insufficient long-term investment and a reliance on partner contributions and co-financing arrangements<sup>21</sup>. The Sustainability Plan therefore represents a deliberate shift toward structured resource mobilization, recognizing that global public goods such as the Red List require predictable, diversified, and institutionalized funding models to ensure long-term viability and scalability. The project also leveraged a robust collaborative network, including the IUCN Red List Partnership and academic institutions, ensuring essential technical and scientific expertise

<sup>19</sup> K4N Project Document, p. 15, 20 and 55.

<sup>20</sup> K4N Project Document, p. 22 and 55.

<sup>21</sup> K4N Project Document, p. 28 and 51.



was mobilized. This approach builds on the historical evolution of the Red List, which has relied on a wide partnership model to mobilize taxonomic expertise, validate assessments, and ensure scientific credibility at scale.

#### KEQ 7: What socioeconomic synergies and trade-offs are associated with the project design?

The design of the K4N Project generated **significant socioeconomic synergies** by strengthening foundational biodiversity knowledge to inform crucial decision-making across public and private spheres, directly addressing the global biodiversity crisis that negatively impacts communities, economies, and overall well-being. The project aimed to operationalize this by producing essential data services and expanding taxonomic coverage to accelerate conservation action. A key planned benefit was **improving global capacity to monitor and achieve large-scale policy objectives**, including those with socio-cultural and socio-economic implications. For instance, by generating comprehensive extinction risk assessments for previously underrepresented freshwater fauna (decapods, fishes, odonates), K4N aimed to provide evidence crucial for policy and investment decisions for safeguarding aquatic environments, which support the culture, economy, and livelihoods of billions worldwide. Furthermore, efforts focused on fungi and dung beetles provide data to guide soil and land health, which is vital for sustainable agriculture practices and rural livelihoods, aligning with broader socioeconomic goals like addressing food security and poverty.

Another notable area of socioeconomic synergy is the proactive **engagement with the financial sector** through the TNFD and the development of the STAR metric. By aligning the provision of robust, scientifically anchored, and spatially explicit biodiversity metrics with the TNFD Reporting Framework, K4N aimed to integrate nature into enterprise and portfolio risk management, shifting financial flows away from nature-negative outcomes. The implementation model also featured a unique internal revenue synergy: commercial use of Red List and STAR data through the IBAT provides substantial co-financing to the IUCN Red List (e.g. \$833k in 2024–2025), supporting the long-term sustainability of the data infrastructure itself.

However, the pursuit of these broad socioeconomic objectives involved inherent **trade-offs and structural challenges**. While engagement with the private sector for financial sustainability is a clear strategy, the project documents noted a reputational risk to IUCN arising from this engagement, although efforts such as running the service through IBAT mitigate this risk.

In conclusion, the K4N Project was built on lessons learned from previous initiatives and demonstrated a high degree of internal and external coherence, addressing key challenges in global biodiversity data generation, delivery, and sustainability. Through its strategic design and integration of data production, technology, and sustainability mechanisms, it ensures that investments lead to system-wide improvements rather than isolated outcomes. The project demonstrated significant socioeconomic relevance by translating biodiversity data into actionable intelligence for global policy and decision-making. Its alignment with international frameworks and market actors promoted long-term sustainability, while leveraging innovation and partnerships to maximize the societal value of GEF investments. Despite some structural challenges, the project remained a pivotal contributor to global biodiversity efforts.





## 5.4 Effectiveness

This section provides an assessment of the effectiveness of the K4N Project. This includes an analysis of the extent to which the K4N Project delivered on its outcomes and outputs; and the factors that affected the delivery of outputs and outcomes across the three components of the K4N Project.

### **KEQ 8: To what extent has the project successfully delivered its key planned outputs as a foundation for achieving its intended outcomes?**

While tracking results presented in the results framework, the Evaluation Team has consolidated the project's effectiveness, supplemented by findings from the desk review of project documentation and interviews with IUCN staff key executing partners, and the beneficiaries of the project. Overall, in alignment with its intended design, the project improved global biodiversity data delivery through the IUCN Red List by automating the Red List Index, extended science-based targets to marine environments, completed critical species assessments, and advanced the integration of biodiversity data for private sector uptake while developing a sustainability mechanism for long-term data maintenance.

#### Component 1: Providing state-of-the-art data services

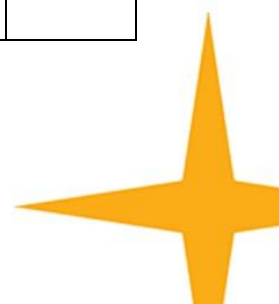
Component 1 of the K4N project aimed to enhance global biodiversity data availability, focusing on RLI and STAR metrics. It intended to improve decision-making in conservation, extend science-based targets to marine environments, and integrate biodiversity data into financial frameworks. The key indicators of success for this component include the: i) completion of an automated RLI pipeline, ii) development of STAR recalculation mechanisms, iii) publication of the marine STAR layer, and iv) integration of biodiversity metrics into the TNFD frameworks, enabling comprehensive tracking of biodiversity risks and impacts.

As illustrated in Table 2, the project has made significant progress under Component 1, with all outputs having been fully achieved.

Table 2: Progress Table for Component 1 of K4N Project

| Outcomes                                                                                                                                                                                     | Outputs                                                                                                                                                    | Indicators                                                                                 | Baseline                                              | EOP Target                                                          | Progress <sup>22</sup> | Progress Rating |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------|------------------------|-----------------|
| <b>Component 1: Providing state-of-the-art data services</b>                                                                                                                                 |                                                                                                                                                            |                                                                                            |                                                       |                                                                     |                        |                 |
| 1.1 Data availability is strengthened for decision making in conservation and sustainable development, facilitating the establishment, tracking and verification of NBSAPs and science-based | 1.1.1 Mechanisms are built and implemented to automatically generate the Red List Index on demand and serve it through web services to relevant platforms. | The number of mechanisms that exist to automatically generate and serve the Red List Index | No mechanism exists to automatically generate the RLI | One mechanism for automatically generating the RLI on demand exists | 100%                   | HS              |
|                                                                                                                                                                                              | 1.1.2 Development and implementation of plan for automated re-calculation                                                                                  | The existence of an implemented plan for updating and serving STAR                         | No mechanism exists to automatically update STAR      | One mechanism for automatically                                     | 100%                   | HS              |

<sup>22</sup> As of 31<sup>st</sup> December, 2025.



| Outcomes                                                                                                                                                | Outputs                                                                                                                                         | Indicators                                                                                                       | Baseline                                                                                              | EOP Target                                                                             | Progress <sup>22</sup> | Progress Rating |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------|-----------------|
| targets for biodiversity.                                                                                                                               | updating, and maintaining Species Threat Abatement and Restoration metric and serving it through webservices to relevant platforms such as IBAT |                                                                                                                  |                                                                                                       | generating STAR exists                                                                 |                        |                 |
| 1.2 Science-based targets for species biodiversity are extended to marine environments.                                                                 | 1.2.1 A marine layer is developed for the STAR metric, incorporated into the global heat map and published in the literature.                   | Whether or not the STAR metric is extended to marine environments                                                | STAR is limited to terrestrial biomes, and no marine layer exists for STAR                            | One marine layer for STAR developed.                                                   | 100%                   | HS              |
| 1.3 Biodiversity data is tailored for and served to the Task Force on Nature Related Financial Disclosure (TNFD), building on IUCN engagement with TNFD | 1.3.1 Robust, scientifically anchored and spatially explicit biodiversity metrics are proposed for inclusion in the TNFD Reporting Framework    | Proposal of robust, scientifically anchored spatially explicit metrics for inclusion in TNFD Reporting Framework | No spatially explicit scalable global biodiversity metrics incorporated into TNFD reporting framework | Alignment between the emerging TNFD approach and IUCN's global datasets and standards. | 100%                   | HS              |

One of the primary objectives of the project was to develop and operationalize an **automated RLI pipeline (Output 1.1.1)**, a critical tool for tracking global biodiversity trends. This pipeline has seen substantial progress, with key achievements in both the technical infrastructure and the quality of the data provided. Notably, the validation of RLI data for birds, amphibians, and mammals was completed in collaboration with leading partners, including BirdLife, Re:wild, and Sapienza University.

A major technical milestone was the **shift from R to Python coding** for the RLI pipeline, which not only improved the technical efficiency but also facilitated the **incorporation of new species groups, including marine species and freshwater fauna**, significantly expanding the scope of the Red List data. The development of API endpoints has been instrumental in making RLI data more accessible on demand. These **API integrations allow real-time access to RLI data**, supporting a wide range of users from government agencies to private sector companies who rely on this data for biodiversity monitoring, risk assessment, and reporting. The ability to provide RLI data through web services enhances the tool's operational use, ensuring that global frameworks like GBF and SDG reporting can access the most up-to-date information for decision-making.

Moreover, **geographical disaggregation of metrics** has significantly improved the timeliness and consistency of biodiversity indicators. This is particularly crucial for national reporting under



frameworks such as NBSAPs, which require localized data to track progress toward biodiversity targets. By enabling detailed reporting by region, the automated RLI system has strengthened the monitoring capabilities of countries and international organizations, ensuring that they have access to accurate, current, and globally comparable biodiversity data.

While the complexity of the underlying work contributed to some delays, particularly with the integration of new data layers and the initial rollout of the automated system, **the pipeline was fully operationalized by the project's conclusion**. This successful completion has greatly improved the speed and accuracy of biodiversity reporting, ensuring that indicators such as the RLI can be updated and analyzed with minimal manual intervention. This, in turn, directly supports global conservation efforts by providing timely insights into trends in extinction risk, which can be used by policy makers, conservation organizations, and the private sector to inform biodiversity conservation strategies and actions.

The **automated re-calculation, updating, and maintaining of STAR (Output 1.1.2)** has also been a central focus of the project. The project successfully addressed a major computational bottleneck by developing **software to abstract STAR calculations from spatial rasters into sparse matrices**<sup>23</sup>. This shift has significantly increased computational efficiency, allowing for the recalculation of the metric at a much higher - 1km spatial resolution without relying on unsustainable super-computing resources. This advancement in computational efficiency and scalability ensures that the STAR metric can provide high-resolution, real-time biodiversity data with broader accessibility, democratizing access to critical biodiversity information, and enabling more localized and inclusive conservation efforts.

A key element of this achievement lies in the **technical integration with IBAT**, which is a direct consumer of Output 1.1.2. IBAT played an essential role in **transitioning STAR from a static file to a dynamic pipeline, delivered via API**. The IBAT team was deeply involved in defining the technical requirements for the STAR API and rigorously testing the usability of the newly introduced 1km spatial resolution layers from a business user perspective. This collaboration was instrumental in the successful launch of the updated STAR layer at the World Conservation Congress, which now includes new taxonomic groups such as reptiles and marine species.

Furthermore, under **Output 1.2.1**, the project was successful in developing a **marine STAR layer**. According to stakeholders interviewed, the completion of the marine STAR layer has significantly enhanced the understanding of marine species' threats and conservation needs, directly supporting the achievement of science-based biodiversity targets. Initial progress on integrating marine species into the global STAR map was slower than anticipated, owing to the complexity of harmonizing terrestrial and marine datasets and to interlinked technical dependencies—most notably, the delivery of the dynamic STAR metric being contingent upon the completion of Output 3.1.2 (automated generation of AoH maps). However, **a unified global STAR layer, combining data from marine, terrestrial, freshwater, and reptile realms, has been completed**, which is a powerful tool for guiding conservation actions across ecosystems. Within this output, the project also **advanced Restoration STAR (STAR-R)**, a component designed to identify specific areas where habitat restoration can most effectively reduce global species extinction risk<sup>24</sup>. While the marine threat abatement layer is robust, the marine STAR-R component currently remains focused on mangrove-associated species due to the global lack of historical time-series remote sensing for other marine habitats<sup>25,26</sup>.

<sup>23</sup> K4N – Quarterly Review Meeting (Dec 2025), p.4.

<sup>24</sup> <https://www.nature.com/articles/s44183-023-00040-8>, p.2.

<sup>25</sup> <https://www.nature.com/articles/s44183-023-00040-8>, p.7.

<sup>26</sup> Newcastle Interim Technical Report to IUCN's K4N, p.1.



The **marine STAR methodology was published** in *Nature Ocean Sustainability*, marking a significant milestone in the project's success. This publication outlines how marine species' threats, particularly overfishing, are quantified and mapped, setting a precedent for science-based targets that incorporate both marine and terrestrial conservation needs. **In addition to its ecological value, the marine STAR framework has been instrumental in enhancing partnerships** with organizations including IBAT and the TNFD. To make these metrics actionable for the private sector, the project emphasized Calibrated STAR, which allows users to verify global "estimated" scores by confirming the actual presence of species and the severity of threats at a specific site using locally relevant data, thus playing a significant role in Environmental Impact Assessments and Strategic Environmental Assessments<sup>27</sup>. **The development of an automated recalculation pipeline, coupled with an API for dynamic data delivery, has made STAR more accessible and scalable, aligning with both global conservation goals and private sector engagement.** This robust data service infrastructure is crucial for long-term sustainability and for enabling stakeholders to make real-time, data-driven decisions.

The project has also made notable progress in **adapting biodiversity data for the TNFD (Output 1.3.1)**. One of the key achievements of the project is its successful integration of scientifically rigorous, spatially explicit biodiversity metrics, such as species extinction risks and ecosystem impacts, into the TNFD framework. Stakeholders interviewed described this as a pivotal development. Despite initial hesitance to incorporate data on living nature into TNFD's framework, K4N's collaboration led to the **integration of IUCN Red List-based metrics into nature-related financial disclosures**, significantly strengthening the framework's analytical depth and overall reliability.

**K4N played a critical role in the development of the Nature Data Public Facility (NDPF)**, which is expected to provide the infrastructure for integrating these biodiversity metrics into global conservation and financial decision-making frameworks. Through this initiative, K4N supported IUCN's advocacy for a sustainable licensing model, ensuring the continuous development of high-quality biodiversity data while maintaining free access for non-commercial users. Although still in development, the NDPF, launched at COP16, aims to provide stakeholders with enhanced access to biodiversity data, thereby improving their capacity to assess and mitigate nature-related risks. To operationalize these metrics for business use, **the project supported the development of the RHINO (Rapid High-Integrity Nature-Positive Outcomes) framework**. While technically independent, RHINO is heavily informed by K4N outputs and uses the STAR metric as its core engine to provide a step-by-step process for stakeholders to measure their contributions to nature-positive outcomes.

The establishment of **TNFD-IBAT guidance pages** further strengthens this integration, enabling commercial users to leverage Red List and STAR data to identify "sensitive locations" within their value chains, thereby enhancing their ability to assess and mitigate nature-related risks. By aligning IUCN's Red List data with the TNFD framework and developing these guidance pages, the project has created a robust, spatially explicit set of biodiversity metrics that guide financial institutions in integrating biodiversity considerations into their risk assessments. This integration is essential for improving the flow of biodiversity data between conservation and financial sectors, fostering a more comprehensive approach to sustainability reporting. Moreover, according to stakeholders, the expansion of the STAR metric to marine environments is especially important to users, as the TNFD's framework now covers nature across land, ocean, freshwater, and the atmosphere, providing a more comprehensive tool for users across sectors to assess the full scope of nature-related financial risks.

IUCN's advocacy for the inclusion of state-of-nature metrics in TNFD frameworks is an important step (and an ongoing process) toward ensuring that biodiversity is fully considered in global financial decision-making. As a result of this collaboration, over 700 organizations, many of which are impactful

<sup>27</sup> <https://www.nature.com/articles/s44183-023-00040-8>, p.6.



players in the private sector and represent more than \$22 billion in assets under management and \$9 billion in market capitalization<sup>28</sup>, now utilize the improved biodiversity metrics integrated into their financial risk assessments<sup>29</sup>. The growing adoption of the TNFD framework is further underscored by its integration into global standards, including the International Sustainability Standards Board (ISSB) under the IFRS Foundation, significantly amplifying its impact in shaping nature-related financial disclosures worldwide<sup>30</sup>. This widespread adoption, reflected in more than 500 publicly available reports<sup>31</sup> aligned with TNFD's recommendations, signifies that the K4N project's enhancements to biodiversity data are playing a critical role in linking economic activities with nature conservation and shaping more comprehensive, nature-positive decision-making across sectors.

In conclusion, Component 1 of the K4N project successfully enhanced global biodiversity data availability, focusing on RLI and STAR metrics, which were critical for informing conservation decisions and integrating biodiversity into financial frameworks. Key achievements include the operationalization of an automated RLI pipeline, the development of STAR recalculation mechanisms, and the creation of a marine STAR layer, all of which improved the timeliness, accuracy, and accessibility of biodiversity data. The project also made significant progress in adapting these data for use in the TNFD framework, fostering broader integration of biodiversity considerations into global financial risk assessments. Through innovations like API integrations, Component 1 has established a robust, scalable infrastructure for sustainable biodiversity data delivery, with its outputs playing a vital role in supporting global conservation goals and enabling informed, data-driven decision-making.

## Component 2: Addressing urgent knowledge needs

Component 2 of the K4N project focuses on addressing urgent knowledge gaps in biodiversity, specifically through expanding critical datasets for key taxonomic groups. It aims to improve data availability for species that are underrepresented or require immediate conservation attention. The key indicators of success for this component include the completion of assessments for goby fishes, fungi species, and dung beetles.

As illustrated in Table 3, all three outputs under this component achieved 100% implementation. Specifically, Output 2.1.1, which focuses on generating data for aquatic ecosystems, has seen 1,035 goby fish assessments completed and published. Output 2.1.2, involving fungi species assessments, is fully achieved, with 500 assessments finalized. Additionally, Output 2.1.3, focusing on dung beetles, has seen 500 assessments published.

Table 3: Progress Table for Component 2 of K4N Project

| Outcomes                                            | Outputs                                                 | Indicators                      | Baseline                                      | EOP Target                                    | Progress <sup>32</sup> | Progress Rating |
|-----------------------------------------------------|---------------------------------------------------------|---------------------------------|-----------------------------------------------|-----------------------------------------------|------------------------|-----------------|
| Component 2: Addressing urgent knowledge needs      |                                                         |                                 |                                               |                                               |                        |                 |
| 2.1 Critical biodiversity datasets are expanded for | Output 2.1.1 Data for species in aquatic ecosystems are | Number of fish species assessed | 12,000 marine fishes published on RL website; | 13,000 marine fishes published on RL website; | 100%                   | HS              |

<sup>28</sup> <https://tnfd.global/tnfd-release-recommendations-for-upgrading-nature-data-for-market-participants/>

<sup>29</sup> Since K4N biodiversity indicators are included in the TNFD recommendations, all firms that adopt these recommendations utilize the improved biodiversity metrics and integrating them into their financial risk assessments.

<sup>30</sup> <https://tnfd.global/issb-decision-on-nature-related-standard-setting-drawing-on-tnfd-framework/>

<sup>31</sup> <https://tnfd.global/publication/tnfd-2025-status-report/>

<sup>32</sup> As of 31<sup>st</sup> December 2025.





| Outcomes                                                      | Outputs                                                                                                           | Indicators                             | Baseline                                             | EOP Target                                           | Progress <sup>32</sup> | Progress Rating |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------|-----------------|
| accelerated action on issues of highest conservation concern. | generated to support the safeguard of freshwater and marine environments and the livelihoods that depend on them. |                                        | 11,000 freshwater fishes published on the RL website | 11,777 freshwater fishes published on the RL website |                        |                 |
|                                                               | Output 2.1.2 Fungi Species assessments are undertaken to guide soil and land health                               | Number of fungi species assessed       | 550 fungi published on the RL website                | 1050 fungi published on the RL website               | 100%                   | HS              |
|                                                               | Output 2.1.3 Dung beetle species assessments are undertaken to guide soil and land health.                        | Number of dung beetle species assessed | 750 dung beetles on the RL website                   | 1250 dung beetles on the RL website                  | 100%                   | HS              |

In terms of expanding critical biodiversity datasets, the project has made substantial and strategically coherent progress in addressing long-standing taxonomic and geographic gaps that undermined the representativeness of global biodiversity data in the past. Under Component 2, over 2,000 species assessments have been completed or advanced, with a particular focus on historically underrepresented groups.

**Output 2.1.1** delivered particularly high strategic value: **the completion of over 1,000 goby fish assessments has substantially improved Red List coverage for marine and freshwater systems** that have historically been underrepresented. In particular, the assessment of gobies significantly enhances data coverage in global biodiversity hotspots such as the Coral Triangle, where small-bodied, range-restricted species play a critical role in ecosystem functioning but have previously been poorly represented in global datasets<sup>33</sup>. In addition, targeted freshwater fish assessments concentrated in South America and China strengthened coverage in major river basins facing intense pressures from hydropower development, pollution, and land-use change<sup>34</sup>. This expanded and geographically focused evidence base improves the robustness of spatial prioritization, extinction-risk analysis, and the derivation of policy-relevant biodiversity indicators for some of the world's most biologically rich and threatened aquatic regions. The scale, taxonomic coherence, and policy relevance of this output indicate strong effectiveness, especially given its direct applicability to global indicators and emerging marine biodiversity commitments.

**Output 2.1.2** has been effective in advancing the **inclusion of fungi in global assessments, addressing a long-standing taxonomic bias in the Red List**. The output delivered 500 targeted fungal species assessments, with a particular focus on ecologically significant but data-poor regions such as the Congo Basin and southern–eastern Africa, where fungi play a critical role in forest structure, nutrient cycling, and ecosystem resilience<sup>35</sup>. However, its effectiveness has been partially constrained by longer

<sup>33</sup> K4N GEF Project Document, p.24.

<sup>34</sup> Ibid.

<sup>35</sup> K4N GEF Project Document, p.25.



assessment and publication timelines, high reliance on a small pool of specialist expertise, and the fact that downstream uptake and use of fungal Red List data in policy and planning remain nascent.

**Output 2.1.3** has similarly expanded **knowledge of dung beetles, producing 500 assessments that contribute valuable information on soil health, ecosystem functioning, and land-use impacts.** While scientifically robust, its effectiveness has been moderated by slower-than-anticipated expert review processes and certain delays encountered in assessing dung beetles due to the need to train and guide a newly formed IUCN SSC specialist group for this taxon.

In summary, Component 2 of the K4N project successfully addressed urgent knowledge gaps in biodiversity by expanding critical datasets for underrepresented taxonomic groups. Key achievements include the completion of over 2,000 species assessments, with notable progress in goby fish, fungi, and dung beetles, significantly enhancing global biodiversity coverage. The project strengthened data for critical regions like the Coral Triangle and the Congo Basin, improving spatial prioritization and extinction-risk analysis. While some outputs faced delays and challenges in expert reviews, the overall effectiveness was substantial in advancing availability of policy-relevant biodiversity data for conservation needs.

#### Component 3: Strengthening sustainability including by exploiting new technologies and applications

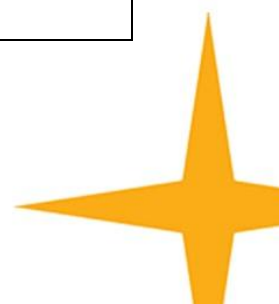
Component 3 of the K4N project focuses on enhancing the sustainability of the Red List and improving the use of advanced technologies for biodiversity data management. The main objectives were to broaden the production of high-quality biodiversity data by integrating new technologies such as AI, remote sensing, and spatial data automation, and to develop a long-term sustainability plan for the Red List.

As illustrated in Table 4, progress across the key outputs under Component 3 of the evaluation framework demonstrates substantial advancement, with most outputs nearing full completion. Specifically, Output 3.1.1, which focuses on the incorporation of knowledge frontiers, has been fully completed, achieving 100%. Likewise, Output 3.1.2, which involves the development of mechanisms for streamlining processes, is also fully achieved at 100%. Similarly, Output 3.1.3, which aims to strengthen connections between national and international biodiversity frameworks, has reached 100% completion. However, Output 3.2.1, related to the development of a sustainability plan for, reached 90% completion, and Output 3.2.2, concerning outreach to selected stakeholders in support of the sustainability plan, similarly achieved 90%. These outputs did not reach full implementation by the conclusion of the project, though they made significant progress toward their intended goals. Overall, the component achieved a high level of success, with minor gaps remaining in the final stages of the sustainability-related activities.

Table 4: Progress Table for Component 3 of K4N Project

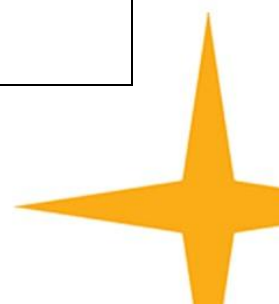
| Outcomes                                                                                                   | Outputs                                                                            | Indicators                                                           | Baseline                                                                   | EOP Target                                                           | Progress <sup>36</sup> | Progress Rating |
|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------|-----------------|
| <b>Component 3: Strengthening sustainability including by exploiting new technologies and applications</b> |                                                                                    |                                                                      |                                                                            |                                                                      |                        |                 |
| 3.1 The production of high-quality biodiversity data is broadened by exploiting new                        | 3.1.1 Incorporation of knowledge frontiers (eg. remote sensing, national linkages, | Number of scoping reviews for incorporating knowledge frontiers into | No scoping review exists for the incorporation of knowledge frontiers into | One scoping review submitted for publication that analyses knowledge | 100%                   | HS              |

<sup>36</sup> As of 31<sup>st</sup> December, 2025.





| Outcomes                                        | Outputs                                                                                                                                   | Indicators                                                                               | Baseline                                                                                                                                                                | EOP Target                                                                                                                                                                                                                                              | Progress <sup>36</sup> | Progress Rating |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------|
| technologies and methods (knowledge frontiers). | etc.) analysed to catalyse more efficient responses to biodiversity species data demands, and scoping review published in the literature. | species data provisioning                                                                | species data provisioning                                                                                                                                               | frontiers for more effecting species data provisioning                                                                                                                                                                                                  |                        |                 |
|                                                 | 3.1.2 Mechanisms developed for streamlining input of spatial information, maintenance and recalculation of AoH                            | Existence of AoH on Red List species pages                                               | No system available to automatically generate current or historical AoH maps from distribution data. No AoH maps on RL website                                          | Automated system for generating current and historical AoH maps for one 'type' of dataset (e.g. terrestrial polygons) produced. Current and historical AoH maps for terrestrial mammals and birds made available on the RL website                      | 100%                   | S               |
|                                                 | 3.1.3 Strengthened connections between national red lists and the IUCN Red List of Threatened Species to allow interoperability.          | Number of countries using the SIS systems to undertake assessments and manage their data | SIS connect does not allow editing of data, and does not allow automated import of national RL data. Limited functionality across RLTS systems to support NBSAP process | Improved SIS Connect tool that allows automated import and editing of National RL data With 'self-assessment' for encouraging adoption of IUCN RL standards. New functions to allow national users to generate and download into SIS Connect Nationally | 100%                   | S               |



| Outcomes                                                                 | Outputs                                                                                                                   | Indicators                                                                                                                          | Baseline                                                                       | EOP Target                                                                                                                  | Progress <sup>36</sup> | Progress Rating |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------|
|                                                                          |                                                                                                                           |                                                                                                                                     |                                                                                | relevant species data                                                                                                       |                        |                 |
| 3.2 Development and implementation of a sustainability plan for Red List | 3.2.1 Sustainability plan developed for the Red List                                                                      | Number of Sustainability Plans developed for the Red List                                                                           | No Sustainability plan for the Red List                                        | Sustainability plan developed for the Red List                                                                              | 90%                    | MS              |
|                                                                          | 3.2.2 Outreach to selected stakeholders in support of implementation of the plan, generating initial incremental revenue. | Whether or not the total Red List income generated against the Sustainability plan is reported to the Red List Governance Structure | Reporting on total RL income generated not reported to RL governance structure | Reporting, annually on income generated against projected income required to meet the target set in the Sustainability plan | 90%                    | S               |

The project explored and integrated new technologies and methods for data production, a critical component for addressing the increasing demand for up-to-date biodiversity data (**Outputs 3.1.1, 3.1.2 and 3.1.3**). **Collectively, these outputs have been effective in modernizing the technical foundations of Red List data production and use, addressing long-standing structural constraints rather than delivering isolated tools.**

**Output 3.1.1** aimed to strategically integrate emerging technologies to modernize and streamline the IUCN Red List assessment process, addressing key challenges in data scalability, efficiency, and accuracy. As outlined in Table 5, central to this output were activities that focused on exploring AI, remote sensing, and automated spatial analyses to enhance biodiversity conservation and improve the Red List assessment process. The events engaged a diverse range of stakeholders, including academic researchers, conservation experts, IUCN entities, and government representatives. Additionally, technology sector experts, private sector partners, foundations, NGOs, and marginalized communities such as IPLCs were involved, with an emphasis on collaborative efforts for advancing biodiversity and conservation technology.

These events fostered critical knowledge exchange and beneficial partnerships for the K4N Project. In particular, through the **Red List Technology Workshop**, the project secured a strategic partnership with the UoC Computing Department, which delivered a vital in-kind contribution of large-scale computing capability and technical expertise. This accelerated the production of AoH maps and STAR calculations, helping transition these tools from research pipelines into production-ready digital services.



Table 5: Key Events in Integrating Emerging Technologies

| Event Name                                                    | Location            | Year | Focus                                                                                                                                                                                                                                                |
|---------------------------------------------------------------|---------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ICCB 2023 Symposium                                           | Kigali, Uganda      | 2023 | A major symposium was convened to discuss specific topics such as AI, remote sensing, modeling, and the flow of data between national and global systems.                                                                                            |
| "AI for Biodiversity: Overcoming Barriers to Impact" Workshop | Virtual             | 2024 | Addressed challenges in applying AI to biodiversity conservation practices.                                                                                                                                                                          |
| Red List Technology Workshop                                  | Cambridge, UK       | 2025 | Focused on integrating AI, remote sensing, eDNA, and cloud computing to overcome assessment bottlenecks and improve data scalability, with the development of an "SIS Intelligence Suite" for real-time consistency checks and bulk data processing. |
| ICCB 2025 Workshop on STAR Metric                             | Brisbane, Australia | 2025 | Focused on the practical application of the STAR metric to improve conservation efforts.                                                                                                                                                             |
| IUCN WCC 2025 Workshop                                        | Abu Dhabi, UAE      | 2025 | Focused on leveraging new technologies to enhance the impact of the IUCN Red List in biodiversity conservation.                                                                                                                                      |

The activities under this output demonstrated the **methodological feasibility of using AI-powered tools**, such as Assessment Accelerators and Conservation Analytics Engines, which aim to significantly speed up the assessment process while maintaining the scientific rigor required for global biodiversity monitoring<sup>37</sup>. These innovations promise to enhance the reproducibility and scalability of Red List assessments, enabling the efficient processing of vast data streams. Importantly, they contribute to closing the gap between cutting-edge research and operational Red List practice, facilitating the timely incorporation of new scientific knowledge into biodiversity conservation strategies.

**While AI integration into biodiversity data services has shown promise, it remains fraught with challenges.** Key stakeholders interviewed cautioned that one major issue is the risk of deploying AI tools built on weak or incomplete datasets, which could compromise the scientific rigor of the Red List and associated metrics. This concern is further highlighted by instances where AI-driven attempts to process Red List data have led to significant inaccuracies, including recent attempts by AI companies to scrape Red List data resulted in a 60% inaccuracy rate. Such outcomes emphasize the need for robust, verified data and careful validation before fully relying on AI to automate critical conservation assessments. Therefore, **while Output 3.1.1 made significant strides in enhancing biodiversity data services through the integration of emerging technologies like AI, remote sensing, and spatial data automation, its effectiveness is hindered by AI's current limitations**, including the inability to transparently justify its results, a critical barrier that distinguishes it from traditional scientific data grounded in expert-verified methodologies.

**Output 3.1.2** represents one of the most technically consequential achievements of the project: automation of AOH mapping, which previously acted as a major bottleneck for the Red List<sup>38</sup>. Stakeholders noted that prior to the project, AOH methods were largely confined to academic research; however, the project established a standardized analytical workflow that processes land cover and elevation data to generate habitat-specific maps for tens of thousands of species. The incorporation of current and historical AOH into Red List workflows has significantly strengthened analytical rigor, enabled downstream automation (notably for STAR), and reduced reliance on manual

<sup>37</sup> IUCN Red List Technology Workshop (Cambridge, 2025) – Workshop Report

<sup>38</sup> K4N GEF Project Document, p.35.



GIS processing. Its effectiveness is nonetheless partially constrained by interdependencies with other outputs, particularly STAR automation and SIS 3.0 redevelopment, which slowed full operationalization. Despite this, the output has clearly **shifted the Red List towards a more scalable and reproducible spatial data pipeline, marking a structural improvement** rather than an incremental gain.

**Output 3.1.3**, which aimed to strengthen connections between national and international biodiversity frameworks demonstrated significant impact. A notable achievement of this output was the substantial enhancement of the sRedList platform, an innovative, user-centric web-based tool developed to streamline the IUCN Red List assessment process. This platform addresses several key challenges in species extinction risk assessment, primarily by standardizing the workflow and bridging the gap between research and its practical application in conservation. **By integrating advanced technologies, sRedList facilitates critical tasks such as generating accurate range maps, identifying countries of occurrence, and assessing habitat preferences.** sRedList's ability to compute essential parameters like Extent of Occurrence (EOO), AOH, and population trends relies on sophisticated spatial data and remote sensing products, allowing for a more granular understanding of species' distribution and conservation status. The platform's design, which guides users through a step-by-step process, ensures accessibility for individuals without GIS or programming expertise, thus democratizing the use of complex analytical tools. Furthermore, the platform includes features that automate the generation and updating of range maps, calculate population fragmentation, and track trends in habitat loss—further improving the consistency and efficiency of the assessment process. These capabilities are especially important for monitoring biodiversity in large, often data-sparse regions where traditional methods would be time-consuming or infeasible. By prioritizing species for reassessment, sRedList effectively addresses the challenge of outdated or Data Deficient species, helping to maintain the Red List's relevance and accuracy.

**The enhancement of the sRedList platform has had a profound impact on the SIS and its Connect module by introducing streamlined, automated processes for generating and updating data.** Acting as a prototype for future IUCN data systems, sRedList has been instrumental in shaping the development of SIS 3.0, ensuring the seamless integration of its design principles and technical innovations into the next generation of the system. By enabling assessors to generate "SIS-ready" outputs directly from the platform, sRedList significantly reduces data entry time and increases the consistency and accuracy of species assessments. The integration of geospatial tools allows assessors to conduct complex spatial analyses. These capabilities are being integrated into the SIS geospatial module, helping to modernize the assessment system. Furthermore, the standardization of outputs from sRedList has enabled faster data processing and smoother uploads to the SIS through SIS Connect, facilitating more timely and consistent Red List assessments across taxonomic groups.

**SIS Connect significantly strengthened the links between national Red Lists and the global IUCN Red List by streamlining and standardizing the process of data exchange.** The portal enabled countries to convert their national biodiversity data into formats that complied with IUCN's guidelines, conduct validation checks, and directly publish assessments to the global Red List database. This integration proved particularly advantageous for countries such as Brazil, South Africa, Turkey, New Caledonia and Greece, where national systems were either still under development or in need of coordination<sup>39</sup>. According to stakeholders interviewed, the SIS Connect was utilized by South Africa to export data for national processes, while Greece leveraged it to publish both national assessments and global assessments, despite not having a fully developed national database. By facilitating a two-way data exchange, SIS Connect fostered real-time interoperability between national and global systems, promoting collaboration not only within a country but also between neighboring regions. This system

<sup>39</sup> K4N PIR (2025), p.18.



enhanced data accuracy and efficiency, ensuring that biodiversity data was more accessible and reliable, thus contributing to the creation of a more integrated and comprehensive global biodiversity dataset.

While the early adoption of SIS Connect in a small number of countries demonstrates proof of concept, effectiveness at scale remains limited by uneven national capacity, competing national systems, technical guidance, and sustained engagement, which were only partially addressed within the project's scope. As such, this output has laid necessary groundwork, but its full effectiveness will depend on post-project follow-through.

Finally, effectiveness is reinforced by the project's contribution to long-term sustainability (Outputs 3.2.1 and 3.2.2). Output 3.2.1 has been effective in addressing one of the most fundamental risks to the Red List: chronic under-financing of a global public good. **The development of the first comprehensive sustainability plan represents a qualitative shift from ad hoc fundraising towards strategic, long-term financial planning.** Its effectiveness lies not only in the plan itself, but in its integration with system modernization and private-sector engagement, aligning technical outputs with a viable financial model. However, the plan's ultimate effectiveness will depend on sustained institutional commitment and governance decisions beyond the project lifecycle.

**Output 3.2.2** has reinforced this trajectory by translating planning into early, tangible results. Securing significant co-financing from private sector partners (approximately \$9.4 million) and the IBAT innovation fund (\$833K) demonstrates the credibility of the sustainability strategy and reduces immediate financial risk. That said, early revenue generation remains modest relative to the scale of long-term needs: for instance, in 2023, IUCN generated approximately \$15 million in donations, while the Red List Strategic Plan 2024–2030 has set a \$100 million fundraising goal<sup>40</sup>. The sustainability strategy's dependence on commercial and philanthropic streams introduces exposure to external market and policy fluctuations. Therefore, the sustainability strategy developed can best be characterized as an effective catalyst rather than a complete solution. However, these efforts are crucial for ensuring the long-term viability and accessibility of the IUCN Red List.

In conclusion, Component 3 of the K4N project successfully modernized the Red List by integrating emerging technologies such as AI, remote sensing, and spatial data automation, significantly improving the efficiency, scalability, and accuracy of biodiversity data management. Key achievements include the automation of AoH mapping, the development of the sRedList platform, and the establishment of SIS Connect, which strengthened links between national and global biodiversity frameworks. The project also made progress in securing long-term financial sustainability through obtaining co-financing and the development of a draft resource mobilization strategy. However, effective implementation of the finalized strategy will be crucial for resource mobilization going forward.

#### **KEQ 9: What factors affected the delivery of outputs, outcomes, and progress toward impact? And how did the project deal with these constraints?**

The delivery of outputs, outcomes, and progress toward impact in the K4N project was influenced by interdependencies between key activities and outputs. These interdependencies played a critical role in shaping the overall timing of the project's deliverables.

<sup>40</sup> Resource Mobilization Strategy (2024), p. 2 and 3.



The key interdependencies between various project outputs have had both operational challenges and transformative strategic impacts. The automation of the Red List Index (Output 1.1.1) was interdependent with parallel assessment projects in Component 2. For example, RLI calculations were delayed because of revised timelines, emphasizing the interdependency between the index and data from specific taxonomic groups.

The most critical technical dependency lies between Output 1.1.2 (STAR automation) and Output 3.1.2 (AoH mechanisms), as the STAR metric relies on AoH maps for spatial input. The transition of STAR from a static research product to a dynamic, near-real-time service was dependent on automating the AoH pipeline. Similarly, the delivery of Output 1.2.1 (Marine STAR layer) was contingent upon Output 3.1.2, as standardized methods for generating marine AoH had to be developed to integrate the marine realm into a unified global STAR heatmap, harmonized with terrestrial and freshwater realms. The tailoring of data for the TNFD (Outcome 1.3) also heavily relied on technical advancements in Outputs 1.1.2 and 3.1.2 to ensure that the spatially explicit data required by the financial sector was based on the most current, automated calculations rather than outdated static files. Another interdependency was observed in sustainability planning, where Output 3.2.2 (Outreach and revenue generation) was directly dependent on the completion of Output 3.2.1 (Sustainability Plan). Outreach efforts to secure incremental revenue required the prior identification of business models and funding targets in the plan.

These interdependencies led to operational impacts, resulting in slower-than-anticipated progress and operational bottlenecks. Consequently, the project required a no-cost extension to December 2025 to harmonize these complex data pipelines across different ecosystems. While these interlinkages initially delayed delivery, they ultimately catalyzed a transformative structural shift from fragmented, manual processing to a centralized, automated decision-support infrastructure that ensures the long-term sustainability and scalability of global biodiversity indicators like the RLI and STAR.

#### **KEQ 10: Were there any unintended consequences, both positive and negative, resulting from the actions of the Project?**

The K4N project has made significant progress in enhancing biodiversity data services and supporting global conservation goals, leading to two key unintended positive consequences.

Firstly, while the primary goal of Output 3.1.3 was to enhance the integration of national and global biodiversity data systems, an unintended but highly positive consequence has been the broader development and enhancement of the sRedList platform. This platform, initially created to support Red List assessors, inadvertently became a pivotal tool for the redevelopment of the SIS by introducing streamlined, automated processes for data generation and updating. By enabling the production of "SIS-ready" outputs directly from sRedList, the platform contributed to an acceleration in data processing and uploads to SIS, facilitating faster and more consistent global assessments. Additionally, sRedList's geospatial tools, initially designed for Red List workflows, have been integrated into the SIS geospatial module, contributing to a more modernized and efficient assessment process. This outcome, which was not initially anticipated, has greatly strengthened the overall capacity of SIS, directly supporting the project's broader objectives of data interoperability and real-time biodiversity monitoring.

A second unintended but impactful consequence resulted from the partnership between the University of Cambridge (UoC) and the K4N project. Within UoC, this collaboration aligned with the development of the LIFE project, a high-resolution, spatially explicit framework designed to quantify the impacts of land-use change on species extinction risk. The partnership between the UoC and the





K4N project catalyzed significant advancements in both computational infrastructure and ecological expertise, benefiting both the STAR and LIFE metrics. UoC's in-kind contribution of advanced computing power and technical proficiency fast-tracked the generation of AoH maps and STAR calculations, transforming STAR from a research pipeline into a production-ready service, operational in the Red List Unit's production environment. This collaboration streamlined data processing, improving efficiency through a faster pipeline while ensuring methodological rigor by validating AoH outputs against existing R-based systems, establishing consistency across platforms.

For the LIFE project, the partnership accelerated the development of its data pipeline. Insights from STAR's spatial data management enabled LIFE developers to refine their approach, enhancing speed and performance. Additionally, scientific exchange between the two teams, especially through collaborations with senior K4N scientists, fostered the development of more sophisticated tools and deeper ecological understanding, improving both metrics. Strategically, the project revealed the complementary nature of STAR and LIFE—while STAR provides broad threat data across species ranges, LIFE offers high-resolution insights into land-use change impacts. The integration of these approaches moves both projects towards a more automated and interoperable system for global biodiversity monitoring, with the combined efforts strengthening the overall ecosystem of data services and analysis for biodiversity conservation.

#### KEQ 11: How effective were the approaches and strategies implemented by the project?

The K4N project implemented a strategy centered on digital transformation and the automation of scientific workflows, moving global biodiversity monitoring from static, manual updates to dynamic, scalable data services. This approach was highly effective in aligning IUCN's technical outputs with the urgent requirements of the GBF Framework and the SDGs. By focusing on the "back-office" technical infrastructure, the project successfully transitioned flagship indicators—specifically the **RLI** and the **STAR metric**—into robust, institutionalized pipelines capable of serving data via APIs to global platforms.

Key strategies that drove this effectiveness included:

- **Methodological Innovation:** The adoption of a sparse matrix approach allowed the project to move away from computationally heavy spatial rasters, enabling the recalculation of STAR at a higher 1km resolution.
- **Knowledge Frontier Exploration:** The project effectively used workshops and symposiums to scope the integration of Artificial Intelligence (AI), environmental DNA (eDNA), and remote sensing, identifying "human-in-the-loop" models as a future priority to accelerate assessments without compromising scientific rigor.
- **Strategic Policy Alignment:** By positioning IUCN as a Knowledge Partner to the TNFD, the project ensured that its biodiversity metrics were tailored for private-sector disclosure, effectively bridging the gap between conservation science and financial risk management.

The project's collaborative **partnership model was also central to its success**, mobilizing extensive scientific expertise and in-kind contributions from partners. Strategic engagement with the TNFD positioned Red List and STAR data as core metrics for private-sector nature disclosures, ensuring strong alignment with global policy and financial reporting needs. This effectiveness was also facilitated by regular planning and coordination, and adjusted timelines to ensure outputs met required scientific standards.



## KEQ 12: Did the project contribute to transformational change at scale? If so, how?

## KEQ 13: What were the causal factors and mechanisms driving transformational change?

The K4N project has made significant progress in driving transformational change, particularly in how biodiversity data is used within global policy and finance. A key example of this impact is the inclusion of the improved RLI in the 2025 SDG Annual Report, which highlights the project's direct influence on global policy reporting. Furthermore, the updated RLI data has been used by the GEF to track progress towards biodiversity conservation targets, demonstrating its relevance in global environmental monitoring. Outputs like the automated RLI and TNFD engagement have demonstrated considerable potential to influence systemic changes. The automation of the RLI enables real-time, scalable data for more efficient policy application, while the TNFD engagement integrates biodiversity metrics into financial risk management frameworks. These efforts are reshaping how biodiversity is factored into decision-making at both the policy and corporate levels, fostering nature-positive strategies. Additionally, the integration of the STAR metric across multiple realms further strengthens this shift, promoting data-driven, science-based conservation targets.

Key factors driving the project's transformational impact include the adoption of advanced technologies such as automated systems and analytics in biodiversity monitoring. These innovations have made biodiversity data more accessible and actionable, facilitating its integration into policy and financial decision-making. While advancing AI technologies have shown great promise, there are limitations that need to be addressed. These include challenges related to the quality and consistency of biodiversity data across different taxonomic groups, which can affect the accuracy of AI-driven models. Nevertheless, the collaborative partnerships between IUCN, scientific institutions, and the private sector have been essential in ensuring the data meets global standards for influencing policy and finance.

The project encountered constraints such as the complexity of developing automated systems, integrating data across different realms, and delays in expert availability. To address these challenges, the project extended timelines, secured additional co-financing, and improved partner coordination. These measures ensured that the project stayed on track to deliver key outputs and achieve its impact by 2025.

Overall, the K4N project proved highly effective in modernizing global biodiversity monitoring and decision-making frameworks. Key achievements include the operationalization of an automated RLI pipeline, the expansion of critical biodiversity datasets through over 2,000 species assessments, and the integration of emerging technologies like AI, remote sensing, and spatial data automation. The project has made significant strides in enhancing data accessibility and timeliness, while also fostering the integration of biodiversity metrics into global financial risk assessments, particularly through the TNFD framework. Additionally, the development of scalable data infrastructure, including the sRedList platform and the establishment of SIS Connect, has strengthened links between national and global biodiversity systems. Despite technical challenges and delays in some outputs, the project's strategic partnerships, adaptive management, and commitment to long-term sustainability have laid a solid foundation for continuing the integration of nature-positive, data-driven decision-making at a systemic level.

## 5.5 Efficiency

### 5.5.1. Project Governance

## KEQ 14: To what extent is the Project governance system conducive to results achievement?



The governance system of the K4N project was designed to ensure the efficient delivery of outputs and outcomes through a structured and collaborative approach. Strategic guidance was provided by a **Project Advisory Group (PAG)**, a high-level body composed of senior IUCN leadership. Originally referred to as the Project Steering Committee (PSC), it was renamed to the PAG in March 2023.

The PAG connected the project to ongoing policy processes and external initiatives, enhancing the visibility and uptake of its outputs<sup>41</sup>. The PAG played a pivotal role in linking the K4N project to both internal IUCN strategies and external networks. By leveraging the collective expertise of its members, the PAG facilitated the uptake and visibility of the project's outputs within major biodiversity frameworks such as the GBF. By leveraging its networks and addressing specific bottlenecks when requested, the PAG helped overcome delivery barriers and strengthened overall project effectiveness.

A major strength of the governance system has been its ability to crowd in significant "in-kind" **technical and scientific expertise through key stakeholders**, notably the Red List Partnership and the IUCN Species Survival Commission (SSC). This collaborative network has successfully mobilized experts for over 2,000 species assessments, including underrepresented groups like goby fishes, fungi, and dung beetles. Importantly, engagement of senior scientists created institutional ownership beyond the PMU. By embedding delivery responsibilities within heads of units, chief scientists, and SSC leadership, the project secured buy-in from top management and ensured alignment with IUCN's strategic priorities and global policy positioning. The integration of senior scientific authority, partner institutions, SSC networks, and revenue-generating platforms created both technical credibility and executive-level ownership.

Furthermore, the governance model has fostered essential **financial synergies**; for example, the commercial licensing of Red List data through the IBAT generated \$833k for the Red List in 2024–2025, directly supporting the project's long-term sustainability goals. This integration of technical output and financial mobilization ensured that governance supports not only immediate delivery but also the future viability of the data infrastructure.

The governance system of the K4N project proved to be highly conducive to the achievement of its objectives. By establishing a robust oversight mechanism through the PAG, fostering institutional ownership among senior scientific leaders, and successfully integrating technical expertise with financial strategies, the project secured both **operational success** and a pathway for **long-term sustainability**. The governance structure effectively addressed both the immediate needs of project delivery and the broader, strategic goals of global biodiversity data advancement.

### 5.5.2. Finance

**KEQ 15: Has the management approach promoted by the Project led to the most effective use of resources, cost savings, and efficiencies of scale?**

Financial management of the K4N Project was generally satisfactory and consistent with GEF and IUCN fiduciary requirements. At project closure, **total expenditure** amounted to USD 1,808,767, corresponding to approximately 98.5% of the total GEF grant allocation of USD 1,834,862.

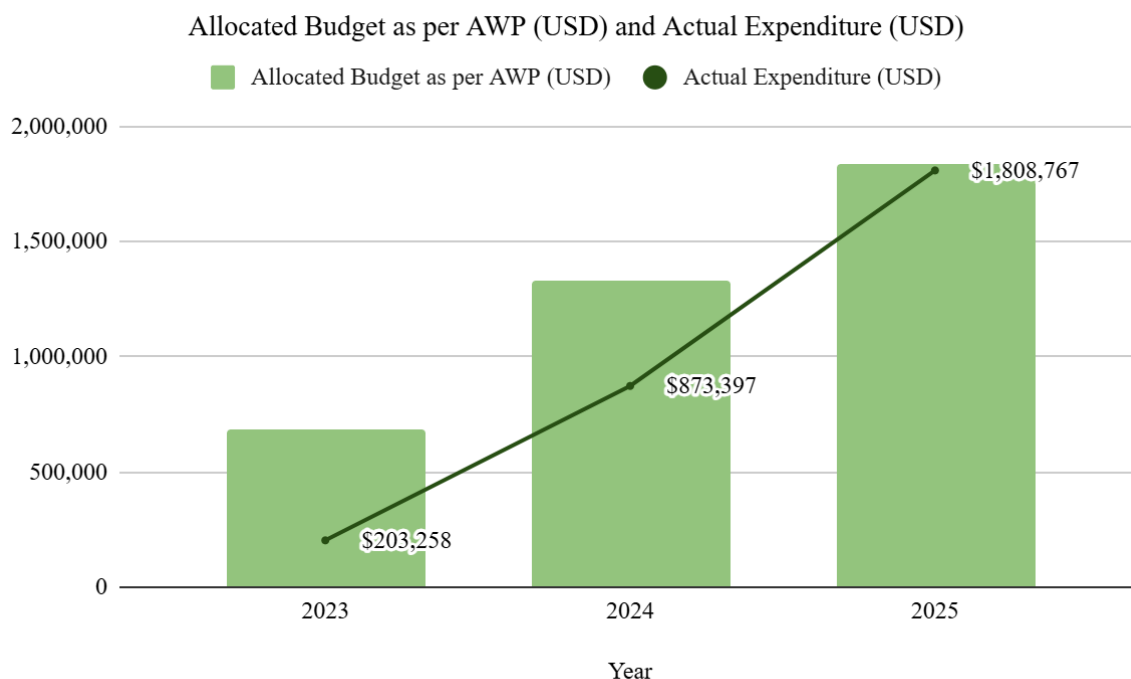
**Expenditure patterns**, illustrated in Figure 2, over the project life show an initially slow disbursement followed by accelerated spending in later years. In 2023, only 41% of the Annual Work Plan (AWP) budget was spent, reflecting delayed project start-up and the time required to mobilize specialized

<sup>41</sup> Annual PAG Meeting (2024), p. 5



technical expertise and establish complex data and systems-related workflows. Financial execution improved substantially in 2024, with 75% of the AWP budget utilized, and remained relatively strong in 2025, with approximately 98.5% expenditure recorded. This trajectory is consistent with the project's implementation dynamics, where technically demanding outputs were concentrated in the latter stages once foundational systems and partnerships were fully operational.

Figure 2: Year-wise Expenditure Pattern



At the **component level**, expenditure broadly aligned with implementation progress and output delivery. Component 1, focused on the provision of state-of-the-art biodiversity data services, demonstrated strong financial performance, with 98% of allocated funds spent, reflecting the advanced development and deployment of core technical outputs. Component 2, addressing urgent knowledge gaps through species assessments, reached an expenditure rate of approximately 91%, consistent with the phased and expert-driven nature of assessment processes. Component 3, which focused on sustainability and the application of new technologies, recorded an expenditure rate of 103%, slightly exceeding the allocated funds. Monitoring and Evaluation costs were efficiently managed, with around 90% of allocated resources utilized, while Programme Management Costs stood at approximately 103%, reflecting a slight over-expenditure but remaining within a reasonable variance, suggesting generally sound cost control in project management functions. The table below illustrates component wise allocation and expenditure level.

Table 6: Component and Core indicator-wise Allocation and Expenditure

| Outputs     | Donor Allocated Fund (USD) | Expenditure (USD) | Percent of Expenditure | Percent of Allocation Spent |
|-------------|----------------------------|-------------------|------------------------|-----------------------------|
| Component 1 | 671,662                    | 655,278           | 98%                    | 98%                         |
| Component 2 | 574,175                    | 525,122           | 91%                    | 91%                         |
| Component 3 | 392,723                    | 404,239           | 103%                   | 103%                        |
| M&E Costs   | 29,500                     | 26,600            | 90%                    | 90%                         |



|                           |           |           |      |      |
|---------------------------|-----------|-----------|------|------|
| Programme Management Cost | 166,802   | 171,375   | 103% | 103% |
| Total                     | 1,834,862 | 1,782,614 | 97%  | 97%  |

The project faced structural financing constraints arising from GEF budget rules, which prohibit charging senior IUCN staff time to the project despite their essential technical and strategic oversight roles. As a result, these functions were sustained through co-financing and complementary institutional budget allocations (including IBAT allocations). In parallel, internal budget flexibility was applied: part of the USD 45,000 originally allocated for consultancy support under Output 1.3.1 (TNFD engagement) was reprogrammed to cover staff costs following the consultant's transition into a staff position. This adjustment ensured delivery continuity without increasing overall project expenditure.

The project's accounting and financial systems were adequate and fit-for-purpose, supporting sound financial management throughout implementation. Financial management was characterized by strong fiduciary compliance, effective reporting, and successful leveraging of co-financing. The Implementing Agency ensured alignment with GEF fiduciary standards, ensured expenditures were consistent with approved budgets, and systematically tracked disbursement and co-financing flows. The Executing Agency ensured financial reporting processes were robust, with progress reports submitted on time and providing clear visibility on both overall and component-wise disbursement figures, enabling accurate monitoring and informed decision-making.

Overall, the K4N Project's efficiency was supported by a governance system that provided clear strategic direction, facilitated coordination, and enabled timely resolution of implementation bottlenecks. Financial management was effective, with high budget utilization and expenditure patterns aligned with the project's technically phased implementation. The project demonstrated adaptive resource use, including budget reprogramming and strategic reliance on co-financing and in-kind contributions. Collectively, these mechanisms ensured that resources were deployed in a manner consistent with project objectives and the delivery of global environmental benefits.

## 5.6 Sustainability

**KEQ 16: What is the likelihood that results will be useful or persist after the end of the K4N project?**

**KEQ 17: What are the chances to see initiatives developed under the K4N project replicated elsewhere or scaled up?**

This section examines the extent to which the results generated under the K4N project are likely to endure beyond the project's lifetime and the degree to which they are positioned for replication or scale-up in other contexts. It focuses on three interlinked dimensions: (i) the extent to which key **technical and institutional results** have been embedded within IUCN's core operating systems and workflows, (ii) the robustness of post-project financing and **resource-mobilization** pathways supporting their continued operation, and (iii) the presence of practical **adoption and demand signals**, at national and global levels, that create conditions for wider replication and scaling of K4N-developed initiatives.

The likelihood that K4N results will persist post-project is high for the core infrastructure results (i.e., data pipelines, assessment-production tooling, and institutionalized metrics), because these were deliberately designed as standardized service pipelines anchored inside the IUCN Red List operating model rather than as one-off deliverables. **Across the project's sustainability-focused outputs, the key persistence mechanism was institutional embedding:** (i) shifting indicator production toward





repeatable workflows (e.g., automated recalculation logic and APIs); (ii) strengthening interoperable tooling that reduces transaction costs for assessors and national partners; and (iii) aligning outputs with durable external demand drivers (CBD/GBF reporting, corporate nature-risk disclosure, and indicator frameworks that require regular updates).

**A key sustainability and scale-up pathway that emerged during implementation is the increasing relevance of K4N outputs for GEF biodiversity project design, monitoring, and results reporting.** The automation and standardization of Red List–derived data, combined with the operationalization of STAR, have substantially lowered the technical and institutional barriers to using biodiversity risk and impact metrics at scale. These improvements position K4N outputs for systematic uptake within GEF project cycles, particularly for baseline setting, biodiversity hotspot prioritization, and results-based reporting. Stakeholders noted that the availability of regularly updated spatially explicit STAR layers, now extended to include a harmonized marine STAR layer, creates new opportunities for GEF-funded projects to integrate biodiversity considerations across terrestrial, freshwater, and marine realms using a consistent methodological framework.

K4N initiatives have credible “pull” factors that increase the probability of wider diffusion: **private-sector mainstreaming of nature-related disclosure and the growing use of Red List-derived metrics (including STAR) create recurring demand for updated, spatially explicit, decision-grade biodiversity data**, a demand that is well aligned with K4N’s automation and service-orientation. The Red List @ 60 campaign and planned convenings (e.g., World Café fundraising and partnership-building) are also explicitly structured to convert technical credibility into broader coalitions and financing, which is a prerequisite for replication beyond early adopters.

The **financial sustainability** of K4N-supported results is anchored in **a deliberate shift away from reliance on single, time-bound project grants toward a diversified portfolio of funding mechanisms.** In the short term, operational continuity is supported through a combination of co-financing, in-kind contributions, and revenue-generating data services, most notably through IBAT-linked products that serve private-sector users. These mechanisms provide near-term resources for maintaining core biodiversity data services, including the Red List and associated metrics, and reduce immediate dependence on follow-on donor funding. Evidence from project reporting and stakeholder interviews indicates that this blended approach has already translated into concrete financial traction, including secured philanthropic funding for system redevelopment and growing private-sector uptake of Red List–derived data products. For instance, **the project leveraged philanthropic financing primarily as catalytic bridge funding to de-risk major system transitions and avoid service disruption**, most notably in relation to the redevelopment of the SIS. The project was successful in procuring CHF 3 million in philanthropic funding to deliver a new SIS platform by 2027, enabling long-term modernization while allowing K4N resources to be reallocated away from incremental SIS Connect upgrades toward continued national integration support<sup>42</sup>.

In the longer term, IUCN has articulated a more ambitious strategy centered on diversified financing, including exploration of an endowment-style mechanism. **Long term financial sustainability is being pursued through the development of the NDPF**, a concept supported and advanced under K4N as part of IUCN’s broader resource mobilization and data governance agenda. The NDPF is intended to function as a public-good infrastructure that aggregates high-quality biodiversity data and metrics,

<sup>42</sup> K4N PIR (2025), p.18.





including those derived from the Red List and STAR, enabling their systematic integration into global conservation planning, policy frameworks, and financial decision-making. A central sustainability feature of the model is its proposed dual-access licensing structure: maintaining free and open access for non-commercial and public-interest users, while introducing paid licensing or contribution mechanisms for corporate and financial-sector users that increasingly rely on these data for nature-related risk assessment and disclosure. Through K4N, IUCN actively advocated this approach as a means of protecting scientific integrity while reducing long-term reliance on project-based funding. Although the NDPF remains under development, it represents an important signal of institutional commitment and a credible pathway toward a diversified, durable funding model capable of supporting the continuous updating and expansion of biodiversity data services beyond the life of the K4N project.

**Replication and scale-up prospects are strong but uneven**, with the highest likelihood of success where K4N outputs operate as modular “adoption packages” that can be integrated without substantial local reinvention. **The most clearly demonstrated replication pathway lies in national–global interoperability**: K4N-supported countries used SIS Connect both to upload national assessments to the global Red List and to export validated outputs for national publication and reporting, evidencing two-way value and creating tangible incentives for continued use. In this sense, **replication has already been proven at small scale; however, scaling will depend critically on whether ongoing upgrades to the core platform meaningfully reduce the marginal effort required for additional countries to participate**. While SIS Connect now provides a more robust technical mechanism to support national assessments in practice, stakeholders noted that technical availability alone is insufficient without complementary investments in institutional linkages, assessor capacity, and long-term ownership. Overall, replication potential is therefore highest where K4N outputs align with existing national processes or reporting incentives, and markedly weaker where such enabling conditions are absent.

That said, scaling is not automatic: sustainable growth requires better partner coordination, clearer shared processes, and investment in fundraising capacity (i.e., replication depends on governance and resourcing, not only on technical readiness). Therefore, post-project sustainability and replication are best characterized as high-likelihood trajectories that are already seeded by concrete financing and adoption, but whose ultimate scale will depend on continued platform modernization, partnership coordination, and follow-through on the resource mobilization roadmap.

**KEQ 18: Are there any financial, institutional, environmental, social or political risks that could jeopardize the permanence of the program results?**

**KEQ 19: What efforts were made by the K4N project to mitigate these risks and ensure sustainability of the results in the long term?**

The following paras provide an assessment of the likelihood of sustainability of K4N Project outcomes, based on financial, socio-political, institutional, and environmental risks.

## 5.6.1 Financial Risks

In the short term, the financial viability of K4N-supported results has been sustained through a combination of donor financing, IBAT-derived revenues, and substantial in-kind contributions from



partners. These mechanisms have provided essential continuity during the project period, enabling the maintenance and incremental expansion of core biodiversity data services while longer-term financing models are being developed. Additional short-term measures, including philanthropic grants and cost-sharing arrangements linked to system redevelopment, have further reduced immediate financial pressure and allowed key platforms and metrics to remain operational beyond the strict life of individual project components.

However, over the longer term, two principal financial risks emerge. First, there is a **structural risk of continued dependence on time-bound or variable funding streams**, including donor grants and voluntary contributions, which are inherently uncertain and insufficient for supporting the recurring costs associated with maintaining, updating, and scaling global biodiversity data infrastructure. Second, there is a **revenue predictability risk** linked to newer financing mechanisms, particularly those still under development, including licensing-based models such as NDPF, which have not yet demonstrated stable, long-term income at the scale required for full cost recovery. Without successful transition to more durable funding sources, these risks could constrain the ability to sustain service quality, update frequency, and geographic or taxonomic coverage.

K4N sought to mitigate these risks by supporting a **diversified financial strategy** rather than reliance on a single funding channel. Central to this approach was the advancement of the NDPF, which aims to establish a sustainable funding model through a combination of public-good access and paid contributions from commercial users. By advocating for a licensing structure that captures value from private-sector demand, K4N addressed both revenue generation and equity considerations. In parallel, the project supported efforts to broaden the user base of Red List–derived services, expand applicability to new domains such as marine systems, and explore partnerships with technology and AI companies in ways that could enable future cost-sharing without compromising scientific standards.

Taken together, these measures indicate that while **long-term financial sustainability is not yet secured**, K4N has substantially reduced financial risk by moving the Red List and associated metrics away from exclusive dependence on project-based funding towards a **portfolio approach to financial risk management**. The project’s contribution lies less in fully resolving long-term financing challenges than in establishing credible pathways, governance principles, and demand signals that improve the prospects for sustainable financing after project closure.

### 5.6.2 Socio-Political Risks

A key socio-political risk to the sustainability and uptake of K4N results relates to **fluctuating political commitment** and **regulatory uncertainty**, particularly among government and private-sector users. At the national level, changes in political priorities, administrative turnover, or shifting fiscal constraints can reduce government engagement in biodiversity assessment and reporting, weakening demand for tools that support Red List–aligned processes. In the private sector, demand for biodiversity data services has proven sensitive to broader political and economic contexts. Recent regulatory rollbacks and delays in Europe, together with shifts in the U.S. political environment, have weakened near-term regulatory pressure on companies to act on nature-related risks, creating a less predictable demand environment for biodiversity data services. These dynamics increase the risk that uptake of K4N-supported tools and metrics, including STAR and other Red List–derived products, is



uneven or subject to temporary plateaus, with adoption shaped more by fluctuating external policy signals than by underlying conservation need or the technical readiness of the tools themselves.

K4N has sought to mitigate these risks by anchoring its results in globally endorsed multi-lateral frameworks that transcend short-term political cycles and national policy reversals. By aligning Red List and STAR data services with the GBF, CBD reporting processes, SDG indicators, and emerging disclosure initiatives such as the TNFD, the project has positioned its outputs as foundational infrastructure for international commitments that governments and companies continue to reference even when domestic implementation slows. This strategy reduces dependence on any single regulatory regime and allows K4N outputs to remain relevant across jurisdictions and political contexts. At the same time, the project has deliberately diversified its user base by strengthening both public-sector and private-sector engagement, ensuring that demand is distributed across conservation planning, multilateral finance, and corporate risk management. **While socio-political volatility remains an external risk beyond the project's control, K4N's emphasis on global frameworks, standardized metrics, and cross-sector relevance substantially increases resilience to shifting political and economic conditions.**

### 5.6.3 Institutional Risks

A central institutional risk to the K4N project stemmed from the outdated and cumbersome data management processes. K4N reduced such long-term institutional risks by shifting critical functions away from bespoke, person-dependent workflows toward standardized, automated pipelines and shared digital platforms that can be maintained within existing IUCN structures. **By embedding outputs within core Red List systems and aligning them with parallel institutional investments,** strengthened the likelihood that results can be sustained and scaled within IUCN's institutional ecosystem beyond the project lifecycle.

### 5.6.4 Environmental Risks

Environmental risks to the K4N project were indirect, arising primarily from the increasing pace and unpredictability of environmental change itself. Accelerating habitat loss, climate-driven range shifts, and extreme events introduce uncertainty into species distribution data, increasing the risk that assessments and derived metrics become outdated more quickly than traditional update cycles can accommodate. This creates a potential mismatch between the dynamic nature of biodiversity change and the static or periodic nature of assessment processes, with implications for the relevance and timeliness of Red List-based indicators and decision-support tools if update mechanisms are not sufficiently responsive.

K4N mitigated these risks by strengthening the temporal responsiveness and analytical adaptability of biodiversity data systems. The project invested in automation of key processes, including AoH generation and indicator recalculation, enabling more frequent updates as new data become available and reducing dependence on infrequent, resource-intensive reassessment cycles. Integration of remote sensing and other emerging data sources further improved the capacity to detect and reflect environmental change in assessment workflows. **By shifting from static products toward repeatable, update-ready data pipelines, K4N reduced the risk that rapid environmental change undermines the utility of its outputs,** although continued updating and sustained resourcing will remain essential to fully keep pace with accelerating ecological change beyond the project period.



Overall, the K4N project has established a strong foundation for the sustainability of its results, particularly through the integration of core infrastructure into IUCN's operating systems, the diversification of financing strategies, and alignment with global frameworks like the GBF and SDGs. While challenges remain in securing long-term financial sustainability and managing socio-political risks, the project has made significant strides in embedding its outputs within widely adopted systems, ensuring continued relevance and demand. The establishment of the NDPF and philanthropic support for SIS platform redevelopment further strengthens the project's financial and institutional resilience. The combination of strategic partnerships, innovative financing models, and ongoing technical improvements positions K4N's outputs for sustained impact and future scale-up.

## 5.7 Implementation and Execution

### KEQ 20: How well did the implementing and executing agency discharge their responsibilities throughout the project?

The K4N Project has utilized a multi-layered and adaptive project management structure that has been largely conducive to results, though it remains constrained by inherent technical dependencies and the fragility of specialized expert networks. The project management is anchored in a clear separation of functions between the IUCN Science and Data Centre (**Executing Agency**) and the IUCN Multilateral Finance Unit (**Implementing Agency**), maintaining a necessary "firewall" to ensure GEF fiduciary standards are met while leveraging IUCN's scientific leadership.

As **Implementing Agency**, the IUCN Multilateral Finance Unit provided fiduciary oversight, quality assurance, and compliance management, ensuring adherence to GEF policies, reporting standards, and agreed project objectives. It played a central role in advancing the project through key approval stages, including PIF approval and CEO endorsement, culminating in project initiation in April 2023. During preparation, the Agency ensured robust stakeholder consultation—engaging 29 informants across 20 organizations—to align the project with global biodiversity data demands and maximize strategic relevance. It also ensured strong alignment with the GEF-7 Biodiversity Focal Area, particularly in relation to extinction risk documentation and cross-sectoral data mainstreaming, reinforcing coherence with international targets. Through the June 2023 Inception Workshop and Report, the Agency established the project's technical baseline, implementation milestones, and institutional arrangements. It further ensured compliance with environmental and social safeguards (ESMS) and commissioned an independent Terminal Evaluation, reinforcing accountability and transparency in line with GEF requirements.

Despite demonstrating strong fiduciary oversight, the Implementing Agency faced challenges related to resource mobilization, and the transition toward a sustainable financing model. Stakeholders also questioned the rationale for fee-based access to platforms such as IBAT, despite recognizing the scientific credibility of the data, while fragmented fundraising approaches and overlapping donor engagement efforts further complicated implementation. Adaptive management measures undertaken to address these challenges are discussed in [Section 5.7.1](#).

The IUCN Science and Data Centre, as **Executing Agency**, managed the Project Management Unit (PMU), responsible for the project's technical and operational implementation, coordinated partners and delivered outputs in accordance with GEF requirements. Their ability to adapt and make timely adjustments was particularly crucial in managing inter-output dependencies and resolving delays caused by external factors, such as the fragility of specialized expert networks. Beyond technical



outputs, the Executing Agency was instrumental in securing CHF 3 million in philanthropic co-financing to support the development of SIS 3.0 and formulated a Resource Mobilization Strategy (2024–2030), alongside launching the “Red List @ 60” campaign, thereby reinforcing the financial sustainability of the IUCN Red List.

The Executing Agency faced structural and budgetary constraints, technical complexity and system interdependencies, and human resource and stakeholder coordination challenges. Structurally, restrictions on funding senior staff time, difficulties in recruiting and retaining IT specialists, and the limitations of short-term grant cycles constrained access to critical technical leadership. Technically, progress was affected by intricate dependencies between outputs leading to delays in project delivery. From a human resource and stakeholder perspective, reliance on a large volunteer network and unforeseen expert unavailability further contributed to implementation delays and necessitated adaptive management measures discussed in [Section 5.7.1](#). Despite these challenges, the Executing Agency successfully delivered on its core technical and scientific objectives, as detailed in [Section 5.4](#).

### 5.7.1 Adaptive Management

**KEQ 21: What challenges emerged during different stages of Project implementation and how were they addressed?**

**KEQ 22: To what extent has the Implementing and Executing Agency been able to adapt to any changing conditions to improve the efficiency of project implementation?**

During implementation, the K4N Implementing and Executing Agencies faced several technical, institutional and operational challenges, which were found to be adaptively addressed.

A major challenge concerned the **scientific rigor** required for RLI updates. Backcasting of historical categories to distinguish genuine from non-genuine changes proved highly time-intensive. For mammals alone, 2,496 species required category backcasting and specialist validation<sup>43</sup>, while amphibian RLI updates required reassessment of historical trends before integration into the automated system<sup>44</sup>. Rather than shortcutting methodology, the Executing Agency invested in expert consultations and Red List Unit validation processes, temporarily storing data outside SIS where necessary until system updates were possible. This reflects a deliberate prioritization of scientific integrity over speed.

**Institutional and platform constraints** also posed implementation challenges. The legacy Species Information Service (SIS 2.0) lacked integrated geospatial tools and efficient workflow features, slowing assessment processing. Some RLI updates required deprecating outdated records within SIS, a process dependent on Red List Unit capacity. Rather than relying on incremental fixes, the Executing Agency leveraged this constraint to catalyze structural reform, securing CHF 3 million in philanthropic **co-financing** to support development of a new SIS 3.0 platform and strengthening complementary tools such as sRedList to standardize spatial and AoH workflows. Stakeholder feedback from the Red List Technology Workshop (Cambridge, June 2025) further reinforced this pivot, identifying bottlenecks in manual drafting processes, spatial workflows, and data integration within the Red List system. The discussions informed prioritization of AI-assisted assessment drafting, improved geospatial integration, and more streamlined data pipelines within ongoing SIS modernization efforts,

<sup>43</sup> Sapienza Technical Report, p. 2.

<sup>44</sup> Re:wild Final Technical Report, p. 1 and 2.





strengthening the project's focus on automation and scalability. Additionally, due to this philanthropic funding, PMU redirected resources from originally planned SIS Connect upgrades to provide direct support for National Red List integration in Brazil, Greece, Turkey, New Caledonia, and South Africa.

Furthermore, the Executing Agency's **reliance on a small number of highly specialized individuals** introduced substantial risk; for instance, the unavailability of lead experts for the Global Fungal Red List Initiative and the Historical AoH model due to medical reasons caused significant implementation delays. While the Executing Agency adjusted its schedules to accommodate their return, eventually allowing these critical tasks to resume, this led to a delay in the completion of the work. Similarly, when the newly formed Dung Beetle Specialist Group required more oversight than anticipated, the Executing Agency integrated targeted training and guidance into its workflow, ensuring that while the group's assessments were delayed, they remained on track for final delivery.

The Executing Agency faced constraints in **recruiting and retaining specialized technical staff**, particularly due to competition with the commercial technology sector, and therefore adopted flexible and non-traditional resourcing approaches. To mitigate this challenge, the Executing Agency adopted targeted resourcing strategies to address constraints in recruiting and retaining specialized technical staff. Where internal recruitment for full-time positions proved difficult due to competition with the commercial technology sector, the agency engaged specialized independent consultants to ensure continuity of technical delivery. This included contracting independent developers to maintain and enhance key tools like sRedList, enabling access to high-level programming expertise on a part-time basis without incurring the costs of full-time employment.

The Executing Agency also faced **structural financial constraints** related to senior staff time. Under GEF rules, project funds could not be used to cover the salary time of senior IUCN staff, despite their critical technical and scientific advisory roles. To ensure continuity of leadership and oversight, the PMU leveraged additional co-financing and leveraged complementary budgets from related initiatives (including IBAT allocations and other co-finance sources) to support these functions. In parallel, a targeted internal budget adjustment was made: an original allocation of USD 45,000 earmarked for consultancy support under Output 1.3.1 (TNFD engagement) was partially repurposed to cover staff time when the designated consultant transitioned into a staff role<sup>45</sup>.

Overall, the Implementing and Executing Agencies discharged their responsibilities efficiently, demonstrating strong coordination, adaptive management, and technical leadership throughout the project. While the project encountered structural implementation challenges, the Implementing and Executing Agencies were successful in adapting timelines, budgets, and workflows to deliver outputs without diluting scope. The Executing Agency's response was strategic: sequencing outputs, protecting methodological rigor, leveraging co-finance, and accelerating platform modernization. In effect, short-term constraints generated long-term institutional strengthening, evidencing embedded adaptive management rather than ad hoc problem-solving.

## 5.8 Cross Cutting Themes

### 5.8.1 M&E

**KEQ 23: To what extent was the project's M&E plan practical and well thought out? How well did it address the project's theory of change and meet GEF M&E requirements?**

<sup>45</sup> K4N PIR (2025), p. 9, 24 and 25.





The K4N project's M&E plan was **well-conceived and technically coherent**, reflecting the project's strong orientation toward measurable, data-driven outcomes. IUCN held responsibility for overall project management and implementation of M&E activities, including continuous monitoring, preparation of monitoring and progress reports, and commissioning of the end-of-project evaluation.

Implementation of the M&E plan was consistent and fully compliant with GEF requirements, supported by regular biweekly coordination meetings, quarterly technical reviews, and formal annual reporting. In terms of transparency and accountability, reporting to the GEF and key stakeholders was timely and detailed, with clear articulation of progress, risks, and mitigation measures. The PMU submitted two annual PIRs to the GEF, covering the reporting periods July 2023 – June 2024 and July 2024 – June 2025, which provided structured and transparent updates on progress, risks, and adaptive management decisions. In parallel to PMU-led monitoring, executing partners were responsible for submitting regular technical progress reports to IUCN, including midterm and final reports aligned with contractual deliverables. These reports provided detailed evidence on implementation progress, technical validation, and challenges encountered, and were used by IUCN to inform consolidated project reporting, adaptive management decisions, and overall performance assessment. Additionally, the PAG strengthened M&E quality through periodic strategic oversight, reviewing progress against outputs and timelines, surfacing emerging risks, and providing technical and policy guidance that informed adaptive management.

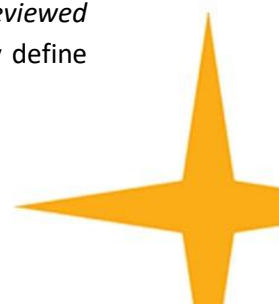
Progress tracking was systematic and enabled the PMU and IUCN GEF Implementing Agency to maintain a clear separation of roles and responsibilities while effectively identifying and managing implementation risks. The M&E plan proved particularly effective in monitoring technically complex outputs, including the delivery of large-scale species assessments, development of automated data pipelines, and publication of peer-reviewed scientific outputs, supporting timely operational decision-making in a complex delivery environment.

The M&E plan was closely aligned with the project's theory of change, which assumed that strengthening biodiversity data infrastructure, metrics, and interoperability would enable more effective decision-making across global policy, national planning, and private-sector disclosure. This causal logic was clearly articulated and largely appropriate for a global knowledge and systems project. Core indicators, such as delivery of automated RLI and STAR pipelines, numbers of species assessments completed, and integration of data into global reporting frameworks, were relevant, attributable, and aligned with GEF biodiversity focal area requirements.

#### **KEQ 24: Did the results framework incorporate applicable core indicators or corporate results indicators and provide baseline information?**

The indicator set was weighted heavily toward technical and production-oriented outputs, with comparatively limited attention to outcomes such as behavioral, institutional, or decision-making uptake. As a result, the Results Framework was less able to assess how project outputs were used by governments, national Red List authorities, or private-sector actors, or whether they influenced planning, prioritization, or disclosure practices. While the theory of change implicitly assumed such downstream use, this assumption was not consistently operationalized through indicators capable of capturing adoption, sustained use, or changes in decision quality.

Several indicators in the Results Framework were not fully SMART. **Indicator 1.1: RLI data reviewed and automated RLI mechanism operational** lacked a quantified baseline and did not clearly define



what constituted an “operational” mechanism (e.g., full automation across taxa, API functionality, or demonstrated external use), limiting objective measurement of completion. **Indicator 1.3.1: Biodiversity metrics integrated into the TNFD Reporting Framework** was also insufficiently specific and measurable, as “integration” was not operationally defined and no adoption thresholds, numeric targets, or time-bound milestones were provided (e.g., number of TNFD guidance documents incorporating the metrics or number of reporting entities applying them). **Indicator 3.2.1: Sustainability plan developed and incremental revenue generated** conflated output and outcome dimensions without specifying quantified revenue targets, percentage growth benchmarks, or clear time-bound financial milestones. Additionally, **Indicator 3.1.3: Strengthened connections between national red lists and the IUCN Red List of Threatened Species to allow interoperability** did not specify a targeted number of countries expected to adopt or operationalize the relevant tools or data services. The absence of defined country-level uptake targets or time-bound milestones constrained the ability to systematically monitor geographic coverage, assess scale of adoption, and determine whether progress reflected isolated engagement or meaningful global integration. As a result, while progress could be described qualitatively, performance against these indicators could not be assessed with full objectivity or precision.

The project also reported against GEF Core Indicator 11, which measures the number of direct beneficiaries. Since the project provides a global public good, the PMU used annual unique visitors to the IUCN Red List website as a proxy for direct beneficiaries. This methodology was supported by historical data from 2015–2020, which showed consistent website traffic between 3.8 million and 5.3 million unique visitors per year. The project set a target of 4,000,000 direct beneficiaries and reported a 50/50 gender distribution, assuming an equal number of male and female beneficiaries, due to limitations in gender disaggregation via IP addresses. Given the non-area-based nature of the project focused on global data delivery, most other GEF core indicators were reported as "Not Applicable".

Learning under the results framework was largely **internal and technical**, with limited systematic capture of lessons related to stakeholder uptake, national capacity constraints, or barriers to scaling tools such as SIS Connect. While workshops, technical consultations, and partner feedback loops existed, these were not consistently translated into structured learning outputs or reflected into indicator refinement.

#### **KEQ 25: Did the M&E plan clearly specify planned activities, responsibilities, and timelines?**

The M&E plan for the K4N project clearly specified planned activities, responsibilities, and timelines through a structured framework outlined in the project document and subsequent implementation reports. The project document defined a Summary Budgeted M&E Plan, listing core activities and the responsible entities, including the Inception Workshop and Report conducted by the PMU, annual tracking of core indicators and the results framework, and the preparation of PIRs by the PMU in coordination with the IUCN GEF Unit. The plan also included bi-annual monitoring of environmental and social safeguards (ESS) by the PMU and GEF Unit to ensure compliance with gender and social risk management plans. Additionally, an Independent Terminal Evaluation was planned for the project’s conclusion, conducted by an independent consultant procured by the IUCN GEF Unit.

The M&E plan set clear timelines, including a virtual Inception Workshop in June 2023, annual PIR submissions covering July–June periods (2023–2024 and 2024–2025), and a mid-term review conducted in August 2024. Following a no-cost extension, the project’s closure date was revised to December 31, 2025, with the Terminal Evaluation scheduled to be completed by April, 2026.



**KEQ 26: To what extent are the MEL strategy and tools adequate and effective? To what extent the resources allocated for M&E were sufficient and used adequately?**

Financial monitoring was robust, and the project exceeded planned co-financing, indicating strong leverage and partner commitment. The project allocated a total of USD 49,500 to Monitoring and Evaluation, comprising USD 29,500 in GEF financing and USD 20,000 in IUCN co-financing, which was broadly adequate for a global knowledge and systems project of this nature. These resources were primarily utilized to support GEF-compliant monitoring and reporting functions. However, M&E expenditure was largely concentrated on compliance and delivery tracking, with limited resources dedicated to outcome-level analysis, user uptake assessment, or independent learning activities. As a result, while the project can demonstrate what was delivered and when, it is less able to robustly evidence how and to what extent those outputs are being used, or the conditions under which they are most effective.

Overall, K4N's M&E plan was fit for purpose for a technically complex, globally scoped knowledge project, enabling effective delivery management, risk mitigation, and accountability to the GEF. The main limitation of the results framework was in capturing analytical depth beyond outputs, particularly regarding outcome-level change, user behavior, and institutional adoption. Strengthening future results frameworks to incorporate explicit learning questions, uptake indicators, and post-project tracking mechanisms would significantly enhance the ability to demonstrate long-term impact and sustainability.

## 5.8.2 Project Co-Financing

**KEQ 27: What type of co-financing was mobilized by the K4N Project?**

**KEQ 28: To what extent did the expected co-financing materialize and how timely was it delivered?**

The K4N Project was supported by co-financing, illustrated in Table 7, which significantly enhanced its financial leverage and contributed to the scale and sustainability of project outcomes. Total co-financing commitments amounted to USD 9.35 million, representing a strong leverage ratio of approximately 5:1 relative to the GEF grant of USD 1.83 million and underscoring the project's strategic importance within IUCN's broader biodiversity data and knowledge portfolio.

Table 7: Component and Core indicator-wise Allocation and Expenditure

| Co-financer          | Committed Amount (USD) | Actual Amount Disbursed (USD) | Percentage of Commitment Provided |
|----------------------|------------------------|-------------------------------|-----------------------------------|
| Red List Partnership | 4,800,000              | 2,600,000                     | 55%                               |
| IBAT                 | 630,000                | 2,600,000                     | 400%                              |
| IUCN                 | 3,500,000              | 3,500,000                     | 100%                              |
| ReWild               | 418,000                | 418,000                       | 100%                              |

As of December 2025, co-financing realization varied by partner but was overall satisfactory. IUCN fully delivered its committed in-kind contribution of USD 3.5 million, reflecting sustained institutional support through staff time, systems, and infrastructure critical to the delivery of core project outputs. Re:wild also fully met its commitment of USD 418,000, providing targeted grant-based support aligned



with species assessment and conservation objectives. These fully realized contributions provided a stable backbone for project implementation.

The Red List Partnership, which committed USD 4.8 million in in-kind support, had delivered approximately 55% of its pledged contribution by December 2025. This level of realization is considered reasonable given the partnership-based and in-kind nature of the contribution, which is closely linked to the timing and availability of expert inputs rather than fixed disbursement schedules. Importantly, the partnership's ongoing engagement continued to underpin the scientific credibility and global reach of project outputs.

Notably, co-financing associated with the IBAT substantially exceeded initial expectations. Against an original commitment of USD 630,000, approximately USD 2.6 million was realized, delivering approximately 400% of the pledged amount and reflecting higher-than-anticipated revenue flows linked to data licensing and service uptake. This over-delivery signals strong demand from private-sector and institutional users for biodiversity data products supported by the project and provides an early indication of the project's contribution to longer-term financial sustainability. Additionally, IBAT financing was leveraged to support the project's no-cost extension through to the end of 2025, with IBAT allocations and minor internal budget reallocations covering essential staff time.

In addition, the economic value of technical contributions from the IUCN SSC network was substantial with anticipated volunteer inputs estimated at approximately USD 663,000<sup>46</sup>. More broadly, historical estimates indicate that the Red List benefits from more than 2,000 volunteer days annually, underscoring the significant in-kind scientific labour underpinning assessment delivery and methodological advancement. Although not always fully captured as formal co-financing, this contribution represents a critical component of the project's effective resource base.

Overall, the co-financing performance of the K4N Project was satisfactory. While realization levels differed across partners, total co-financing materially strengthened project implementation, amplified results beyond what could have been achieved through GEF funding alone, and reinforced pathways for post-project sustainability, particularly through market-based and institutional financing mechanisms.

## 5.8.3 Environmental and Social Safeguards

**KEQ 29: To what extent were environmental and social safeguards applied and the extent to which they were appropriate?**

**KEQ 30: To what extent did the project affected marginalized communities, including indigenous people?**

The K4N project was classified as **low environmental and social risk**<sup>47</sup> and operated in line with IUCN's Environmental and Social Management System (ESMS) and GEF safeguard requirements. As a global knowledge and data systems project, its activities were predominantly analytical, digital, and desk-based, focused on improving biodiversity data infrastructure, metrics, and interoperability rather than financing or implementing on-the-ground interventions. As such, no direct adverse environmental impacts were anticipated or observed. Safeguard screening and project documentation confirmed that no physical footprint, land-use change, resource extraction, or infrastructure development was

<sup>46</sup> K4N GEF Project Document, p.9.

<sup>47</sup> K4N PIR (2025), p.30.



associated with project activities, making the applied safeguards proportionate and appropriate to the project's scope and risk profile<sup>48</sup>.

With respect to social impacts, the project did not negatively affect marginalized communities, including Indigenous Peoples, as it did not involve field-level implementation, livelihood interventions, or engagement with community lands or resources. The project's impact on marginalized communities, specifically Indigenous Peoples and Local Communities (IPLCs), was characterized by high-level strategic engagement and the promotion of inclusive data standards. Through its role as a Knowledge Partner, IUCN collaborated with the International Indigenous Forum on Biodiversity (IIFB) to ensure that IPLC voices and traditional knowledge were incorporated into the TNFD disclosure recommendations<sup>49</sup>. These frameworks now explicitly include requirements for organizations to describe human rights policies and engagement with IPLCs, emphasizing the principle of Free, Prior and Informed Consent (FPIC)<sup>50</sup>. This represents a meaningful upstream contribution to embedding social safeguards and IPLC rights within emerging global nature-related disclosure and accountability frameworks, even though direct community-level outcomes were beyond the project's scope.

#### 5.8.4 Gender

**KEQ 31: To what extent was the project implemented in a manner that ensured gender-equitable participation and benefits?**

The K4N project was implemented in alignment with IUCN policies on gender equity and equality, specifically adopting a gender-responsive approach to all decision-making forums, workshops, and technical meetings. Project-supported workshops, expert consultations, and decision-making forums applied inclusive participation principles, including screening for gender gaps in project activities, transparent selection criteria, and attention to balanced representation where feasible.

**Given the project's reliance on highly specialized taxonomic and technical expertise, gender balance among contributors varied by activity and discipline.** Significant progress was made in promoting women into high-level technical leadership roles; for instance, the development of the STAR metric at Newcastle University was led by two women, and the goby fish assessments at Old Dominion University were also female led. However, in several cases, particularly within narrow taxonomic specialist groups, the available expert pool was male dominated, constraining the project's ability to achieve balanced gender representation among assessors without compromising technical quality. As a result, gender participation rate was approximately 37.5% female in 2024 and 0% female in 2025 for Red List assessments<sup>51,52</sup>.

**KEQ 32: Was gender-disaggregated data on beneficiaries collected, tracked through the project's M&E system and used effectively?**

**Gender-disaggregated data was collected and tracked through the project's internal M&E systems** for partners, consultants, and workshop participation, though its effective use was primarily for internal recording rather than enforcing strict participation criteria. Additionally, the K4N Project identifies its direct beneficiaries as an estimated 4,000,000 people annually who utilize the IUCN Red

<sup>48</sup> K4N PIR (2025), p.30 and 31.

<sup>49</sup> K4N PIR (2025), p.7.

<sup>50</sup> Recommendations of the Taskforce on Nature-related Financial Disclosures (2023), p.50.

<sup>51</sup> K4N PIR (2024), p. 22.

<sup>52</sup> K4N PIR (2025), p. 27.





List website, recognizing the wide-ranging socioeconomic utility of its global biodiversity data. This large-scale access to essential conservation knowledge represents a key socioeconomic synergy resulting from GEF investment. However, the data collection methodology presents a significant limitation: because the figures are derived primarily from tracking unique visitors via IP addresses, no direct "bottom-up" gender disaggregation is available for these millions of users. Consequently, the reported gender breakdown of 2,000,000 female and 2,000,000 male beneficiaries is based on the **explicit assumption of a 50% gender balance** among Red List users. This constraint highlights a methodological trade-off, revealing a challenge in fully quantifying the equitable distribution of the project's benefits, despite the project's internal commitment to a gender-responsive approach in organizing its decision-making forums, workshops, and teams.

**KEQ 33: Are any project activities or outcomes that disadvantaged women or exacerbate gender inequalities?**

Lastly, **no project activities or outcomes were identified that disadvantaged women or exacerbated existing gender inequalities.** The project did not involve field-level interventions, livelihood activities, or resource allocation mechanisms that could differentially affect women or men. Risks related to exclusion were limited to participation in expert processes, where structural gender imbalances in the conservation science workforce, particularly in some specialist groups remain an external constraint. These were not introduced or intensified by the project.

#### 5.8.5 Stakeholder Engagement

**KEQ 34: To what extent did the program engage with the relevant stakeholders, including the private sector, civil society organizations, government agencies, and program beneficiaries?**

**KEQ 35: To what extent did stakeholder engagement contribute to building partnerships, leveraging expertise and capacities, and fostering project ownership and follow-up?**

The K4N Project demonstrated extensive, multi-layered, and strategically targeted engagement with relevant stakeholders across the public and private sectors, civil society, scientific communities, and end users of biodiversity data. Given the project's role as a global knowledge and data infrastructure initiative, stakeholder engagement was primarily technical, institutional, and partnership-based, relevant to the project's objectives and central to achieving results at scale.

**Private sector engagement** was a strategic cornerstone of the project. This was most prominently realized through a knowledge partnership with the TNFD, through which the project tailored biodiversity data and metrics to meet the emerging needs of the finance sector for risk screening, disclosure, and target setting. TNFD now includes 1,880+ Forum member organizations<sup>53</sup> and over 700 organizations committed to reporting in line with its recommendations, demonstrating the scale of uptake and systemic reach of K4N-supported biodiversity data within global financial markets<sup>54</sup>.

In parallel, the project worked through the IBAT, which serves more than 100 commercial subscribers. These engagements directly influenced the design and format of project outputs, emphasizing spatially explicit, standardized, and decision-relevant data products. Strong private-sector uptake, reflected in substantial revenue generation through IBAT, indicates that engagement was both effective and mutually reinforcing.

<sup>53</sup> <https://tnfd.global/engage/tnfd-forum/>

<sup>54</sup> <https://tnfd.global/engage/tnfd-adopters/>





**Civil society engagement** formed the scientific backbone of the project. The Red List Partnership, a consortium of 15 organizations<sup>55</sup>, provided essential technical oversight, methodological validation, and in-kind scientific contributions. This partnership ensured the credibility and global acceptance of project outputs while embedding them within existing governance and delivery structures.

Key executing partners played distinct but complementary technical roles in delivering K4N outputs. **BirdLife International** led validation and backcasting of bird data for the automated RLI, reassessing 4,742 species in 2024 and moderating expert consultations that resulted in 143 approved category changes, thereby ensuring methodological integrity of RLI trend calculations. **Sapienza University of Rome** undertook systematic backcasting of 2,496 mammal category changes, distinguishing genuine from non-genuine shifts and validating outputs with Specialist Groups to secure statistical robustness of automated RLI pipelines.

In parallel, **Re:wild** updated amphibian RLI data, backcasting historical categories and preparing 2022 RLI datapoints for integration into the new automated system. For the marine extension of STAR, **Newcastle University** and **Arizona State University** developed marine AOH methodologies and calculated threat-abatement scores for 1,646 marine species, producing the first published marine STAR layer and advancing harmonization across realms.

Complementing this, **Old Dominion University** coordinated 1,000 marine bony fish (gobioid-focused) assessments, significantly expanding vertebrate coverage on the Red List, while the **Zoological Society of London** advanced dung beetle assessments and development of a sampled Red List Index for invertebrates. Collectively, these partners functioned as co-producing scientific institutions—providing backcasting, data validation, methodological innovation, peer-reviewed outputs, and specialist network mobilization—thereby embedding technical ownership beyond the IUCN Secretariat and materially strengthening the credibility, scalability, and sustainability of project results.

Stakeholder engagement also played a critical role in leveraging complementary institutional capacities. Technical partnerships, including the **University of Cambridge**, provided access to advanced computing infrastructure and software engineering expertise required to develop automated pipelines for AoH and the STAR metric.

The project also mobilized the IUCN SSC, engaging over 1,000 experts worldwide to complete more than 2,000 species assessments for underrepresented taxonomic groups, including goby fishes, chanterelle mushrooms, and dung beetles. This collaborative model leveraged a vast pool of specialized expertise that would not have been feasible to procure through grant financing alone and generated substantial in-kind value beyond the GEF investment. A defining feature of stakeholder engagement under the K4N Project was the mobilization of a large, highly specialized **volunteer network**, which constitutes the scientific and operational backbone of both the project and the IUCN Red List. This network is primarily organized through the IUCN SSC, the largest of IUCN's expert commissions, comprising more than 9,500 members across 186 countries, with estimates placing the broader pool of IUCN-affiliated specialists at approximately 15,000 individuals, predominantly from

<sup>55</sup> The Red List Partnership consists of the following 15 organisations: International Union for Conservation of Nature, IUCN Species Survival Commission, BirdLife International, Missouri Botanical Garden, Arizona State University Center for Biodiversity Outcomes, NatureServe, Conservation International, Texas A&M University, Re:wild, Senckenberg Nature Research Society, Sapienza Università di Roma, Botanic Gardens Conservation International, ABO Biopark, Royal Botanic Gardens Kew, Zoological Society of London. From: <https://www.iucnredlist.org/about/partners>



academia<sup>56</sup>. SSC members formally commit, through quadrennial Terms of Reference, to contributing Red List assessments and are directly responsible for drafting, validating, and peer-reviewing species assessments using standardized quantitative criteria, supported by trained facilitators to ensure methodological consistency. The scale and economic value of this contribution are substantial: anticipated volunteer inputs were estimated at approximately USD 663,000, while historical estimates indicate that the Red List benefits from more than 2,000 volunteer days annually<sup>57</sup>. This reliance on volunteer expertise represents a major in-kind subsidy to global biodiversity monitoring, significantly enhancing cost efficiency and scientific credibility, while simultaneously introducing structural risks related to availability and continuity of highly specialized experts.

Engagement with **government agencies** and national institutions focused on beneficiary countries' roles as both users and contributors of biodiversity data. The project worked closely with national authorities and statistical offices in countries such as Brazil, Greece, and South Africa to support interoperability between national Red Lists and global systems. Tools such as SIS Connect and sRedList were deployed to empower national coordinators to manage and update national datasets while maintaining alignment with global standards. This approach fostered institutional ownership, strengthened national capacities for biodiversity reporting, and enhanced the relevance of global datasets for national decision-making.

**KEQ 36: How did stakeholder engagement influence project implementation, achievement of results, and risks to sustainability?**

Stakeholder engagement had a direct shaping effect on implementation modalities by embedding iterative feedback loops between data producers, technical developers, and end users. Engagement with scientific partners and Red List authorities influenced sequencing decisions and methodological refinements, particularly in the transition toward automated assessment pipelines. For example, inputs from specialist groups and academic collaborators validated the feasibility of backcasting approaches and informed quality-control thresholds for automated RLI generation, reducing risks of methodological drift.

Similarly, private-sector users of IBAT and TNFD-aligned metrics influenced output formatting and interoperability priorities, accelerating the shift toward spatially explicit, machine-readable data products. These dynamics translated into tangible implementation gains: faster production cycles, greater technical robustness, and higher usability of outputs across policy and financial decision contexts. In this sense, stakeholder engagement functioned as a co-design mechanism, increasing the likelihood that project outputs would be both scientifically credible and operationally relevant.

At the same time, stakeholder engagement shaped the project's sustainability profile in both positive and risk-bearing ways. On the positive side, embedding outputs within multi-actor governance systems—such as the Red List Partnership, SSC specialist networks, and TNFD-linked finance coalitions—created distributed ownership that extends beyond the project lifecycle. This diffusion of ownership strengthens prospects for continuity of methodologies, data maintenance, and uptake, as multiple institutions now have vested interests in sustaining the tools and datasets produced. However, the same engagement model also exposes structural dependencies that may affect long-term sustainability. Heavy reliance on volunteer expertise and in-kind scientific contributions

<sup>56</sup> K4N Project Document, p. 43.

<sup>57</sup> K4N GEF Project Document, p.9.



introduces uncertainty around continuity of specialist labor, while strong alignment with evolving private-sector standards (e.g., disclosure frameworks) may require ongoing adaptation to remain relevant. Thus, stakeholder engagement simultaneously enhanced implementation effectiveness and embedded sustainability within a complex ecosystem of institutional interdependencies, where resilience depends on maintaining both scientific networks and market-facing relevance over time.

Overall, stakeholder engagement under the K4N Project was highly relevant, strategically deployed, and instrumental to achieving results. It enabled the pooling of global expertise, strengthened institutional ownership, and reinforced sustainability prospects.

## 5.8.6 Knowledge Management and Learning

### KEQ 37: To what extent did the project design incorporate existing lessons and good practices?

The project design demonstrated a strong incorporation of existing lessons and good practices from prior Red List–related initiatives and global biodiversity knowledge programmes. K4N was explicitly conceived as a continuation and scaling of long-standing investments in the IUCN Red List, the RLI, and derived metrics such as STAR, rather than as a standalone innovation project. The project design was informed by a strategic review of IUCN knowledge products conducted during the identification phase. This review identified critical gaps in existing data, such as the fact that less than 25% of species on the Red List had up-to-date assessments, and the absence of common metrics for multi-sectoral target setting<sup>58</sup>. Consequently, the project was built to provide continuity to long-standing work by the Red List Partnership, ensuring that it did not start from a blank slate but rather addressed identified bottlenecks in data maintenance and accessibility.

In particular, the project built on established scientific methodologies (e.g. Red List categories and criteria, back-casting approaches for RLI, and AoH modelling) and prior experiences that demonstrated the limits of manual, expert-intensive workflows. This learning informed the project’s emphasis on automated pipelines, reproducible analytics, and integration of emerging technologies (e.g. sRedList, AoH automation) to improve scalability and sustainability. The project design reflected lessons from earlier GEF and non-GEF initiatives showing that biodiversity metrics only achieve policy uptake when underpinned by peer-reviewed validation and explicitly aligned with global frameworks. This is evidenced by the Red List Index’s documented pathway into SDG reporting<sup>59</sup> and by the deliberate publication and policy positioning of the Marine STAR metric prior to dissemination<sup>60</sup>. Consistent with these lessons, K4N embedded its outputs directly into SDG and GBF monitoring systems, as documented in the project’s PIRs<sup>61</sup>.

### KEQ 38: What knowledge products were planned and delivered, and how have they contributed or are expected to contribute to learning and knowledge sharing?

As illustrated in table 8, knowledge management under K4N was characterized by a strong emphasis on formalized scientific and technical learning, reflected in multiple peer-reviewed articles, scoping reviews, and methodological publications that codified and validated new approaches to biodiversity metrics and data systems.

<sup>58</sup> K4N GEF Project Document, p. 14 and 18.

<sup>59</sup> Butchart et al. 2025, pp. 6-9.

<sup>60</sup> Turner et al. 2024, pp. 6–8.

<sup>61</sup> K4N PIR (2024), p. 28; K4N PIR (2025), p. 10 – 11.



Table 8: Knowledge Products Developed Under K4N

| Knowledge Product                                        | Brief Description                                                                                                                                                                        |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Freshwater Fauna Assessment (Sayer et al., 2025)         | A landmark study published in <i>Nature</i> presenting a comprehensive global assessment of 23,496 freshwater species, revealing that one-quarter are threatened with extinction.        |
| Marine STAR Methodology (Turner et al., 2024)            | A scientific paper published in <i>npj Ocean Sustainability</i> describing a novel methodology to extend the STAR metric to the marine realm, covering 1,646 species.                    |
| sRedList Platform and Publication (Cazalis et al., 2024) | An online tool and associated paper in <i>Biological Conservation</i> that provides automated workflows for generating range maps, Area of Habitat (AoH), and other Red List parameters. |
| RLI 20-Year Review (Butchart et al., 2025)               | A comprehensive review tracing two decades of the Red List Index (RLI), detailing its evolution into a globally recognized indicator for SDG and IPBES reporting.                        |
| Amphibian RLI Update (Luedtke et al., 2023)              | A study published in <i>Nature</i> reporting the second Global Amphibian Assessment, documenting ongoing declines and calculating an updated RLI for amphibians.                         |
| Knowledge Frontiers Scoping Review                       | A technical document submitted for publication analyzing how emerging technologies (AI, genomics, social media) can improve species data provisioning.                                   |
| AoH Maps                                                 | A system-wide delivery of current and historical AoH maps for terrestrial mammals and birds, intended to serve as foundational inputs for STAR calculations.                             |
| Resource Mobilization Strategy                           | A strategic plan (2024–2030) outlining sustainable funding models, including corporate bonds and philanthropic giving, to support the Red List's future operations.                      |
| sRedList Documentation and Tutorials                     | A package of 15 video tutorials, "cheatsheets," and detailed manuals designed to train global assessors in using standardized spatial analysis tools.                                    |
| TNFD-IBAT Disclosure Guidance                            | Spatially explicit biodiversity metrics and joint guidance materials integrated into the TNFD website to help the private sector assess and disclose nature-related risks.               |

#### KEQ 39: What arrangements were made to capture, manage, use, and share knowledge and lessons generated during project implementation?

Additionally, core arrangements included regular biweekly **coordination meetings** within the PMU, technical reviews with executing partners, and annual PIRs to the GEF, all of which provided structured mechanisms to capture implementation experience and emerging technical lessons. At the technical level, learning was embedded in **collaborative workflows between IUCN and Red List partners**, where methodologies were iteratively refined through joint workshops, data validation exercises, and expert consultations. Lessons generated through these processes were used to adjust workflows and to inform adaptive management decisions. **Knowledge sharing beyond the immediate project partners** was achieved largely through open science practices and convenings, including specialist workshops (e.g. Red List Technology workshops), conference sessions, and engagement with policy and private-sector platforms such as TNFD.

#### KEQ 40: Were knowledge management activities supported with an adequate budget?

Knowledge management activities were supported through the project budget, but predominantly as integrated components of technical delivery rather than as a distinct KM workstream. Resources were allocated for coordination, workshops, technical documentation, peer-reviewed publications, and stakeholder engagement, which together enabled effective knowledge exchange among scientific and institutional partners.



However, the absence of a ring-fenced budget line specifically dedicated to learning synthesis and dissemination constrained the project's ability to systematically translate technical learning into broader, user-oriented knowledge products. While learning was actively used internally to improve delivery, it was less systematically codified into standalone learning briefs or synthesized lessons-learned products explicitly designed to translate insights for non-technical audiences or to document lessons related to uptake, adoption, and use by national authorities, planners, or private-sector actors. At the same time, this constraint has been progressively mitigated through parallel and follow-on initiatives that build directly on K4N's technical outputs. Leveraging GEF's foundational investment, IUCN and its partners have secured complementary funding to develop accessible STAR guidance tailored to governments<sup>62</sup>, civil society and Indigenous Peoples' Organizations<sup>63</sup>, and the private sector<sup>64</sup>, and to operationalize STAR within the RHINO framework<sup>65</sup> and associated training courses<sup>66</sup>. These externally financed efforts are translating K4N's scientific and methodological advances into practical guidance, case studies, and capacity-building resources for non-technical audiences, thereby addressing, albeit ex post, the absence of a dedicated outreach and learning synthesis component in the original project design.

## 6. Lessons Learned, Conclusions, and Recommendations – K4N Project

### 6.1 Lessons Learned

#### 1. Collaboration is Key to Scaling Impact

The success of the K4N project underscores the importance of collaboration between diverse stakeholders, from scientific institutions to private sector partners. Leveraging strategic partnerships with existing and new stakeholders has proven essential in advancing both the RLI and the STAR metric. These collaborations have allowed for the efficient exchange of data and expertise, facilitating the development of critical biodiversity metrics.

#### 2. Continued Demand for Biodiversity Data Services

The relevance of Red List data to key global mechanisms and national policies indicate strong demand for biodiversity data. Similarly, the increased trajectory of private-led biodiversity initiatives, such as the improving IBAT revenue and expansion in TNFD membership point to growing demand from the private sector for credible biodiversity data. To further promote the use of biodiversity data by stakeholders, there is a need to improve data availability, such as improving the data availability on marine species as well as inclusion of additional species in the STAR Metric. Beyond improving data availability, uptake is further driven by policy and financial incentives, including GBF reporting requirements, TNFD-aligned disclosure expectations, and GEF guidelines mandating the use of standardized biodiversity indicators (e.g. RLI, STAR). These mechanisms create clear incentives for governments and private-sector actors to integrate biodiversity data into decision-making processes.

#### 3. Technology is Vital for Improved Biodiversity Data Collection and Accessibility

<sup>62</sup> [https://nc.iucnredlist.org/redlist/content/attachment\\_files/STAR\\_Guidance\\_for\\_Governments.pdf](https://nc.iucnredlist.org/redlist/content/attachment_files/STAR_Guidance_for_Governments.pdf)

<sup>63</sup> [https://nc.iucnredlist.org/redlist/content/attachment\\_files/STAR\\_Guidance\\_for\\_Civil\\_Society\\_Organizations.pdf](https://nc.iucnredlist.org/redlist/content/attachment_files/STAR_Guidance_for_Civil_Society_Organizations.pdf)

<sup>64</sup> <https://www.ibat-alliance.org/datasets/species-threat-abatement-and-restoration>

<sup>65</sup> <https://www.iucnrhino.org/>

<sup>66</sup> <https://iucnacademy.org/courses/intro-iucn-rhino/>





The transition from manual data compilation to automated systems has been a cornerstone of K4N's efficiency gains. The development of automated pipelines for RLI and STAR, coupled with the migration to Python-based systems, has dramatically improved the scalability of biodiversity data services. This shift highlights the necessity of adopting advanced technologies to manage large-scale biodiversity datasets and provide real-time decision-making tools.

#### 4. Mobilizing Resources for Sustainability and Scalability of Technological Solutions

The development and implementation of tools like the sRedList platform and automated STAR pipeline marked significant technological achievements in the project. However, sustainability and scalability of these solutions remain concerns. While these tools were integral to the success of K4N, their long-term viability will depend on continued investment in infrastructure and capacity building. The project yielded the lesson that technological advancements, while transformative, must be backed by robust financial and institutional support to ensure they can be maintained and scaled to meet growing global demands. This highlights the need for a more structured long-term funding strategy founded on the principles of financial portfolio diversification, ensuring that the project's outputs are supported beyond the initial funding period.

## 6.2 Conclusions

Based on the evaluation of the K4N Project, key conclusions underscore substantial progress in enhancing global biodiversity data infrastructure, addressing critical knowledge gaps, and integrating advanced technologies.

1. **Strengthening the Global Biodiversity Data Infrastructure:** The K4N project has made significant strides in advancing global biodiversity data through the IUCN Red List, addressing key barriers such as outdated assessments, lack of unified metrics, and underutilized technologies. Through strategic collaboration and the development of cutting-edge data services, the project has substantially enhanced the availability and accessibility of biodiversity metrics that are critical for global conservation efforts. Key accomplishments include the automation of the RLI and the STAR metrics, which now provide a scalable and real-time tool for tracking species extinction risks.
2. **Marine Biodiversity as a Critical Focus:** The integration of the STAR metric with marine species, an essential development, fills a crucial gap in conservation metrics, ensuring that all ecosystems are represented in global assessments. These advancements are poised to play a pivotal role in shaping nature-related financial disclosures and informing decision-making for conservation priorities. This expansion is crucial for meeting science-based targets for biodiversity, particularly within frameworks like the SDGs and the GBF, which emphasize the need for more comprehensive monitoring of ocean health.
3. **Addressing Knowledge Gaps in Underrepresented Taxa:** The project has also tackled urgent knowledge gaps, producing over two thousand species assessments across underrepresented taxa, including goby fishes, fungi, and dung beetles. By addressing these critical knowledge gaps, K4N is helping create a more inclusive and complete database of species conservation status, which will better inform conservation strategies and interventions.
4. **Integration of New Technologies for Enhanced Sustainability and Scalability:** The emphasis on integrating new technologies like AI and remote sensing further strengthens the project's ability to maintain and expand its datasets, ensuring the sustainability and scalability of the tools developed.





5. **The Importance of Adaptive Management and Flexibility:** The project has demonstrated the necessity of adaptive management, as the complexity of the work and the dependencies between various outputs required adjustments throughout the project. The ability to pivot and reallocate resources in response to unforeseen challenges, such as expert availability and co-financing needs, has been crucial to maintaining project progress. Moving forward, this flexible approach will be important in addressing any new challenges that arise in the final stages of the project and beyond.
6. **Collaboration with TNFD and Financial Reporting:** The ongoing collaboration with the TNFD is expected to drive the integration of these tools into financial reporting frameworks, enhancing transparency and accountability in biodiversity conservation. By aligning with TNFD's framework, the project supports the financial sector in adopting standardized biodiversity disclosures, driving more sustainable practices across industries. Ultimately, this collaboration is critical for embedding biodiversity considerations into global financial frameworks, fostering a nature-positive economy.
7. **Project Challenges and Future Focus:** Despite the complexity and challenges inherent in the project, including dependencies between outputs and resource limitations, the project was successfully completed. Adjustments in response to delays and emerging risks, such as the need for co-financing and expert availability, have been effectively managed. Looking forward, continued focus on sustainability, resource mobilization, and enhancing national-level integration will be essential for maintaining the momentum of the K4N initiative and ensuring the long-term impact of the IUCN Red List in global biodiversity conservation.

The table below provides an assessment of the K4N's ratings in line with GEF evaluation criteria. The Performance Rating Criteria is provided in [Annex 6](#).

Table 9: Evaluation Ratings – K4N

| Evaluation Criteria  | Ratings                 | Comment                                                                                                          |
|----------------------|-------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Relevance</b>     | Highly Satisfactory     | High Relevance to Global, National, Regional biodiversity data needs                                             |
| <b>Coherence</b>     | Satisfactory            | High Coherence with Global, National, Regional biodiversity data systems and needs                               |
| <b>Effectiveness</b> | Satisfactory            |                                                                                                                  |
| • <b>Component 1</b> | Highly Satisfactory     | Outcomes have significant implications (Automation of RLI and STAR; Marine Layer, and TNFD)                      |
| • <b>Component 2</b> | Satisfactory            | Expanded critical data sets for key taxa                                                                         |
| • <b>Component 3</b> | Moderately Satisfactory | AOH Automation, Improved SIS Connect Tool for National Integration,<br>Sustainability Strategy Under Development |
| <b>Efficiency</b>    | Satisfactory            | Adaptive Management, Stakeholder Collaboration, Co-Financing                                                     |



|                                            |                         |                                                                                                                |
|--------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Sustainability</b>                      | Moderately Likely       | Institutional Embedding, Automation, Reliance of Short-term Funding, Sustainability Strategy Under Development |
| <b>Project Implementation</b>              | Satisfactory            | IUCN GEF Agency followed GEF standards                                                                         |
| <b>Project Execution</b>                   | Satisfactory            | IUCN Executing Agency followed GEF Standards                                                                   |
| <b>Project M&amp;E (Design)</b>            | Moderately Satisfactory | Overall sound design; some indicators are not SMART; ambitious timeline                                        |
| <b>Project M&amp;E (Implementation)</b>    | Satisfactory            | GEF Standards followed                                                                                         |
| <b>Social and Environmental Safeguards</b> | Satisfactory            | Low Risk Rating, Collaboration with IPLC, Gender inclusion in activities as possible                           |

### 6.3 Recommendations

The recommendations below are tailored to inform the design of future biodiversity data projects, ensuring improved efficiency, effectiveness, sustainability, and impact. They are categorized into Project Design; Private Sector Engagement and Financial Mobilization; Capacity Building and Advocacy; and Gender Integration.

#### Project Design:

- **Continue Expanding and Refining the Marine Layer:** Develop a roadmap that broadens the scope of the marine layer by including a wider range of marine species, improving the precision of data related to marine habitat and threat assessment, and integrating the marine layer more effectively into global conservation frameworks. In addition, learnings and outcomes from this project should be used to inform ongoing and future initiatives on inclusion of additional species in the STAR metric, such as trees.
- **Strengthen Institutionalization of SIS Connect Beyond Technical Deployment:** Future phases should promote stronger governmental and institutional partnerships to expand uptake of SIS Connect across additional countries and embed its use within national biodiversity reporting and planning systems. Formal collaboration with environment ministries, national Red List Authorities, and regional bodies will be essential to ensure sustained national integration rather than isolated technical adoption.  
**Accelerate Technological Integration by Defining Tech Roadmaps Early:** Future projects should define technology roadmaps at the design stage, with clear timelines for tool development, testing, and deployment. This roadmap should be treated as a high-level deliverable and aligned with both the technical and scientific outputs from the beginning. Early and ongoing pilot testing will allow for adjustments before full-scale implementation.
- **Build on Existing Technology and Partnerships:** IUCN should continue to leverage the momentum gained from the development of new technologies and partnerships, such as the UoC collaboration and the inclusion of new species in the STAR metric. By integrating these advancements, IUCN can further enhance the accuracy, scalability, and applicability of



biodiversity metrics. IUCN can expand collaboration with academic institutions and technical partners to refine and implement new technologies.

### Private Sector Engagement and Financial Mobilization

- **Strengthen GEF uptake and institutionalization of Red List-derived metrics:** GEF should build on the advances achieved under K4N by formally integrating automated RLI and STAR outputs into project screening, spatial prioritization, and portfolio-level monitoring under GEF-8 and beyond. Embedding these science-based metrics within GEF's operational architecture would enhance decision quality, strengthen results reporting, and create sustained demand for up-to-date biodiversity data infrastructure.
- **Diversified Funding Portfolio:** The project benefited from GEF funding, but to ensure long-term sustainability, future projects must diversify their funding sources and engage with new models, such as corporate funding and philanthropic contributions. In this regard, IUCN should also continue efforts, together with Red List Partners and strategic stakeholders, to advance the NDPF from concept to implementation through a clear roadmap with defined governance, revenue targets, and pilot financing streams (e.g., data services, analytics, blended finance instruments). Revenues should be transparently reinvested into core Red List updating cycles to secure long-term financial sustainability beyond time-bound project funding.

### Capacity Building and Advocacy:

- **Launch Targeted Capacity-Building Programs in Megadiverse Countries:** Local capacity constraints were a barrier to the full utilization of K4N's tools, especially in countries with limited expertise or infrastructure for biodiversity data management. To overcome these challenges, there is a need to launch tailored, in-country capacity-building programs that focus on biodiversity data collection, analysis, and application. These could include a combination of online courses, workshops, and internships designed to upskill local stakeholders in using biodiversity metrics like RLI and STAR. Additionally, practical training can be provided on integrating biodiversity data into national policy frameworks.

### Gender and Social Inclusion

- **Establish Gender-Targeted Capacity-Building in Technical Leadership:** A dedicated program can be developed that targets women for capacity-building in technical roles related to biodiversity data systems, species assessments, and metrics development.



## Annexes

### Annex 1: Ethical Standards and Considerations

The Evaluation was conducted in accordance with the ethical standards of GEF and IUCN. The following considerations were initially outlined in the Evaluation Inception Report and were upheld throughout the evaluation process.

| Ethical Considerations and Guidelines |                                                                                                                                                                                                                                                                                         |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Respect for Participants              | All stakeholders, including IUCN, GEF, Implementing and Executing Agencies, beneficiaries and other interviewees, will be treated with respect and courtesy. Informed consent will be obtained before conducting interviews, and participants will be assured of confidentiality.       |
| Gender Considerations                 | The Evaluation will be gender-responsive, ensuring that perspectives and experiences of both men and women are equally represented and considered throughout the Evaluation process.                                                                                                    |
| Inclusivity                           | The Evaluation will incorporate diverse perspectives by engaging with a wide range of stakeholders, ensuring that voices from different levels and roles within IUCN, K4N civil society executing partners, and other partners are heard.                                               |
| Cultural Sensitivity                  | The Evaluation Team will demonstrate cultural sensitivity during interviews, recognizing and respecting the cultural nuances and diversity of the regions involved. Efforts will be made to ensure that the Evaluation process is culturally appropriate and inclusive.                 |
| Data Confidentiality                  | Data collected, including responses from interviews, will be treated with utmost confidentiality. Personal information will be anonymized in reports and presentations, and efforts will be made to ensure that individuals cannot be identified through the dissemination of findings. |
| Triangulation                         | To enhance the validity of findings, the Evaluation will employ triangulation by cross-referencing information collected through different methods, including desk review, interviews. This approach aims to ensure the reliability and accuracy of the data.                           |

|                                     |                                                                                                                                                                                                                                                                |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Methodological Rigor                | The Evaluation Team will develop a detailed methodological framework, aligning with IUCN and GEF standards, to guide the entire Evaluation process. The framework will emphasize transparency, consistency, and rigor in data collection and analysis.         |
| Transparency in Information Sharing | Participants will be provided with clear and comprehensive information about the purpose, objectives, and potential outcomes of the Evaluation. This transparency is essential for informed decision-making and obtaining genuine consent.                     |
| Right to Withdraw                   | Participants will be informed of their right to withdraw from the Evaluation at any stage without facing adverse consequences. This ensures that individuals can freely choose their level of involvement in the Evaluation process.                           |
| Feedback Mechanism                  | A feedback mechanism will be established to allow participants to provide comments or corrections to the Evaluation findings. This ensures an ongoing dialogue and promotes accountability in the Evaluation process.                                          |
| Independence of the Evaluation Team | The Evaluation Team will operate independently from IUCN, executing partners and other stakeholders involved in the partnership. This independence is crucial for impartiality and unbiased assessment of the Independent Final Evaluation of the K4N Project. |
| Conflict of Interest Disclosure     | Any potential conflicts of interest among the Evaluation Team members will be disclosed transparently. Steps will be taken to mitigate or manage conflicts to maintain the integrity of the Evaluation.                                                        |
| Adaptive Approach                   | The Evaluation will adopt an adaptive approach, allowing for flexibility in methods and strategies based on ongoing learning. This ensures that the Evaluation remains responsive to emerging insights and unexpected challenges.                              |

## Annex 2: Data Collection Tools

### KEY INFORMANT INTERVIEW (KII) SHEET

#### K4N PROJECT EVALUATION

#### IUCN - GEF IMPLEMENTING AGENCY

|                           |                    |                        |
|---------------------------|--------------------|------------------------|
| Date of KII               |                    |                        |
| Starting Time of KII      |                    |                        |
| Finishing Time of KII     |                    |                        |
| <b>Name of Respondent</b> | <b>Designation</b> | <b>Contact Details</b> |
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## K4N Project

### Background & Project Design

1. How did IUCN's prior experience in similar biodiversity data projects contribute to its involvement in and the design of the K4N initiative?
2. How did IUCN's high-level mandate and its Nature 2030 Programme influence the strategic design and objectives of the K4N Project?
3. What were the key strengths and weaknesses of the final project design from an oversight perspective?

### Relevance & Coherence

1. How well did the K4N project align with the GEF's strategic priorities for the Biodiversity Focal Area, particularly regarding the mainstreaming of biodiversity data?
2. From your oversight perspective, how effectively did the project adapt to remain relevant to major external developments, such as the finalization of the Kunming-Montreal Global Biodiversity Framework and the TNFD recommendations?
3. What specific action did IUCN's oversight and advisory body take to ensure the project complemented, rather than duplicated, the work of other major biodiversity data initiatives?

### Effectiveness and Impact

1. From your high-level perspective to what extent has the project been successful in achieving its core objectives of strengthening data services, expanding datasets, and promoting sustainability?
2. How has IUCN's involvement in the project's governance structures (e.g., the PAG) influenced key decisions and the project's overall direction?
3. What evidence have you seen that demonstrates the impact of K4N's outputs on biodiversity knowledge and conservation action (e.g., uptake by policy or financial sectors)?
4. Were there any unexpected or unintended impacts (positive or negative) arising from the project that were brought to the attention of the oversight team?
5. From a strategic viewpoint, has the project contributed to transformational change in how biodiversity data is produced, managed, or used by key stakeholders?

### Efficiency

1. From an oversight perspective, were the financial and human resources allocated to this project sufficient and managed effectively by the executing team?
2. The project required a no-cost extension. How was this adaptive management decision handled from a governance perspective, and how did it help mitigate the impact of initial delays?
3. To what extent were K4N activities delivered on time and in accordance with the planned timeline, as set out in the project document and work plans?

## Partnerships and Donor Coordination

1. How would you characterize the effectiveness of the multi-partner collaboration model used in this project? What were its main strengths and weaknesses from a governance standpoint?
2. How would you describe the coordination and communication between the project's implementing agency executing team and the GEF Secretariat?
3. From your perspective, how well did the coordination with the GEF contribute to the project's overall effectiveness and timely delivery of outputs?

## Sustainability

1. How likely are the project's interventions (e.g., automated data platforms) to be sustained beyond the project's lifecycle?
2. What is the role of the Implementing Agency in reviewing and supporting the long-term Resource Mobilization Strategy being developed under Outcome 3.2?
3. From a strategic risk perspective, what are the biggest threats to the long-term sustainability of the project's achievements?

## Oversight of Cross-Cutting Issues

1. How useful were the project's M&E reports, such as the PIRs, for IUCN's oversight and governance role? Did they provide the right information to make strategic decisions?
2. How did the Implementing Agency ensure the project complied with GEF and IUCN's fiduciary standards?
3. How did the oversight team monitor the project's adherence to its Environmental and Social Safeguards ?
4. How was the implementation of the project's Gender Action Plan monitored at the governance level?

## Lessons Learnt & Recommendations

1. What are the most important strategic lessons learned by IUCN from implementing the K4N project?
2. Based on this experience, what recommendations would you provide to improve the design, governance, and efficiency of future global biodiversity data initiatives supported by the GEF?

## KEY INFORMANT INTERVIEW (KII) SHEET

### K4N PROJECT ADVISORY GROUP (PAG)

|                           |                    |                        |
|---------------------------|--------------------|------------------------|
| Date of KII               |                    |                        |
| Starting Time of KII      |                    |                        |
| Finishing Time of KII     |                    |                        |
| <b>Name of Respondent</b> | <b>Designation</b> | <b>Contact Details</b> |
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## Background and Composition

1. When was the K4N PAG established, and what was the rationale behind its formation?
2. What are the roles and responsibilities of the PAG members, and how have these roles evolved during the K4N Project's implementation?
3. What is the composition of the PAG, and what expertise or perspectives do the different members bring to the committee?
4. How were PAG members selected, and how does the composition ensure balanced representation across scientific, policy, and stakeholder interests?

## Decision-Making

1. What is the frequency and format (e.g., in-person, virtual) of PAG meetings?
2. Were all PAG meetings conducted as scheduled, and if not, what were the reasons for any changes or delays?
3. How does the PAG make decisions, and what mechanisms are in place to ensure consensus or address any disagreements among members?
4. Can you provide an example of a key recommendation from the PAG that was successfully adopted and had a positive impact on the project's direction or effectiveness?
5. Conversely, were there any instances where the PAG's recommendations or decisions were not implemented or faced challenges in being adopted? If so, what were the reasons behind these challenges?

## Monitoring, Evaluation, and Learning

1. In what ways did the PAG utilize the monitoring and evaluation data and findings to provide guidance and recommendations for the K4N?
2. In what ways has the PAG provided guidance or support to ensure the project remains relevant to global biodiversity priorities, national needs, and stakeholder expectations?
3. How effectively has the PAG helped the PMU identify risks or emerging challenges in the project, and how has this influenced project adaptations?

## Implementation and Coordination

1. What specific mechanisms or processes did the K4N PAG employ to facilitate coordination and collaboration among project stakeholders, including implementing partners, executing agencies, and national or regional data users?
2. How did the PAG contribute to adaptive management within K4N, particularly in response to emerging biodiversity data needs, technological developments, or changes in stakeholder priorities?
3. In what ways did the PAG's involvement during project implementation enhance the overall efficiency and effectiveness of K4N in achieving its objectives, such as strengthening data services, expanding critical datasets, and ensuring sustainability?
4. How did the PAG foster knowledge sharing and learning across the K4N project, particularly among global partners, national stakeholders, and technical teams involved in biodiversity data generation and application?

## Lessons Learned and Recommendations

1. What are the key lessons learned from the PAG's involvement in K4N that could inform the design and governance of similar global biodiversity knowledge initiatives?
2. Based on the PAG's experience, what recommendations would you provide to enhance the effectiveness, impact, and sustainability of future biodiversity data projects or multi-partner conservation initiatives?

## KEY INFORMANT INTERVIEW (KII) SHEET

GEF (DONOR)

|                           |  |
|---------------------------|--|
| 1. Name of the Respondent |  |
| 2. Designation            |  |
| 3. Contact Details        |  |
| 4. Date of KII            |  |
| 5. Starting Time of KII   |  |
| 6. Finishing Time of KII  |  |



## K4N PROJECT

### Project Design and Alignment

1. How did GEF's strategic priorities and objectives inform the design and conceptualization of the K4N Project?
2. In what ways did GEF contribute to the development or refinement of K4N's Theory of Change, including its focus on biodiversity data gaps, monitoring, and sustainability?
3. How did the GEF ensure that the K4N project's design would be relevant and useful for countries globally in meeting their international biodiversity commitments, such as their NBSAPs?
4. What was GEF's rationale for supporting K4N as a programmatic approach, and how it envisioned the project's role in strengthening global biodiversity knowledge systems?
5. From the GEF's perspective, what was the specific 'additionality' of this project? What did this investment enable that would not have happened otherwise?

### Implementation and Coordination

1. Did GEF facilitate any coordination and collaboration among K4N implementing and executing partners throughout project implementation?
2. How effective were the monitoring mechanisms, such as the annual PIRs, in providing the GEF with a clear understanding of the project's progress and challenges? Was the information provided sufficient for your oversight needs?
3. The project required a no-cost extension due to technical complexities. From the GEF's perspective, how was this adaptive management process handled by the Implementing Agency, and was the justification for the extension sound?
4. In what ways did GEF promote knowledge sharing and learning among K4N partners, national stakeholders, and the broader biodiversity data community?

### GEF's Role and Influence

1. What was GEF's involvement in the governance structures of K4N, such as advisory groups, steering committees, or technical boards?
2. How did GEF's financial and strategic support influence the outcomes and achievements of K4N, including the expansion of biodiversity datasets, technology adoption, and sustainability of platforms?

### Lessons Learned and Recommendations

1. What are the key lessons learned from GEF's engagement in K4N that could inform the design, governance, and implementation of similar biodiversity knowledge initiatives?
2. Based on GEF's experience, what recommendations would you provide to implementing agency, executing partners and participating countries to enhance the effectiveness, impact, and sustainability of future biodiversity data programs?

## KEY INFORMANT INTERVIEW (KII) SHEET

PMU

|                           |                    |                        |
|---------------------------|--------------------|------------------------|
| Date of KII               |                    |                        |
| Starting Time of KII      |                    |                        |
| Finishing Time of KII     |                    |                        |
| <b>Name of Respondent</b> | <b>Designation</b> | <b>Contact Details</b> |
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## K4N Project

### Background & Design

1. When was the PMU established?
2. Which agency/department has the ownership of the PMU?
3. From your perspective, what were the key strengths of the K4N project's design?
4. Conversely, what were the main weaknesses or challenges in the project's design that you had to manage during implementation?

### Relevance and Coherence

1. How did the PMU work to ensure the project's activities remained aligned with the evolving priorities of key stakeholders, particularly the TNFD?
2. What were the other key global biodiversity data initiatives that the K4N project needed to coordinate with, and how did the PMU manage these relationships to create synergies?

### Effectiveness

1. To what extent has the PMU been successful in guiding the project toward its core objectives? Please provide an example of a major success.
2. What were the key factors (internal or external) that most influenced the project's progress?
3. How effective has the PMU been in mitigating implementation challenges, such as technical bottlenecks or coordination issues across the diverse partnership?
4. How effective was the support and strategic guidance provided by the IUCN Implementing Agency in helping the PMU achieve its objectives?

### Efficiency

1. From your management perspective, were the financial and human resources sufficient to achieve the project's ambitious outputs? If not, how did this affect progress?
2. How did the PMU address any resource or operational challenges to improve efficiency?
3. To what extent were K4N activities delivered on time and according to the planned timeline outlined in the project document and annual work plans? If there were delays, what were the key contributing factors?
4. How was the decision to request a no-cost extension made, and how has the PMU re-planned activities to ensure completion within the new timeframe?

### Partnerships and Coordination

1. How did the PMU establish and maintain effective coordination mechanisms with the various executing partners?

2. What were the key challenges encountered in coordinating activities and sharing data across such a diverse and geographically dispersed group of partners?
3. How did the PMU ensure that the project's activities complemented and created synergies with the partners' own work, particularly on shared platforms like the Red List and IBAT?
4. How would you describe the coordination with the donor (GEF)? Were reporting and communication channels effective?

## Impact & Sustainability

1. What, in your view, is the most significant impact of the K4N project on biodiversity knowledge and conservation action so far?
2. What strategies is the PMU implementing to ensure the long-term sustainability of the project's outcomes, particularly the new tools and data platforms?
3. How is the PMU involved in the development and planned roll-out of the Red List Sustainability Plan (Outcome 3.2)?
4. What are the biggest risks to the long-term sustainability of the project's achievements, and how are these being mitigated?

## Monitoring, Evaluation, and Cross-Cutting Issues

1. How did the PMU use the project's M&E framework to monitor progress, report to the donor (e.g., through PIRs), and inform adaptive management decisions?
2. What were the main challenges the PMU faced in monitoring and reporting on progress, particularly for the highly technical and interdependent outputs?
3. How did the PMU ensure the project's adherence to its Environmental and Social Safeguards?
4. How did the PMU work to implement the project's Gender Action Plan, for example, in ensuring gender balance in workshops and expert groups?

## Lessons Learned and Recommendations

1. What are the most important operational and management lessons the PMU has learned from implementing the K4N project?
2. What recommendations would you make to improve the effectiveness and efficiency of future multi-partner, global knowledge projects like K4N?

## KEY INFORMANT INTERVIEW (KII) SHEET

EXECUTING PARTNERS (BirdLife International, Sapienza University, Re:wild, Old Dominion University, Simon Fraser University, etc.)

|                           |                    |                        |
|---------------------------|--------------------|------------------------|
| Executing Partner         |                    |                        |
| Date of KII               |                    |                        |
| Starting Time of KII      |                    |                        |
| Finishing Time of KII     |                    |                        |
| <b>Name of Respondent</b> | <b>Designation</b> | <b>Contact Details</b> |
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## Background Information

1. What is the core mandate of your organization, and how does it align with the goals of the K4N Project at the global levels?
2. How did your organization become involved in K4N implementation?
3. Has your organization previously collaborated with IUCN, other K4N implementing partners, or the GEF? If yes, in what capacity?
4. What was your organization's involvement in the design and planning phase of the K4N implementation (e.g., providing technical input, feasibility assessments, or guidance on biodiversity data priorities)?
5. In your opinion, how does K4N complement your organization's existing projects, strategies, and objectives related to biodiversity monitoring, data management, or policy support?

## Project Implementation

1. Please provide an overview of your organization's role in the implementation of the K4N project.
2. Please specify which project outputs your organization led or made significant contributions to (e.g., the RLI, the Marine STAR metric, specific species assessments)?
3. What factors have contributed to the success of your organization's involvement in K4N?
4. Were there any barriers or challenges that hindered your organization's contributions during project implementation? If yes, how were these addressed?
5. The project experienced some delays due to the technical complexity of the work. How did this complexity affect your team's work and timelines? How was this managed in coordination with the IUCN PMU?
6. How has participation in the K4N implementation benefited your organization in terms of capacity building, knowledge sharing, or partnership development?

## Coordination and Partnerships

1. What coordination mechanisms were in place to support collaboration between your organization and other K4N stakeholders, including IUCN, and local or regional partners?
2. Was your organization part of any steering or advisory committees for K4N? If so, what was your role within these structures (e.g., advisory, decision-making, technical guidance)?
3. In your opinion, what aspects of coordination worked well in ensuring smooth project implementation of the K4N Project?
4. Were there any challenges or gaps in coordination between your organization and other partners? How were these addressed, or what improvements could be made for future implementation?
5. How would you assess the collaboration between your organization and IUCN including the technical support and shared resources provided?

## Gender and Environmental and Social Safeguards

1. How has your organization ensured the integration of gender considerations during K4N implementation within your team and activities?



2. What specific measures were taken to ensure that project benefits are equitably distributed among men, women, and marginalized groups within the context of your work?
3. How did your organization integrate Environmental and Social Safeguards into its project activities?
4. Were there any challenges in meeting gender or ESS standards? If so, how were these addressed?
5. What monitoring systems were in place to track compliance with gender and ESS requirements throughout the project?

## Impact and Sustainability

1. In your view, what has been the overall impact of K4N implementation in achieving the project's objectives, such as strengthening biodiversity knowledge, improving data accessibility, and supporting evidence-based decision-making?
2. Can you provide a specific example of how your work on this project has contributed to this impact?
3. How has your organization ensured the sustainability of K4N activities and outcomes beyond the project's timeframe? For example, will your organization continue to use the methodologies developed during this project? Are there plans to maintain or update the datasets you contributed to?
4. What role will your organization play in continuing to support biodiversity data generation, management, and application after the project ends?
5. How does the success of K4N implementation contribute to wider environmental or policy goals, such as the Kunming-Montreal Global Biodiversity Framework, SDGs, or global biodiversity strategies?
6. Are there any external factors that may affect the sustainability of the project's achievements, such as political, financial, technological, or institutional challenges?

## Lessons Learned and Recommendations

1. What key lessons has your organization learned from its involvement in the K4N implementation?

What recommendations would you provide for future biodiversity knowledge and data initiatives aiming to achieve similar outcomes?

## KEY INFORMANT INTERVIEW (KII) SHEET

ADDITIONAL PARTNERS (e.g., IBAT, Natureleon, International Institute for Sustainability)

|                           |                    |                        |
|---------------------------|--------------------|------------------------|
| Organization              |                    |                        |
| Date of KII               |                    |                        |
| Starting Time of KII      |                    |                        |
| Finishing Time of KII     |                    |                        |
| <b>Name of Respondent</b> | <b>Designation</b> | <b>Contact Details</b> |
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## K4N Project

1. How does the mandate of your organization align with the objectives of the K4N Project?
2. What activities has your organization been directly involved in or contributed to within K4N implementation? For example, has your involvement been through providing data, using one of the project's tools (like STAR via IBAT), participating in workshops, or reviewing assessments?
3. Were there any internal or external factors that either facilitated or hindered the success of your organization's contributions to K4N?
4. Were there any challenges in communication or coordination with other partners or stakeholders? If so, how were these addressed?
5. From your perspective, what has been the impact of the K4N project's outputs (e.g., the automated RLI, the Marine STAR metric, new species data) on your organization's work or on the broader conservation community?
6. From your perspective, how likely is it that the tools and datasets enhanced by the K4N project will be sustained and continue to be useful for the conservation community in the long term? What are the biggest risks to their sustainability?
7. What are the key lessons learned from your organization's participation in the K4N Project?
8. Based on your experience, what recommendations would you provide to improve future collaborations in multi-country biodiversity knowledge and data initiatives? Specifically, what are your recommendations for improving the collaboration between a core project team, like K4N, and the broader network of partners and users in the Red List ecosystem?

## BENEFICIARY INTERVIEWS SHEET

### BENEFICIARIES

|                                    |  |
|------------------------------------|--|
| <b>Organization</b>                |  |
| <b>Date of Interview</b>           |  |
| <b>Starting Time of Interview</b>  |  |
| <b>Finishing Time of Interview</b> |  |

| Sr. No. | Name | Gender |
|---------|------|--------|
| 1       |      |        |
| 2       |      |        |
| 3       |      |        |
| 4       |      |        |

## K4N Project

### Background: User and Stakeholder Involvement

1. When did you or your organization first start using data or tools related to the IUCN Red List or its products (like STAR)?
2. How were you informed about the new tools or data updates developed through the K4N project (e.g., Marine STAR, automated RLI)?
3. Are the data and tools provided by the K4N project relevant to the needs of your organization? What motivated you to use them?
4. Were there opportunities for users like you to provide feedback or influence the development of these data products (e.g., through workshops, surveys, or direct contact)?
5. From your perspective, who are the key user groups or stakeholders for these global biodiversity data products?

### Project Implementation & Use

1. What specific K4N data products or tools have you or your organization used? (e.g., the STAR metric via IBAT, the Red List Index, new species assessments, the sRedList tool).
2. What role did women, youth, or other groups within your organization or sector play in using or benefiting from these data and tools?
3. Did you face any challenges when trying to access or use the data and tools from the K4N project, such as technical difficulties, data complexity, or issues with accessibility?
4. How were these challenges addressed by the project team or the platforms providing the data (e.g., IUCN, IBAT)?

### Impact

1. Has the use of K4N's data or tools led to any improvements in your organization's work, such as better-informed decision-making, more effective conservation planning, or improved environmental risk assessment? Please elaborate.
2. How has K4N's work contributed to the way you manage, monitor, or report on biodiversity?
3. What changes have you observed in the quality, accessibility, or scope of biodiversity data available for your work as a result of this project?
4. How has K4N's work impacted your organization's ability to respond to policy or market drivers (e.g., reporting for the GBF, TNFD, or other sustainability frameworks)?
5. Have any of your organization's strategies or priorities benefited from the project's activities? Please provide examples.
6. How has K4N contributed to your professional capacity for data management and biodiversity analysis?

7. Have there been noticeable changes in your organization's ability to access and use critical biodiversity information as a result of the project?
8. How has the project improved your access to technical support, guidance, or a network of experts for using this data?
9. What social or collaborative benefits have emerged, such as improved networking with other data users or a greater capacity for evidence-based advocacy?
10. Have there been specific benefits for women, youth, or other groups in your professional field through the use of K4N's data and tools?

## **Sustainability and Long-term Benefits**

1. Which data, tools, or practices introduced by K4N are likely to become a permanent part of your organization's workflow?
2. Are there sufficient financial, institutional, or technical mechanisms in place to support your continued use of these biodiversity knowledge platforms in the future?
3. What long-term benefits do you anticipate for your work, such as sustained access to high-quality data, continued professional development, or more evidence-based decision-making?
4. How are users like you contributing to the long-term sustainability of these data platforms (e.g., through subscriptions, providing feedback, contributing data)?

## **Knowledge Sharing and Replication**

1. Have you shared the knowledge, data, or tools gained from K4N with others in your professional network or organization? If yes, how?
2. Have there been training sessions, workshops (like the STAR or Red List Technology workshops), or other events where you could share or learn from other users?
3. Are there opportunities for replicating the approaches or tools from K4N in other parts of your work or in other professional contexts?

## **Gender and Environmental and Social Safeguards**

1. From your perspective as a user, did the project's data and tools seem to address gender equity appropriately (e.g., through inclusive language, accessibility)?
2. In your experience, were the platforms and networks associated with the project inclusive and welcoming to a diversity of participants, including women, men, and professionals from different backgrounds?
3. Were there any social risks associated with the use of this data that you identified (e.g., data privacy, misinterpretation)? How were these managed?
4. In your view, how was scientific and expert knowledge respected and integrated during the project?



## Lessons Learned and Recommendations

1. What lessons did you learn from using the K4N data and tools that could improve future biodiversity data initiatives?

What recommendations would you provide for improving the development, accessibility, or utility of similar global biodiversity data platforms in the future?

### Annex 3: List of Documents Reviewed

| S. No. | Document Title                                                                                                    |
|--------|-------------------------------------------------------------------------------------------------------------------|
| 1      | K4N TORs                                                                                                          |
| 2      | K4N PIR 2025                                                                                                      |
| 3      | K4N PIR 2024                                                                                                      |
| 4      | K4N GEF Project Document                                                                                          |
| 5      | IUCN PR Red List                                                                                                  |
| 6      | K4N Inception Workshop Agenda                                                                                     |
| 7      | K4N Inception Workshop                                                                                            |
| 8      | K4N Annual Project Advisory Group Meeting                                                                         |
| 9      | ASU Final Report                                                                                                  |
| 10     | BirdLife report to IUCN on Red List work (2024)                                                                   |
| 11     | Measuring trends in extinction risk: a review of two decades of development and application of the Red List Index |
| 12     | IUCN - Dung Beetles Report                                                                                        |
| 13     | IUCN - Dung Final Assessments                                                                                     |
| 14     | IUCN - Dung Final Assessments Summary                                                                             |
| 15     | Dung Final K4N Final Report                                                                                       |
| 16     | TNFD Recommendations                                                                                              |
| 17     | Freshwater Assessment                                                                                             |
| 18     | Goby GEF Project MBU First Technical Report                                                                       |
| 19     | The Thematic Assessment of the Interlinkages Among Biodiversity, Water, Food and Health - IPBES                   |
| 20     | Newcastle Interim Technical Report to IUCN                                                                        |
| 21     | Red List Technology Workshop Report                                                                               |
| 22     | ReWild K4N Amphibian Final Report                                                                                 |
| 23     | Sapienza K4N Technical Report                                                                                     |
| 24     | SRedList Cazalis (2024)                                                                                           |
| 25     | Targeting Ocean Conservation Outcomes Through Threat Reduction – Turner (2024)                                    |
| 26     | IUCN Resource Mobilization Strategy (2024)                                                                        |

#### Annex 4: List of Stakeholders Interviewed

| Stakeholder Group                   | Name                                | Position                                        | Stakeholders                                             | No. of Interview(s) |
|-------------------------------------|-------------------------------------|-------------------------------------------------|----------------------------------------------------------|---------------------|
| <b>Donor</b>                        | Mr. Jurgis Pierre-Louis Sapijanskas | Program Manager                                 | GEF                                                      | 1                   |
| <b>Project Advisory Group (PAG)</b> | Ms. Susanne Pedersen                | Director, IUCN Centre for Science and Knowledge | K4N Project Advisory Group                               | 1                   |
| <b>Lead Executing Agency</b>        | Mr. Simon Tarr                      | Red List Data Manager                           | IUCN – Biodiversity Assessment and Knowledge Team (BAKT) | 1                   |
|                                     | Mr. Richard Jenkins                 | Director, Biodiversity Assessment and Knowledge | IUCN – Biodiversity Assessment and Knowledge Team (BAKT) |                     |
|                                     | Mr. Thomas Brooks                   | Chief Scientist                                 | IUCN - Science                                           | 1                   |
|                                     | Mr. Nicholas Macfarlane             | Head of Conservation Science and Technology     | IUCN - Science                                           |                     |
|                                     | Ms. Florence Curet                  | Senior Programme Manager                        | IUCN – Business and Nature                               | 1                   |
|                                     | Mr. Juha Siikamaki                  | Chief Economist & Economics                     | IUCN – Economy and Finance                               | 1                   |
| <b>Implementing Agency</b>          | Mr. Joshua Schneck                  | Portfolio Manager Global Initiatives            | IUCN – Multilateral Finance Unit                         | 1                   |
| <b>PMU</b>                          | Mr. Andrés Rodríguez                | Scientific Associate                            | PMU                                                      | 1                   |
|                                     | Mr. Craig Hilton-Taylor             | Head, Red List Unit                             | PMU                                                      |                     |
|                                     | Mr. Randall Jimenez                 | Senior Conservation Scientist                   | PMU                                                      |                     |
|                                     | Mr. Stuart Butchard                 | Chief Scientist                                 | BirdLife International (BLI)                             | 1                   |

| Stakeholder Group          | Name                     | Position                                                                | Stakeholders                            | No. of Interview(s) |
|----------------------------|--------------------------|-------------------------------------------------------------------------|-----------------------------------------|---------------------|
| <b>Executing Partners</b>  | Ms. Christi Linardich    | Senior Researcher IUCN Marine Biodiversity Unit                         | Old Dominion University (ODU)           | 1                   |
|                            | Mr. Michael Wiston Dales | Senior Research Associate (Department of Computer Science & Technology) | University of Cambridge (UoC)           | 1                   |
|                            | Ms. Louise Mair          | NUAcT Research Fellow                                                   | Newcastle University                    | 1                   |
|                            | Ms. Chess Ridley         | Research Associate in Ecology                                           | Newcastle University                    |                     |
| <b>Additional Partners</b> | Mr. Nikolai Berkoff      | IBAT Lead Software Architect                                            | IBAT                                    | 1                   |
|                            | Mr. Warwick Mostert      | IBAT Biodiversity and Business Lead                                     | IBAT                                    |                     |
|                            | Mr. Victor Cazalis       | Conservation Analyst for Research Application (www.conservara.fr)       | Support to National Governments via SIS | 1                   |
| <b>Beneficiaries</b>       | Ms. Emily McKenzie       | Technical Director                                                      | TNFD                                    | 1                   |
| <b>Total:</b>              |                          |                                                                         |                                         | 15                  |

## Annex 5: Evaluation Matrix

| Key Evaluation Questions                                                                                                                                                                                                                                                                                                                                    | Sub Questions                                                                                                                                                                                  | Indicators                                                                                                                                                                                                                                                                             | Source of Information                                                                                                                                                                                                                                                                                | Data Collection Tools                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Relevance:</b> Assess the <b>relevance</b> of the K4N Project in terms of its alignment with and response to the environmental and development priorities of the participating countries, as well as IUCN and GEF's strategic priorities and objectives, the mandates of executing partners, and the needs and priorities of the intended beneficiaries. |                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                    |
| 1. To what extent are the K4N project's objectives and design responsive to the environmental and development priorities of the participating stakeholders?                                                                                                                                                                                                 | 1.1 How well does the project's design address documented global biodiversity priorities, particularly the need for accessible, high-quality species data as articulated in global frameworks? | <ul style="list-style-type: none"> <li>• Alignment of project components with priorities in the Kunming-Montreal GBF, particularly Target 15.</li> <li>• Evidence of project design responding to needs identified in the IPBES Global Assessment.</li> </ul>                          | <ul style="list-style-type: none"> <li>• GEF Project Document (CEO Endorsement Request)</li> <li>• TNFD Recommendations (2023)</li> <li>• IPBES Thematic Assessment of Interlinkages Among Biodiversity, Water, Food And Health</li> <li>• K4N Inception Workshop presentation and report</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (Project Management Unit, Thematic Leads), GEF Secretariat, and Executing Partners.</li> <li>• Desk Review.</li> </ul> |
| 2. How well do the K4N project's objectives and design align with the GEF's strategic priorities and objectives?                                                                                                                                                                                                                                            | 2.1 To what extent do the project's three components directly contribute to the GEF-7 Biodiversity Focal Area objectives (e.g., BD-1-1 Mainstreaming Biodiversity)?                            | <ul style="list-style-type: none"> <li>• Explicit links between K4N outcomes (e.g., 1.3 on TNFD, 1.1 on NBSAPs) and GEF mainstreaming objectives.</li> <li>• Number and nature of project outputs designed to provide "decision-grade data" for policy and finance sectors.</li> </ul> | <ul style="list-style-type: none"> <li>• GEF Project Document (specifically Section B and Alignment with GEF Focal Area)</li> <li>• K4N PIRs</li> </ul>                                                                                                                                              | <ul style="list-style-type: none"> <li>• Key Informant Interviews with the GEF Secretariat and the IUCN Portfolio Manager.</li> <li>• Desk Review.</li> </ul>                                      |
| 3. To what extent are the K4N project's objectives and design                                                                                                                                                                                                                                                                                               | 3.1 How does the project's focus on strengthening the IUCN Red List and                                                                                                                        | <ul style="list-style-type: none"> <li>• Alignment of K4N's three components with</li> </ul>                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>• GEF Project Document</li> <li>• IUCN Nature 2030</li> </ul>                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>• Key Informant Interviews with</li> </ul>                                                                                                                  |

| Key Evaluation Questions                                                                                                            | Sub Questions                                                                                                                                                                                                                                                             | Indicators                                                                                                                                                                                                                                                                      | Source of Information                                                                                                                                                                                                                                                        | Data Collection Tools                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| congruent with the mandates of the IUCN and its executing partners?                                                                 | its derived products (RLI, STAR) align with IUCN's core mandate and its Nature 2030 Programme?                                                                                                                                                                            | IUCN's strategic goals for science, data, and conservation action.<br>• Evidence of executing partners' involvement in project activities that align with their own institutional mandates (e.g., BirdLife's role in RLI, Arizona State University's role in Marine STAR).      | Programme<br>• Partner Technical Reports (Arizona State University, BirdLife International, Sapienza University, Re:Wild)<br>• K4N Inception Workshop and Annual Project Advisory Group Meeting presentations                                                                | IUCN (Project Management Unit, Project Advisory Group members) and all Executing Partners.<br>• Desk Review.                          |
| 4. To what extent are the K4N project's objectives and design responsive to the needs and priorities of the intended beneficiaries? | 4.1 How effectively do the project's key outputs (e.g., automated RLI, Marine STAR, TNFD metrics, new species assessments) address the specific, expressed needs of primary user groups (e.g., financial institutions, national governments, conservation practitioners)? | • Number of consultations and documented feedback from user groups (such as the TNFD) during project design and implementation.<br>• Evidence of uptake or use of project outputs by beneficiaries (e.g., use of the sRedList tool, integration of data into national reports). | • GEF Project Document (Stakeholder Engagement Plan)<br>• K4N PIRs<br>• Partner Technical Reports (Newcastle University, Old Dominion University)<br>• TNFD Recommendations (2023)<br>• Nature paper on Freshwater Assessment, npj Ocean Sustainability paper on Marine STAR | • Key Informant Interviews with Executing Partners, Project Management Unit, and Project Advisory Group.<br>• Beneficiary interviews. |
| 5. Do the project's objectives and intended results remain relevant at the time of project completion?                              | 5.1 How has the project adapted its activities and outputs to remain aligned with major external developments during its lifecycle (e.g.,                                                                                                                                 | • Evidence of adaptive management in response to external context (e.g., project's engagement                                                                                                                                                                                   | • K4N PIRs<br>• K4N Annual Project Advisory Group Meeting presentations                                                                                                                                                                                                      | • Key Informant Interviews with IUCN (Project Management Unit,                                                                        |

| Key Evaluation Questions                                                                                                                                                                             | Sub Questions                                                                                                                                                                                      | Indicators                                                                                                                                                                                                            | Source of Information                                                                                                                                                                                                  | Data Collection Tools                                                                                          |
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|                                                                                                                                                                                                      | finalization of the GBF, rapid evolution of the TNFD)?                                                                                                                                             | with TNFD as it developed, alignment of RLI with SDG reporting needs).<br>• Continued demand for project outputs (e.g., Red List data, STAR metric) from key policy and market initiatives at the time of evaluation. | • Red List Technology Workshop Report (2025)<br>• Butchart et al. (2025) "Measuring trends in extinction risk: a review of two decades of development and application of the Red List Index"                           | Project Advisory Group), GEF Secretariat, and Executing Partners.<br>• Desk Review                             |
| <b>Coherence:</b> Assess the <b>coherence</b> of the K4N Project with project's internal alignment and external compatibility with related initiatives to achieve targeted environmental objectives. |                                                                                                                                                                                                    |                                                                                                                                                                                                                       |                                                                                                                                                                                                                        |                                                                                                                |
| 1. To what extent is the project design compatible with other activities and strategies implemented by participating stakeholders, relevant sectors, and institutions?                               | 1.1 How well does the project's work on the RLI and STAR metrics complement the conservation science and data management activities of its executing partners (e.g., BirdLife, Re:wild, Sapienza)? | • Extent of collaboration and data sharing between IUCN and partners on shared outputs (e.g., RLI backcasting, AoH methodology).<br>• Evidence of K4N outputs being integrated into partners' own tools or workflows. | • Partner Technical Reports (BirdLife, Sapienza, Re:Wild, Newcastle)<br>• K4N PIRs<br>• Butchart et al. (2025) "Measuring trends in extinction risk"<br>• Turner et al. (2024) "Targeting Ocean Conservation Outcomes" | • Key Informant Interviews with all Executing Partners and the IUCN Project Management Unit.<br>• Desk Review. |
| 2. How well does the project align with the work of development partners and other organizations in the same context?                                                                                | 2.1 How effectively does the project's engagement with the TNFD (Outcome 1.3) align with and contribute to the broader sustainable finance agenda and the work of other TNFD knowledge partners?   | • Level and nature of IUCN's documented role within the TNFD framework (e.g., Knowledge Partner, participation in forums).<br>• Evidence of K4N-supported metrics (e.g.,                                              | • TNFD Recommendations (2023)<br>• K4N Annual Project Advisory Group Meeting presentations<br>• K4N PIRs                                                                                                               | • Key Informant Interviews with IUCN (Economics/BAKT teams), TNFD-related stakeholders.<br>• Desk Review.      |



| Key Evaluation Questions                                                                                                      | Sub Questions                                                                                                                                                                                                                 | Indicators                                                                                                                                                                                                                                                                                                       | Source of Information                                                                                                                                                                                                                                                                    | Data Collection Tools                                                                                                                                                                         |
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|                                                                                                                               |                                                                                                                                                                                                                               | STAR) being referenced or integrated into TNFD guidance documents.                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                               |
| 3. What socioeconomic synergies and trade-offs are associated with the project design?                                        | 3.1 What are the potential socioeconomic synergies of providing open, accessible biodiversity data (e.g., enabling sustainable business practices, supporting national environmental reporting, informing academic research)? | <ul style="list-style-type: none"> <li>• Examples of project data being used by businesses, governments, or researchers for purposes beyond direct conservation action.</li> <li>• Number and diversity of users accessing project outputs through platforms like the IUCN Red List website and IBAT.</li> </ul> | <ul style="list-style-type: none"> <li>• GEF Project Document (CEO Endorsement Request)</li> <li>• Nature paper on Freshwater Assessment</li> <li>• K4N PIRs</li> </ul>                                                                                                                  | <ul style="list-style-type: none"> <li>• Key Informant Interviews with a sample of data users (e.g., from private sector, government agencies).</li> <li>• Beneficiary interviews.</li> </ul> |
| 4. Is the project well targeted—in terms of countries, regions, and/or communities—to generate global environmental benefits? | 4.1 How does the project's focus on under-assessed taxonomic groups (Component 2) and the extension of STAR to the marine realm (Outcome 1.2) strategically target recognized gaps in global biodiversity knowledge?          | <ul style="list-style-type: none"> <li>• Alignment of target taxa (goby fish, fungi, dung beetles) with scientifically recognized knowledge gaps.</li> <li>• Justification for the development of a marine STAR metric as a priority for global conservation.</li> </ul>                                         | <ul style="list-style-type: none"> <li>• GEF Project Document (Project Justification section)</li> <li>• Final Technical Reports (ASU, ODU, ZSL, Dung Beetle Annex)</li> <li>• Nature paper on Freshwater Assessment</li> <li>• npj Ocean Sustainability paper on Marine STAR</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, Thematic Leads) and relevant Executing Partners.</li> <li>• Desk Review.</li> </ul>                         |
| 5. Does the project design provide a practical and logical approach for addressing the targeted environmental concern?        | 5.1 How logically do the project's three components connect to form a coherent strategy (i.e., does improving data and tools [C1/C2]                                                                                          | <ul style="list-style-type: none"> <li>• Clarity of the causal links between Component 1 (data services), Component 2 (data gaps), and</li> </ul>                                                                                                                                                                | <ul style="list-style-type: none"> <li>• GEF Project Document (Project Description and Theory of Change sections)</li> <li>• K4N Inception</li> </ul>                                                                                                                                    | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, PAG).</li> <li>• Desk Review.</li> </ul>                                                                    |

| Key Evaluation Questions                                                                                                                                                                    | Sub Questions                                                                                                                                                                                       | Indicators                                                                                                                                                                                                                                                                                                | Source of Information                                                                                                                                                                                                                                                | Data Collection Tools                                                                                                                                  |
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|                                                                                                                                                                                             | logically support the goal of long-term sustainability [C3])?                                                                                                                                       | Component 3 (sustainability) in the project's design.<br>• Evidence that the outputs are mutually reinforcing (e.g., new species data from C2 feeds into improved metrics in C1).                                                                                                                         | Workshop presentation (which outlines the project logic)                                                                                                                                                                                                             |                                                                                                                                                        |
| 6. To what extent are the project's implicit theory of change,(as reconstructed for this evaluation), project components, activities, and M&E system aligned with the project's objectives? | 6.1 How well does the project's results framework (indicators and targets) align with the activities and intended outcomes described in the project narrative?                                      | <ul style="list-style-type: none"> <li>• Consistency between the project's logframe/results framework and the activities described in the work plan and partner agreements.</li> <li>• Evidence that M&amp;E indicators are tracking progress towards the stated outcomes.</li> </ul>                     | <ul style="list-style-type: none"> <li>• GEF Project Document (Annex A: Project Results Framework)</li> <li>• K4N PIRs</li> <li>• Partner Technical Reports</li> </ul>                                                                                               | <ul style="list-style-type: none"> <li>• Desk Review.</li> <li>• Key Informant Interviews with the IUCN Project Management Unit.</li> </ul>            |
| 7. How and to what extent has the project design incorporated lessons from past interventions and built on recognized good practices?                                                       | 7.1 To what extent does the project's design (e.g., use of sRedList, development of automated pipelines) build upon existing tools and lessons learned from previous biodiversity data initiatives? | <ul style="list-style-type: none"> <li>• References in the project design to lessons from prior initiatives (e.g., the need for automation, the success of GeoCAT).</li> <li>• Evidence of the project leveraging existing platforms (e.g., SIS, IBAT) rather than creating entirely new ones.</li> </ul> | <ul style="list-style-type: none"> <li>• GEF Project Document (Baseline Scenario section)</li> <li>• Cazalis et al. (2024) "Accelerating and standardising IUCN Red List assessments with sRedList"</li> <li>• Red List Technology Workshop Report (2025)</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN technical staff and long-term partners.</li> <li>• Desk Review.</li> </ul> |

| Key Evaluation Questions                                                                                                                                                                                  | Sub Questions                                                                                                                                   | Indicators                                                                                                                                                                                                                                                                                        | Source of Information                                                                                                                                                                                                                                                                  | Data Collection Tools                                                                                                                                             |
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| <b>Effectiveness:</b> Assess the <b>effectiveness</b> of the K4N project in achieving its objectives throughout its four components and provide clear insights about what has and has not worked and why. |                                                                                                                                                 |                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                        |                                                                                                                                                                   |
| 1. To what extent has the project successfully delivered its key planned outputs as a foundation for achieving its intended outcomes?                                                                     | 1.1 To what extent was the automated Red List Index (RLI) pipeline (Output 1.1.1) successfully developed and made operational?                  | <ul style="list-style-type: none"> <li>• Status of the RLI automation pipeline (e.g., code developed, API endpoints functional).</li> <li>• Evidence of the 2025 RLI being generated and submitted for SDG reporting using the new or revised methodology.</li> </ul>                             | <ul style="list-style-type: none"> <li>• K4N PIRs</li> <li>• Partner Technical Reports (BirdLife, Sapienza, Re:Wild)</li> <li>• Butchart et al. (2025) "Measuring trends in extinction risk"</li> <li>• KILs with IUCN (PMU, technical staff), BirdLife, Sapienza, Re:Wild.</li> </ul> | <ul style="list-style-type: none"> <li>• KILs with IUCN (PMU, technical staff), Newcastle University, and other STAR partners.</li> <li>• Desk Review.</li> </ul> |
|                                                                                                                                                                                                           | 1.2 To what extent was the marine layer for the STAR metric (Output 1.2.1) developed, published, and integrated into a unified global STAR map? | <ul style="list-style-type: none"> <li>• Publication of the marine STAR methodology in a peer-reviewed journal.</li> <li>• Status of the unified (terrestrial, freshwater, marine) STAR heatmap.</li> <li>• Availability of the marine STAR metric on relevant platforms (e.g., IBAT).</li> </ul> | <ul style="list-style-type: none"> <li>• npj Ocean Sustainability paper (Turner et al., 2024)</li> <li>• Partner Technical Reports (Newcastle, ASU, ODU, SFU)</li> <li>• K4N PIRs</li> </ul>                                                                                           |                                                                                                                                                                   |
|                                                                                                                                                                                                           | 1.3 How effectively were biodiversity metrics tailored for and served to the TNFD (Output 1.3.1)?                                               | <ul style="list-style-type: none"> <li>• Evidence of K4N-supported metrics or data being integrated into TNFD guidance, reports, or associated platforms (e.g., IBAT-TNFD pages).</li> <li>• Level of documented</li> </ul>                                                                       | <ul style="list-style-type: none"> <li>• TNFD Recommendations (2023)</li> <li>• K4N PIRs</li> <li>• Annual Project Advisory Group Meeting presentations</li> </ul>                                                                                                                     | <ul style="list-style-type: none"> <li>• KILs with IUCN staff involved in the TNFD engagement.</li> <li>• Desk Review.</li> </ul>                                 |

| Key Evaluation Questions | Sub Questions                                                                                                                                          | Indicators                                                                                                                                                                                                                                                                                          | Source of Information                                                                                                                                                                 | Data Collection Tools                                                                                                                                                                              |
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|                          |                                                                                                                                                        | engagement and collaboration between the project and the TNFD Secretariat.                                                                                                                                                                                                                          |                                                                                                                                                                                       |                                                                                                                                                                                                    |
|                          | 1.4 To what extent did the project meet its targets for expanding critical biodiversity datasets (Outcome 2.1) for goby fish, fungi, and dung beetles? | <ul style="list-style-type: none"> <li>• Number of species assessments completed and published on the IUCN Red List for each target taxonomic group, compared to project targets.</li> <li>• Publication of the global freshwater assessment in a peer-reviewed journal.</li> </ul>                 | <ul style="list-style-type: none"> <li>• K4N PIRs</li> <li>• Partner Technical Reports (ZSL, ODU) and Dung Beetle Annex 1</li> <li>• Nature paper on Freshwater Assessment</li> </ul> | <ul style="list-style-type: none"> <li>• KIIs with IUCN (Red List Unit) and relevant executing partners/SSC groups.</li> <li>• Desk Review (cross-referencing published Red List data).</li> </ul> |
|                          | 1.5 To what extent were new technologies and methods for data production explored and integrated (Outcome 3.1)?                                        | <ul style="list-style-type: none"> <li>• Publication of the scoping review on "knowledge frontiers."</li> <li>• Status of the improved Area of Habitat (AoH) workflow.</li> <li>• Evidence of the adapted strategy for SIS Connect being successfully implemented with target countries.</li> </ul> | <ul style="list-style-type: none"> <li>• Red List Technology Workshop Report (2025)</li> <li>• Cazalis et al. (2024) "sRedList" paper</li> <li>• K4N PIRs</li> </ul>                  | <ul style="list-style-type: none"> <li>• KIIs with IUCN technical staff and relevant partners.</li> <li>• Desk Review.</li> </ul>                                                                  |
|                          | 1.6 To what extent was a sustainability plan for the Red List developed and endorsed (Outcome 3.2)?                                                    | <ul style="list-style-type: none"> <li>• Existence and completeness of the Red List Sustainability Plan.</li> <li>• Evidence of discussion and/or endorsement of</li> </ul>                                                                                                                         | <ul style="list-style-type: none"> <li>• K4N PIRs</li> <li>• Annual Project Advisory Group Meeting presentations</li> </ul>                                                           | <ul style="list-style-type: none"> <li>• KIIs with IUCN leadership (PMU, PAG).</li> <li>• Desk Review.</li> </ul>                                                                                  |

| Key Evaluation Questions                                                        | Sub Questions                                                                                                                                                                                         | Indicators                                                                                                                                                                                                                                                                                                     | Source of Information                                                                                                                                                                 | Data Collection Tools                                                                                                           |
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|                                                                                 |                                                                                                                                                                                                       | the plan by the Red List Partnership Committee.                                                                                                                                                                                                                                                                |                                                                                                                                                                                       |                                                                                                                                 |
| 2. How effective were the approaches and strategies implemented by the project? | 2.1 How successful was the project's collaborative partnership model in delivering complex, technical outputs?                                                                                        | <ul style="list-style-type: none"> <li>• Quality and timeliness of deliverables from the multi-partner collaborations (e.g., for RLI and Marine STAR).</li> <li>• Stakeholder perceptions of the effectiveness of coordination and communication within the partnerships.</li> </ul>                           | <ul style="list-style-type: none"> <li>• Partner Technical Reports</li> <li>• K4N PIRs</li> <li>• Minutes/reports from PAG meetings</li> </ul>                                        | <ul style="list-style-type: none"> <li>• KIIs with all Executing Partners and IUCN PMU.</li> </ul>                              |
| 3. Did the project contribute to transformational change at scale? If so, how?  | 3.1 To what extent have the project's outputs (e.g., automated metrics, TNFD engagement) shown potential to influence systemic changes in how biodiversity data is used in global policy and finance? | <ul style="list-style-type: none"> <li>• Evidence of project outputs being adopted or referenced in major global frameworks (e.g., SDG reporting, TNFD).</li> <li>• Stakeholder perceptions of whether the project's outputs represent a significant step-change in data accessibility and utility.</li> </ul> | <ul style="list-style-type: none"> <li>• K4N PIRs</li> <li>• TNFD Recommendations (2023)</li> <li>• UN SDG reporting documents referencing the RLI</li> </ul>                         | <ul style="list-style-type: none"> <li>• KIIs with IUCN leadership, GEF, and key external stakeholders.</li> </ul>              |
| 4. What were the causal factors and mechanisms driving transformational change? | 4.1 What specific project strategies (e.g., partnership with TNFD, focus on automation, development of open-access tools) were most critical in driving any observed transformational change?         | <ul style="list-style-type: none"> <li>• Identification by stakeholders of the key project elements that enabled broader uptake or systemic influence.</li> <li>• Causal links drawn between specific project</li> </ul>                                                                                       | <ul style="list-style-type: none"> <li>• GEF Project Document (for intended mechanisms)</li> <li>• K4N PIRs</li> <li>• Partner Technical Reports</li> <li>• Annual Project</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN leadership, Executing Partners, and GEF.</li> </ul> |

| Key Evaluation Questions                                                                                                                                                                                                            | Sub Questions                                                                                                                                                                               | Indicators                                                                                                                                                                                                                                                              | Source of Information                                                                                                                                                               | Data Collection Tools                                                                                                             |
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|                                                                                                                                                                                                                                     |                                                                                                                                                                                             | activities (e.g., publishing in high-impact journals, direct engagement with financial sector) and their wider impact.                                                                                                                                                  | Advisory Group Meeting presentations                                                                                                                                                |                                                                                                                                   |
| 5. What factors affected the delivery of outputs, outcomes, and progress toward impact? And how did the project deal with these constraints?                                                                                        | 5.1 What were the key enabling factors (e.g., partner expertise, existing platforms) and constraints (e.g., technical complexity, expert availability) that influenced project performance? | <ul style="list-style-type: none"> <li>• Identification of key challenges and successes in project reporting.</li> <li>• Evidence of adaptive management actions taken in response to constraints (e.g., no-cost extension, re-scoping of SIS Connect work).</li> </ul> | <ul style="list-style-type: none"> <li>• K4N PIRs (especially the challenges and risk sections)</li> <li>• Annual Project Advisory Group Meeting presentations</li> </ul>           | <ul style="list-style-type: none"> <li>• KIIs with IUCN PMU, PAG, and all Executing Partners.</li> </ul>                          |
| 6. Were there any unintended consequences, both positive and negative, resulting from the actions of the Project?                                                                                                                   | 6.1 Did the project generate any unintended positive outcomes (e.g., new collaborations, innovative methodological spin-offs) or negative outcomes?                                         | <ul style="list-style-type: none"> <li>• Identification of any unexpected results or impacts (positive or negative) reported by stakeholders.</li> <li>• Examples of project tools or methods being used for purposes not originally envisioned.</li> </ul>             | <ul style="list-style-type: none"> <li>• Partner Technical Reports</li> <li>• K4N PIRs</li> </ul>                                                                                   | <ul style="list-style-type: none"> <li>• KIIs with all key stakeholders.</li> <li>• Beneficiary interviews</li> </ul>             |
| <b>Efficiency:</b> Assess the extent to which the project was efficient in achieving its results. It will assess the extent to which the inputs (human, financial, etc.) were converted into results in an economic and timely way. |                                                                                                                                                                                             |                                                                                                                                                                                                                                                                         |                                                                                                                                                                                     |                                                                                                                                   |
| 1. To what extent is the Project governance system conducive to results achievement?                                                                                                                                                | 1.1 How effectively did the project's governance structure (e.g., PMU, PAG, partner roles) facilitate timely decision-making and efficient resource allocation?                             | <ul style="list-style-type: none"> <li>• Frequency and effectiveness of governance meetings (e.g., PAG meetings).</li> <li>• Evidence of clear roles, responsibilities, and</li> </ul>                                                                                  | <ul style="list-style-type: none"> <li>• GEF Project Document (Institutional Arrangement section)</li> <li>• K4N Inception Workshop Report</li> <li>• K4N Annual Project</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, PAG members) and Executing Partners.</li> </ul> |

| Key Evaluation Questions                                                                                                                    | Sub Questions                                                                                                                                             | Indicators                                                                                                                                                                                                                                                                                | Source of Information                                                                                                                                      | Data Collection Tools                                                                                                                                       |
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|                                                                                                                                             |                                                                                                                                                           | communication channels between IUCN and executing partners.<br>• Stakeholder perception of the efficiency of the governance and management structure.                                                                                                                                     | Advisory Group Meeting presentations and minutes                                                                                                           |                                                                                                                                                             |
| 2. Has the management approach promoted by the Project led to the most effective use of resources, cost savings, and efficiencies of scale? | 2.1 How efficiently were financial resources managed, including budget execution, co-financing, and procurement processes?                                | <ul style="list-style-type: none"> <li>• Rate of budget expenditure against planned delivery (burn rate).</li> <li>• Timeliness and accuracy of financial reporting.</li> <li>• Evidence of cost-effective procurement and resource management.</li> </ul>                                | <ul style="list-style-type: none"> <li>• GEF Project Document (Budget)</li> <li>• K4N PIRs (Financial sections)</li> <li>• Co-financing reports</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, Finance staff).</li> <li>• Desk Review of financial documents.</li> </ul> |
|                                                                                                                                             | 2.2 How well did the project leverage partner contributions (including co-financing and in-kind expertise) to achieve results in a cost-effective manner? | <ul style="list-style-type: none"> <li>• Ratio of project results to GEF investment, considering the value of partner co-financing and in-kind contributions.</li> <li>• Examples of where partner expertise or existing infrastructure created efficiencies or avoided costs.</li> </ul> | <ul style="list-style-type: none"> <li>• Co-financing reports</li> <li>• Partner Technical Reports</li> <li>• K4N PIRs</li> </ul>                          | <ul style="list-style-type: none"> <li>• Key Informant Interviews with all Executing Partners and IUCN PMU.</li> </ul>                                      |
| 3. To what extent has the Project been able to adapt to any changing conditions to improve                                                  | 3.1 Were project activities delivered in a timely manner against the original and revised work plans? What were                                           | • Comparison of milestone achievement dates against the original                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>• GEF Project Document (Work Plan)</li> <li>• K4N Inception</li> </ul>                                              | • Key Informant Interviews with IUCN PMU and                                                                                                                |



| Key Evaluation Questions                                                                                                                                                                                                                                        | Sub Questions                                                                                                                                                                                                | Indicators                                                                                                                                                                                                                                 | Source of Information                                                                                                                   | Data Collection Tools                                                                                                |
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| the efficiency of project implementation?                                                                                                                                                                                                                       | the primary causes and consequences of any delays?                                                                                                                                                           | and revised project timelines.<br>• Analysis of the justification for the no-cost extension and its impact on the project's timeline and delivery schedule.                                                                                | Workshop Report<br>• K4N PIRs                                                                                                           | Executing Partners.<br>• Desk Review.                                                                                |
|                                                                                                                                                                                                                                                                 | 3.2 How effectively did the project's management adapt to unforeseen challenges (e.g., technical complexity, delays in partner deliverables) to maintain momentum and ensure the efficient use of resources? | • Evidence of adaptive management decisions (e.g., re-scoping of SIS Connect, re-allocation of resources, seeking no-cost extension).<br>• Stakeholder perception of the project's ability to adapt efficiently to changing circumstances. | • K4N PIRs (Challenges and Adaptive Management sections)<br>• K4N Annual Project Advisory Group Meeting presentations                   | • Key Informant Interviews with IUCN (PMU, PAG) and Executing Partners.                                              |
| <b>Sustainability:</b> Assess the risks to continuation of the benefits of the project, including achievement of long-term impacts, considering the probability and magnitude of relevant risks. Assessing the key risks to the project's long-term objectives. |                                                                                                                                                                                                              |                                                                                                                                                                                                                                            |                                                                                                                                         |                                                                                                                      |
| 1. What is the likelihood that results will be useful or persist after the end of the K4N project?                                                                                                                                                              | 1.1 How likely is it that the project's key technical outputs (e.g., automated RLI/STAR pipelines, AoH workflows, sRedList tool) will be maintained, updated, and used after project closure?                | • Status and quality of the Red List Sustainability Plan (Outcome 3.2).<br>• Evidence of institutional ownership and long-term maintenance plans for key technical outputs.<br>• Level of integration of project tools into the            | • K4N PIRs<br>• Draft/Final Red List Sustainability Plan<br>• Red List Technology Workshop Report (2025)<br>• Partner Technical Reports | • Key Informant Interviews with IUCN (PMU, Red List Unit, technical staff) and Executing Partners.<br>• Desk Review. |

| Key Evaluation Questions                                                                                                                          | Sub Questions                                                                                                                                                                                                         | Indicators                                                                                                                                                                                                                                                                                                                                                          | Source of Information                                                                                                                                                              | Data Collection Tools                                                                                                                                   |
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|                                                                                                                                                   |                                                                                                                                                                                                                       | core workflows of IUCN and its partners.                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                    |                                                                                                                                                         |
| 2. What are the chances to see initiatives developed under the K4N project replicated elsewhere or scaled up?                                     | 2.1 What is the potential for the project's approaches (e.g., Marine STAR methodology, national-global Red List integration via SIS Connect) to be scaled up or replicated for other taxonomic groups or geographies? | <ul style="list-style-type: none"> <li>• Evidence of demand or plans for applying the Marine STAR methodology to other taxa.</li> <li>• Number of countries expressing interest in or actively using SIS Connect for national Red List integration.</li> <li>• Stakeholder perception of the replicability and scalability of the project's innovations.</li> </ul> | <ul style="list-style-type: none"> <li>• npj Ocean Sustainability paper (Turner et al., 2024)</li> <li>• K4N PIRs</li> <li>• Red List Technology Workshop Report (2025)</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, Thematic Leads) and Executing Partners.</li> </ul>                    |
| 3. Are there any financial, institutional, environmental, social, or political risks that could jeopardize the permanence of the program results? | 3.1 What are the primary financial risks to the long-term sustainability of the project's benefits, particularly the continued operation of the IUCN Red List and its data services?                                  | <ul style="list-style-type: none"> <li>• Robustness and feasibility of the funding models proposed in the Red List Sustainability Plan (e.g., commercial revenue, philanthropic, endowment).</li> <li>• Level of success of initial fundraising efforts (e.g., Red List @60 campaign).</li> </ul>                                                                   | <ul style="list-style-type: none"> <li>• Draft/Final Red List Sustainability Plan</li> <li>• K4N PIRs</li> <li>• Co-financing reports</li> </ul>                                   | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN leadership (PAG members) and the Red List Partnership Committee.</li> </ul> |
|                                                                                                                                                   | 3.2 What are the primary institutional and technical risks to the sustainability of the project's benefits?                                                                                                           | <ul style="list-style-type: none"> <li>• Level of institutional buy-in and capacity within IUCN and its partners to manage and</li> </ul>                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>• Partner Technical Reports</li> <li>• Red List Technology Workshop Report</li> </ul>                                                       | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN technical staff</li> </ul>                                                  |

| Key Evaluation Questions                                                                                                        | Sub Questions                                                                                                                                                            | Indicators                                                                                                                                                                                                                                                           | Source of Information                                                                                                                         | Data Collection Tools                                                                                          |
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|                                                                                                                                 |                                                                                                                                                                          | maintain the new automated systems.<br>• Clarity of roles and responsibilities for long-term maintenance of project outputs.<br>• Risk of technical obsolescence of the new tools and platforms.                                                                     | (2025)<br>• K4N Annual Project Advisory Group Meeting presentations                                                                           | and Executing Partners.                                                                                        |
| 4. What efforts were made by the K4N project to mitigate these risks and ensure sustainability of the results in the long term? | 4.1 How effectively did the project's design and implementation of Outcome 3.2 (Sustainability Plan) address the long-standing financial risks facing the IUCN Red List? | • Quality and strategic clarity of the Red List Sustainability Plan as a direct mitigation measure.<br>• Evidence of concrete actions taken during the project to implement the plan (e.g., launching fundraising campaigns, exploring new revenue models via IBAT). | • Draft/Final Red List Sustainability Plan<br>• K4N PIRs                                                                                      | • Key Informant Interviews with IUCN leadership and PMU.<br>• Desk Review.                                     |
| <b>Implementation and Execution:</b> Assess the performance of the Implementing and executing agencies                          |                                                                                                                                                                          |                                                                                                                                                                                                                                                                      |                                                                                                                                               |                                                                                                                |
| 1. How well did the implementing agency meet its responsibilities throughout project implementation?                            | 1.1 How effectively did IUCN, as the Implementing Agency, provide oversight, strategic guidance, and quality assurance for the project?                                  | • Timeliness and quality of feedback on project deliverables and reports.<br>• Evidence of strategic guidance provided during Project Steering Committee (PAG) meetings.<br>• Effectiveness of                                                                       | • K4N Annual Project Advisory Group Meeting minutes/presentations<br>• K4N PIRs<br>• GEF Project Document (Institutional Arrangement section) | • Key Informant Interviews with the IUCN Project Management Unit, Executing Partners, and the GEF Secretariat. |

| Key Evaluation Questions                                                                                                                          | Sub Questions                                                                                                                                                                                                            | Indicators                                                                                                                                                                                                                                                                               | Source of Information                                                                                                                                    | Data Collection Tools                                                                                                                            |
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|                                                                                                                                                   |                                                                                                                                                                                                                          | fiduciary and safeguard oversight.                                                                                                                                                                                                                                                       |                                                                                                                                                          |                                                                                                                                                  |
| 2. What challenges emerged during different stages of implementation, and how were they addressed by the implementing agency?                     | 2.1 What were the main implementation challenges (e.g., technical complexity, coordination, delays), and how effectively did IUCN's oversight function help the executing team to address them?                          | <ul style="list-style-type: none"> <li>• Identification of key challenges in project reporting.</li> <li>• Evidence of adaptive management decisions supported or facilitated by the Implementing Agency (e.g., approval of no-cost extension, guidance on strategic shifts).</li> </ul> | <ul style="list-style-type: none"> <li>• K4N PIRs (Challenges and Risk sections)</li> <li>• K4N Annual Project Advisory Group Meeting minutes</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, Portfolio Manager) and Executing Partners.</li> </ul>          |
| 3. What circumstances facilitated or hindered implementation progress?                                                                            | 3.1 What internal factors (e.g., technical capacity, institutional support) and external factors (e.g., partner availability, global policy developments like TNFD) most significantly facilitated or hindered progress? | <ul style="list-style-type: none"> <li>• Identification of key enabling factors and barriers by stakeholders.</li> <li>• Correlation between external events (e.g., TNFD launch) and project progress in related areas.</li> </ul>                                                       | <ul style="list-style-type: none"> <li>• K4N PIRs</li> <li>• Partner Technical Reports</li> <li>• Inception Workshop Report</li> </ul>                   | <ul style="list-style-type: none"> <li>• Key Informant Interviews with all key stakeholders.</li> </ul>                                          |
| 4. To what extent was information from project monitoring used by the implementing agency for decision-making, adaptive management, and learning? | 4.1 How did IUCN's oversight function use monitoring data from PIRs and other reports to inform strategic decisions, such as approving changes to the work plan or budget?                                               | <ul style="list-style-type: none"> <li>• Examples of specific decisions made by the Implementing Agency based on monitoring information.</li> <li>• Evidence of feedback loops between project monitoring and governance-level decision-making.</li> </ul>                               | <ul style="list-style-type: none"> <li>• K4N PIRs</li> <li>• K4N Annual Project Advisory Group Meeting minutes</li> </ul>                                | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (Portfolio Manager, PAG members).</li> <li>• Desk Review.</li> </ul> |

| Key Evaluation Questions                                                                                                                                                    | Sub Questions                                                                                                                                                                      | Indicators                                                                                                                                                                                                                                                                                                    | Source of Information                                                                                                                                 | Data Collection Tools                                                                                                                        |
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| 5. To what extent did the executing entity (IUCN and partners) effectively meet its roles and responsibilities in managing and administering day-to-day project activities? | 5.1 How effectively did the IUCN PMU and executing partners manage day-to-day activities, including technical delivery, partner coordination, and financial administration?        | <ul style="list-style-type: none"> <li>• Timeliness and quality of output delivery against the work plan.</li> <li>• Effectiveness of communication and coordination between the PMU and the various executing partners.</li> <li>• Accuracy and timeliness of financial and progress reporting.</li> </ul>   | <ul style="list-style-type: none"> <li>• Partner Technical Reports</li> <li>• K4N PIRs</li> <li>• Financial Reports</li> </ul>                        | <ul style="list-style-type: none"> <li>• Key Informant Interviews with all Executing Partners and the IUCN PMU.</li> </ul>                   |
| 6. How well did the executing entity perform in delivering the project under the oversight of the GEF Implementing Agency?                                                  | 6.1 How responsive and effective was the executing entity in meeting the GEF's reporting requirements (e.g., PIRs, financial reports) and adhering to GEF policies and procedures? | <ul style="list-style-type: none"> <li>• Quality and timeliness of submissions to the GEF Agency.</li> <li>• Level of compliance with GEF fiduciary, monitoring, and safeguard standards.</li> </ul>                                                                                                          | <ul style="list-style-type: none"> <li>• K4N PIRs</li> <li>• GEF Project Document</li> </ul>                                                          | <ul style="list-style-type: none"> <li>• Key Informant Interview with the GEF Secretariat representative.</li> <li>• Desk Review.</li> </ul> |
| 7. To what extent is the executing entity likely to facilitate or support follow-up activities after project completion?                                                    | 7.1 What plans or commitments are in place by IUCN and its partners to continue, maintain, or build upon the project's activities and outputs after GEF funding ends?              | <ul style="list-style-type: none"> <li>• Evidence of long-term institutional commitment to the project's outputs (e.g., integration into core budgets, plans for future updates).</li> <li>• Existence of the Red List Sustainability Plan and evidence of its adoption by the executing entities.</li> </ul> | <ul style="list-style-type: none"> <li>• Draft/Final Red List Sustainability Plan</li> <li>• Partner Technical Reports</li> <li>• K4N PIRs</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN leadership and Executing Partners.</li> </ul>                    |
| <b>Monitoring and Evaluation:</b> Assess the strengths and weaknesses of the project M&E plan and its implementation                                                        |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                       |                                                                                                                                              |

| Key Evaluation Questions                                                                                                                   | Sub Questions                                                                                                                                                               | Indicators                                                                                                                                                                                                                                                                | Source of Information                                                                                                                                                                                       | Data Collection Tools                                                                                                                                        |
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| 1. To what extent was the project's M&E framework practical and well thought out? (Design)                                                 | 1.1 How clear, logical, and practical were the indicators and targets in the project's Results Framework for measuring progress towards outcomes?                           | <ul style="list-style-type: none"> <li>• Clarity and measurability of indicators in the Results Framework.</li> <li>• Realism and ambition of the end-of-project targets.</li> <li>• Presence of clear baselines for each indicator.</li> </ul>                           | <ul style="list-style-type: none"> <li>• GEF Project Document (Annex A: Project Results Framework)</li> <li>• K4N Inception Workshop Report</li> </ul>                                                      | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, Portfolio Manager) and GEF Secretariat.</li> <li>• Desk Review.</li> </ul> |
| 2. How well did the M&E framework address the project's theory of change and meet GEF M&E requirements? (Design)                           | 2.1 To what extent did the M&E framework's indicators allow for the tracking of progress along the project's causal pathways as defined in the Theory of Change?            | <ul style="list-style-type: none"> <li>• Alignment between the M&amp;E indicators and the key stages of the reconstructed Theory of Change (outputs, outcomes).</li> <li>• Compliance of the M&amp;E plan with standard GEF M&amp;E policies and requirements.</li> </ul> | <ul style="list-style-type: none"> <li>• GEF Project Document (Annex A: Project Results Framework and Section 9: M&amp;E Plan)</li> <li>• Reconstructed Theory of Change (from Inception Report)</li> </ul> | <ul style="list-style-type: none"> <li>• Desk Review.</li> <li>• Key Informant Interview with IUCN Portfolio Manager.</li> </ul>                             |
| 3. Did the M&E framework incorporate applicable core indicators or corporate results indicators and provide baseline information? (Design) | 3.1 Did the M&E framework correctly identify and establish baselines for the relevant GEF Core Indicators (specifically Core Indicator 11: Number of direct beneficiaries)? | <ul style="list-style-type: none"> <li>• Correct identification of GEF Core Indicator 11 in the project's M&amp;E plan.</li> <li>• Presence of a quantified baseline and target for direct beneficiaries, with a clear methodology for measurement.</li> </ul>            | <ul style="list-style-type: none"> <li>• GEF Project Document (Core Indicators section and Annex A)</li> <li>• K4N PIRs (Core Indicator reporting sections)</li> </ul>                                      | <ul style="list-style-type: none"> <li>• Desk Review.</li> </ul>                                                                                             |

| Key Evaluation Questions                                                                                                                      | Sub Questions                                                                                                                                                                               | Indicators                                                                                                                                                                                                                                                                                                                                                | Source of Information                                                                                                                                                                                 | Data Collection Tools                                                                                                                                           |
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| 4. Did the M&E plan clearly specify planned activities, responsibilities, and timelines? (Design)                                             | 4.1 How clearly did the project's M&E Plan define the roles, responsibilities, budget, and schedule for key M&E activities (e.g., PIRs, Mid-Term Review, Terminal Evaluation)?              | <ul style="list-style-type: none"> <li>• Presence of a detailed M&amp;E budget and timeline in the project document.</li> <li>• Clarity of assigned responsibilities for M&amp;E tasks (e.g., PMU, Implementing Agency).</li> </ul>                                                                                                                       | <ul style="list-style-type: none"> <li>• GEF Project Document (Section 9: Monitoring and Evaluation Plan and Table 2: Summary of budgeted M&amp;E plan)</li> </ul>                                    | <ul style="list-style-type: none"> <li>• Desk Review.</li> </ul>                                                                                                |
| 5. To what extent are the Monitoring, Evaluation and Learning (MEL) strategy and tools adequate and effective? (Implementation)               | 5.1 How effectively was the M&E system used during implementation to track progress, report on results (e.g., in PIRs), and support adaptive management?                                    | <ul style="list-style-type: none"> <li>• Quality, timeliness, and completeness of progress reporting in the annual PIRs.</li> <li>• Evidence that M&amp;E data was used to inform key management decisions (e.g., the no-cost extension, budget reallocations).</li> <li>• Adequacy of the M&amp;E budget and resources during implementation.</li> </ul> | <ul style="list-style-type: none"> <li>• K4N PIRs</li> <li>• K4N Annual Project Advisory Group Meeting minutes/presentations</li> <li>• Financial Reports (for M&amp;E budget expenditure)</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, Portfolio Manager) and Executing Partners.</li> <li>• Desk Review.</li> </ul> |
| <b>Additionality:</b> Assess the additionality of the K4N project by comparing the benefits of GEF support to a scenario without GEF support. |                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                       |                                                                                                                                                                 |
| 1. To what extent has the project demonstrated additionality as a result of GEF support?                                                      | 1.1 What specific project outcomes or outputs would likely not have been achieved, or would have been achieved at a significantly smaller scale or slower pace, without the GEF investment? | <ul style="list-style-type: none"> <li>• Identification of specific "value-added" activities enabled by the GEF grant (e.g., automation of RLI, development of Marine STAR, new species assessments).</li> <li>• Stakeholder assessment of the catalytic role of the GEF</li> </ul>                                                                       | <ul style="list-style-type: none"> <li>• GEF Project Document (Section 5: Incremental/Additional cost reasoning)</li> <li>• K4N PIRs</li> <li>• Partner Technical Reports</li> </ul>                  | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, PAG), GEF Secretariat, and all Executing Partners.</li> </ul>                 |



| Key Evaluation Questions                                                                                                | Sub Questions                                                                                                                                                                                                      | Indicators                                                                                                                                                                                                                                                                                                               | Source of Information                                                                                                                                                                                                                      | Data Collection Tools                                                                                                                                             |
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|                                                                                                                         |                                                                                                                                                                                                                    | funding in leveraging partner co-financing and expertise.                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                            |                                                                                                                                                                   |
| 2. In which specific areas has GEF support contributed to additional results beyond what would have occurred otherwise? | 2.1 How did the GEF funding enable the project to undertake innovative or higher-risk activities, such as the development of new methodologies (Marine STAR) or the exploration of new technologies (Component 3)? | <ul style="list-style-type: none"> <li>• Evidence that GEF funding was used to support novel methodological development and technological innovation.</li> <li>• Comparison of the project's innovative scope against the "business as usual" baseline described in the project document.</li> </ul>                     | <ul style="list-style-type: none"> <li>• GEF Project Document (Baseline Scenario and Innovation sections)</li> <li>• npj Ocean Sustainability paper (Turner et al., 2024)</li> <li>• Red List Technology Workshop Report (2025)</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, Thematic Leads) and technical partners (e.g., Newcastle University).</li> </ul> |
|                                                                                                                         | 2.2 How did the GEF funding facilitate the expansion of biodiversity assessments into under-funded but globally important taxonomic groups (Component 2)?                                                          | <ul style="list-style-type: none"> <li>• Evidence that GEF funds were specifically allocated to assessments of goby fish, fungi, and dung beetles.</li> <li>• Assessment of whether these specific taxonomic groups would have been prioritized for assessment by partners without the GEF project's support.</li> </ul> | <ul style="list-style-type: none"> <li>• GEF Project Document (Budget and Component 2 description)</li> <li>• Final Technical Reports (ZSL, ODU, Dung Beetle Annex)</li> </ul>                                                             | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (Red List Unit) and partners responsible for Component 2.</li> </ul>                  |
| 3. What quantitative and qualitative evidence supports the assessment of additionality?                                 | 3.1 What quantitative evidence (e.g., number of new tools developed, number of additional species assessed) and qualitative evidence                                                                               | <ul style="list-style-type: none"> <li>• Quantified outputs directly funded by the GEF grant (e.g., number of assessments, new</li> </ul>                                                                                                                                                                                | <ul style="list-style-type: none"> <li>• K4N PIRs (Results sections)</li> <li>• Partner Technical Reports</li> </ul>                                                                                                                       | <ul style="list-style-type: none"> <li>• All data collection tools (KIIs, beneficiary</li> </ul>                                                                  |

| Key Evaluation Questions                                                                                        | Sub Questions                                                                                                                                     | Indicators                                                                                                                                                                                                                                                                      | Source of Information                                                                                                                                                                                | Data Collection Tools                                                                                                                                                                  |
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|                                                                                                                 | (e.g., stakeholder testimonials) demonstrates the unique contribution of the GEF investment?                                                      | automated systems).<br>• Qualitative statements from stakeholders on the importance and catalytic effect of the GEF funding.                                                                                                                                                    | • All primary data collected for the evaluation.                                                                                                                                                     | interviews<br>• Desk Review.                                                                                                                                                           |
| <b>Project Co-financing:</b> Assess the extent to which co-financing materialized by the closure of the project |                                                                                                                                                   |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                      |                                                                                                                                                                                        |
| 1. What type of co-financing was mobilized by the K4N Project?                                                  | 1.1 What were the primary sources and types of co-financing (e.g., grants, in-kind staff time, institutional resources) leveraged by the project? | <ul style="list-style-type: none"> <li>• Breakdown of co-financing by source (e.g., IUCN, executing partners, private sector).</li> <li>• Breakdown of co-financing by type (in-kind vs. cash/grant).</li> </ul>                                                                | <ul style="list-style-type: none"> <li>• GEF Project Document (Section C: Sources of Co-financing)</li> <li>• K4N PIRs (Co-financing sections)</li> <li>• Final project financial reports</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, Finance staff) and all Executing Partners.</li> <li>• Desk Review of financial documents.</li> </ul> |
| 2. To what extent did the expected co-financing materialize and how timely was it delivered?                    | 2.1 To what extent did the total realized co-financing match or exceed the amount pledged in the Project Document?                                | <ul style="list-style-type: none"> <li>• Total amount of co-financing realized at project closure, compared to the pledged amount of USD 9.35 million.</li> <li>• Realized co-financing amounts from each contributing partner compared to their individual pledges.</li> </ul> | <ul style="list-style-type: none"> <li>• K4N PIRs (Co-financing sections)</li> <li>• Final project financial reports and co-financing letters/reports</li> </ul>                                     | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, Finance staff) and all Executing Partners.</li> <li>• Desk Review.</li> </ul>                        |
|                                                                                                                 | 2.2 How timely was the delivery of co-financing, and did any delays in its materialization affect project implementation or efficiency?           | <ul style="list-style-type: none"> <li>• Evidence of the timing of co-financing delivery against the project's annual work plans and needs.</li> </ul>                                                                                                                          | <ul style="list-style-type: none"> <li>• K4N PIRs (Challenges and Co-financing sections)</li> <li>• K4N Annual Project</li> </ul>                                                                    | <ul style="list-style-type: none"> <li>• Key Informant Interviews with the IUCN Project Management Unit.</li> </ul>                                                                    |

| Key Evaluation Questions                                                                                                                                 | Sub Questions                                                                                                                                                                   | Indicators                                                                                                                                                                                                                                                                                           | Source of Information                                                                                                                                                           | Data Collection Tools                                                                                                                                   |
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|                                                                                                                                                          |                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>• Identification of any project delays or challenges explicitly linked to a shortfall or delay in co-financing.</li> </ul>                                                                                                                                    | Advisory Group Meeting minutes                                                                                                                                                  |                                                                                                                                                         |
| <b>Environmental and Social Safeguards:</b> Assessment of Environmental and Social Safeguards applied during the project preparation and implementation. |                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                 |                                                                                                                                                         |
| 1. To what extent were environmental and social safeguards applied and the extent to which they were appropriate?                                        | 1.1 How was the project's "Low Risk" ESS classification determined during project design, and was this classification appropriate given the nature of the project's activities? | <ul style="list-style-type: none"> <li>• Evidence of the ESMS screening process and its justification for the Low-Risk rating.</li> <li>• Alignment of the project's activities (data analysis, tool development, assessments) with the definition of a low-risk, non-area-based project.</li> </ul> | <ul style="list-style-type: none"> <li>• GEF Project Document (Section 11: ESS Risks and Appendix 5: ESMS screening report)</li> <li>• K4N Inception Workshop Report</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interview with the IUCN Safeguards Officer/Portfolio Manager.</li> <li>• Desk Review.</li> </ul> |
|                                                                                                                                                          | 1.2 Were any unforeseen environmental or social risks or negative impacts identified during project implementation, and how were they managed or mitigated?                     | <ul style="list-style-type: none"> <li>• Absence or presence of any reported safeguard-related grievances or incidents in project reporting.</li> <li>• Evidence of the project's adherence to data privacy and intellectual property principles when handling biodiversity data.</li> </ul>         | <ul style="list-style-type: none"> <li>• K4N PIRs (Safeguards and Grievance sections)</li> <li>• K4N Annual Project Advisory Group Meeting minutes</li> </ul>                   | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, Safeguards Officer) and Executing Partners.</li> </ul>                |
| 2. To what extent did the project affect marginalized communities, including indigenous people?                                                          | 2.1 Given the project's global, non-site-based nature, what measures were taken to ensure that the                                                                              | <ul style="list-style-type: none"> <li>• Evidence of adherence to IUCN's policies on engaging with IPLCs in</li> </ul>                                                                                                                                                                               | <ul style="list-style-type: none"> <li>• GEF Project Document (Stakeholder Engagement Plan)</li> </ul>                                                                          | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU,</li> </ul>                                                            |

| Key Evaluation Questions                                                                                                                    | Sub Questions                                                                                                                                                                                                   | Indicators                                                                                                                                                                                                                                                   | Source of Information                                                                                                                                                                                           | Data Collection Tools                                                                                                                                                           |
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|                                                                                                                                             | knowledge and data generated were accessible and did not inadvertently create negative impacts for Indigenous Peoples and Local Communities (IPLCs)?                                                            | knowledge-related work.<br>• Consideration of traditional knowledge and data sovereignty principles in the project's data management and dissemination strategies.                                                                                           | • K4N PIRs (Stakeholder Engagement and Safeguards sections)                                                                                                                                                     | Safeguards Officer).<br>• Desk Review of project outputs to assess accessibility and inclusivity.                                                                               |
| <b>Gender:</b> Assess the extent to which the project was implemented in a manner that ensures gender-equitable participation and benefits. |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                 |                                                                                                                                                                                 |
| 1. To what extent was the project implemented in a manner that ensured gender-equitable participation and benefits?                         | 1.1 What specific measures were outlined in the project's Gender Mainstreaming Plan (GMP) to promote gender-equitable participation in project activities (e.g., workshops, expert consultations, assessments)? | <ul style="list-style-type: none"> <li>• Presence and quality of the Gender Analysis and Gender Action Plan within the GEF Project Document.</li> <li>• Clarity of the commitments made to ensure gender balance in project teams and activities.</li> </ul> | <ul style="list-style-type: none"> <li>• GEF Project Document (Section 3: Gender Equality and Women's Empowerment, including the Gender Mainstreaming Plan)</li> <li>• K4N Inception Workshop Report</li> </ul> | <ul style="list-style-type: none"> <li>• Desk Review.</li> <li>• Key Informant Interview with the IUCN Project Management Unit.</li> </ul>                                      |
|                                                                                                                                             | 1.2 To what extent were these measures implemented in practice?                                                                                                                                                 | <ul style="list-style-type: none"> <li>• Gender-disaggregated data on participation in project-supported workshops, trainings, and assessment processes.</li> <li>• Gender balance of the project management and partner teams.</li> </ul>                   | <ul style="list-style-type: none"> <li>• K4N PIRs (Gender sections)</li> <li>• Red List Technology Workshop Report (Participant lists)</li> <li>• Partner Technical Reports</li> </ul>                          | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN PMU and Executing Partners.</li> <li>• Desk Review of participant lists where available.</li> </ul> |
| 2. Was gender-disaggregated data on beneficiaries collected, tracked through the project's M&E system and used effectively?                 | 2.1 How did the project address the challenge of collecting gender-disaggregated data for its primary beneficiaries (i.e., the ~4 million                                                                       | <ul style="list-style-type: none"> <li>• The project's stated methodology for estimating the 50/50 gender balance for online users.</li> </ul>                                                                                                               | <ul style="list-style-type: none"> <li>• GEF Project Document (Core Indicator 11 section)</li> <li>• K4N PIRs (Core Indicator 11 reporting)</li> </ul>                                                          | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN (PMU, M&amp;E Officer).</li> <li>• Desk Review.</li> </ul>                                          |

| Key Evaluation Questions                                                                                                                                                            | Sub Questions                                                                                                                                                                                                                  | Indicators                                                                                                                                                                                                                                                                                                                | Source of Information                                                                                                                                                                                                                                 | Data Collection Tools                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                     | online users of the Red List), as identified in the project design?                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Evidence of any attempts or analysis during the project to refine this estimate or explore methods for collecting gender-disaggregated user data.</li> </ul>                                                                                                                     |                                                                                                                                                                                                                                                       |                                                                                                                                       |
| 3. Are any project activities or outcomes that disadvantaged women or exacerbate gender inequalities?                                                                               | 3.1 Did the evaluation identify any evidence that the project's activities or outputs created barriers to participation for women or inadvertently reinforced existing gender inequalities in the conservation science sector? | <ul style="list-style-type: none"> <li>• Absence or presence of any reported gender-related grievances or concerns from stakeholders.</li> <li>• Stakeholder perceptions on whether the project fostered an inclusive and equitable working environment.</li> </ul>                                                       | <ul style="list-style-type: none"> <li>• K4N PIRs (Grievance and Gender sections)</li> <li>• All primary data collected for the evaluation.</li> </ul>                                                                                                | <ul style="list-style-type: none"> <li>• Key Informant Interviews with all key stakeholders.</li> </ul>                               |
| <b>Stakeholder engagement:</b> Assess the engagement of the various stakeholders in the K4N Project                                                                                 |                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                       |                                                                                                                                       |
| 1. To what extent did the program engage with the relevant stakeholders, including the private sector, civil society organizations, government agencies, and program beneficiaries? | 1.1 How comprehensive and inclusive was the project's stakeholder engagement, particularly with its core executing partners, scientific bodies (SSC), and key user groups like the TNFD?                                       | <ul style="list-style-type: none"> <li>• Frequency, quality, and nature of engagement activities with different stakeholder groups (e.g., workshops, technical meetings, advisory groups).</li> <li>• Evidence of engagement with a wide range of stakeholders as outlined in the Stakeholder Engagement Plan.</li> </ul> | <ul style="list-style-type: none"> <li>• GEF Project Document (Stakeholder Engagement Plan, Annex F)</li> <li>• K4N PIRs (Stakeholder Engagement sections)</li> <li>• K4N Inception Workshop and PAG Meeting participant lists and minutes</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with all stakeholder categories.</li> <li>• Desk Review.</li> </ul> |

| Key Evaluation Questions                                                                                                                                              | Sub Questions                                                                                                                                                                       | Indicators                                                                                                                                                                                                                                                                                          | Source of Information                                                                                                                                                                                                   | Data Collection Tools                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 2. To what extent did stakeholder engagement contribute to building partnerships, leveraging expertise and capacities, and fostering project ownership and follow-up? | 2.1 How effectively did engagement with executing partners and SSC experts leverage their technical expertise and in-kind contributions to deliver high-quality project outputs?    | <ul style="list-style-type: none"> <li>• Quality of technical outputs co-developed with partners (e.g., Marine STAR, RLI, species assessments).</li> <li>• Level of partner co-financing and in-kind support realized, as an indicator of ownership and commitment.</li> </ul>                      | <ul style="list-style-type: none"> <li>• Partner Technical Reports</li> <li>• Co-financing reports</li> <li>• K4N PIRs</li> <li>• Scientific publications (e.g., Nature, npj Ocean Sustainability)</li> </ul>           | <ul style="list-style-type: none"> <li>• Key Informant Interviews with all Executing Partners and IUCN PMU.</li> </ul> |
|                                                                                                                                                                       | 2.2 How did the project's engagement foster a sense of shared ownership and commitment to the project's goals among the core partners?                                              | <ul style="list-style-type: none"> <li>• Stakeholder perceptions of their role, influence, and ownership in the project.</li> <li>• Evidence of partners' commitment to sustaining the project's outcomes beyond the funding period.</li> </ul>                                                     | <ul style="list-style-type: none"> <li>• K4N Annual Project Advisory Group Meeting minutes</li> <li>• Draft/Final Red List Sustainability Plan</li> </ul>                                                               | <ul style="list-style-type: none"> <li>• Key Informant Interviews with all Executing Partners.</li> </ul>              |
| 3. How did stakeholder engagement influence project implementation, achievement of results, and risks to sustainability?                                              | 3.1 In what specific instances did feedback from stakeholders (e.g., TNFD, Red List Partners, workshop participants) lead to adaptations in project design, activities, or outputs? | <ul style="list-style-type: none"> <li>• Documented examples of project adaptations based on stakeholder feedback (e.g., refinements to the STAR metric, priorities for the Technology Workshop).</li> <li>• Evidence that engagement helped identify and mitigate implementation risks.</li> </ul> | <ul style="list-style-type: none"> <li>• K4N PIRs (Adaptive Management and Risk sections)</li> <li>• Red List Technology Workshop Report (2025)</li> <li>• K4N Annual Project Advisory Group Meeting minutes</li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with IUCN PMU and Executing Partners.</li> </ul>     |

| Key Evaluation Questions                                                                                                                                   | Sub Questions                                                                                                                                                                                  | Indicators                                                                                                                                                                                                                                                                                                                       | Source of Information                                                                                                                                                           | Data Collection Tools                                                                                                                  |
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| <b>Knowledge management and learning:</b> Assess how knowledge was managed and lessons learned used to inform the design and implementation of the project |                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                 |                                                                                                                                        |
| 1. To what extent did the project design incorporate existing lessons and good practices?                                                                  | 1.1 How did the project's design explicitly build on lessons from previous biodiversity data initiatives (e.g., the need for automation, user-friendly tools, and sustainable funding models)? | <ul style="list-style-type: none"> <li>References in the project design to specific lessons learned from prior work (e.g., success of GeoCAT, challenges of manual RLI calculation).</li> <li>Evidence that the project's core components directly address known, long-standing challenges in the Red List ecosystem.</li> </ul> | <ul style="list-style-type: none"> <li>GEF Project Document (Baseline Scenario and Incremental Cost Reasoning sections)</li> <li>K4N Inception Workshop presentation</li> </ul> | <ul style="list-style-type: none"> <li>Key Informant Interviews with IUCN (PMU, long-standing staff).</li> <li>Desk Review.</li> </ul> |
| 2. What arrangements were made to capture, manage, use, and share knowledge and lessons generated during project implementation?                           | 2.1 What were the primary mechanisms used to capture and share knowledge among the geographically dispersed project partners (e.g., technical workshops, shared platforms, regular meetings)?  | <ul style="list-style-type: none"> <li>Frequency and type of knowledge-sharing events (e.g., workshops, webinars, partner meetings).</li> <li>Use of collaborative platforms for document and data sharing.</li> <li>Stakeholder perception of the effectiveness of knowledge sharing mechanisms.</li> </ul>                     | <ul style="list-style-type: none"> <li>K4N PIRs</li> <li>Red List Technology Workshop Report (2025)</li> <li>K4N Annual Project Advisory Group Meeting minutes</li> </ul>       | <ul style="list-style-type: none"> <li>Key Informant Interviews with IUCN PMU and all Executing Partners.</li> </ul>                   |
| 3. Were knowledge management activities supported with an adequate budget?                                                                                 | 3.1 Were sufficient financial and human resources allocated to knowledge management and dissemination activities, such as publications, workshops, and the                                     | <ul style="list-style-type: none"> <li>Allocation of budget to specific knowledge management activities (e.g., workshops, publications) in the</li> </ul>                                                                                                                                                                        | <ul style="list-style-type: none"> <li>GEF Project Document (Budget)</li> <li>Project Financial Reports</li> <li>K4N PIRs</li> </ul>                                            | <ul style="list-style-type: none"> <li>Key Informant Interview with IUCN PMU.</li> <li>Desk Review.</li> </ul>                         |



| Key Evaluation Questions                                                                                                                              | Sub Questions                                                                                                                      | Indicators                                                                                                                                                                                                                                                                                                                                                                                                                              | Source of Information                                                                                                                                                                                                                                                                                                                                                                                              | Data Collection Tools                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                       | development of communication materials?                                                                                            | project budget.<br>• Evidence of expenditure on these activities.                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                            |
| 4. What knowledge products were planned and delivered, and how have they contributed or are expected to contribute to learning and knowledge sharing? | 4.1 What were the key knowledge products delivered by the project, and how effectively were they disseminated to target audiences? | <ul style="list-style-type: none"> <li>• List of key knowledge products (e.g., peer-reviewed papers, technical reports, automated data services, sRedList tool).</li> <li>• Evidence of dissemination (e.g., publication in high-impact journals, presentations at international fora, website analytics).</li> <li>• Evidence of uptake and use of these knowledge products by the scientific and conservation communities.</li> </ul> | <ul style="list-style-type: none"> <li>• All project outputs, including: <ul style="list-style-type: none"> <li>- Scientific publications (Nature, npj Ocean Sustainability, Butchart et al. 2025, Cazalis et al. 2024)</li> <li>- Partner Technical Reports</li> <li>- Red List Technology Workshop Report (2025)</li> <li>- Project websites and data portals (e.g., IUCN Red List, IBAT)</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Key Informant Interviews with all stakeholders.</li> <li>• Desk Review (including citation analysis for publications).</li> </ul> |

## Annex 6: Performance Rating Criteria

The project's **relevance, effectiveness, efficiency, M&E, implementation and execution, and maintenance of environmental and social safeguards** will be rated on the following six-point scale:

| Rating                  | Abbreviation |
|-------------------------|--------------|
| Highly Satisfactory     | HS           |
| Satisfactory            | S            |
| Moderately Satisfactory | MS           |
| Unsatisfactory          | U            |
| Highly Unsatisfactory   | HU           |
| Unable to Assess        | UA           |

The project's **sustainability** will be rated on the following five-point scale:

| Rating              | Abbreviation |
|---------------------|--------------|
| Likely              | L            |
| Moderately Likely   | ML           |
| Moderately Unlikely | MU           |
| Unlikely            | U            |
| Unable to Assess    | UA           |



## Annex 7: Evaluation ToRs

Since the Evaluation ToRs are provided in PDF format and copying them into the Evaluation report affects the formatting, we are sharing a OneDrive link for access to the Evaluation ToRs below.

[https://iucn.org/sites/default/files/2025-08/k4n-final-evaluation-tor\\_clean.pdf](https://iucn.org/sites/default/files/2025-08/k4n-final-evaluation-tor_clean.pdf)



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