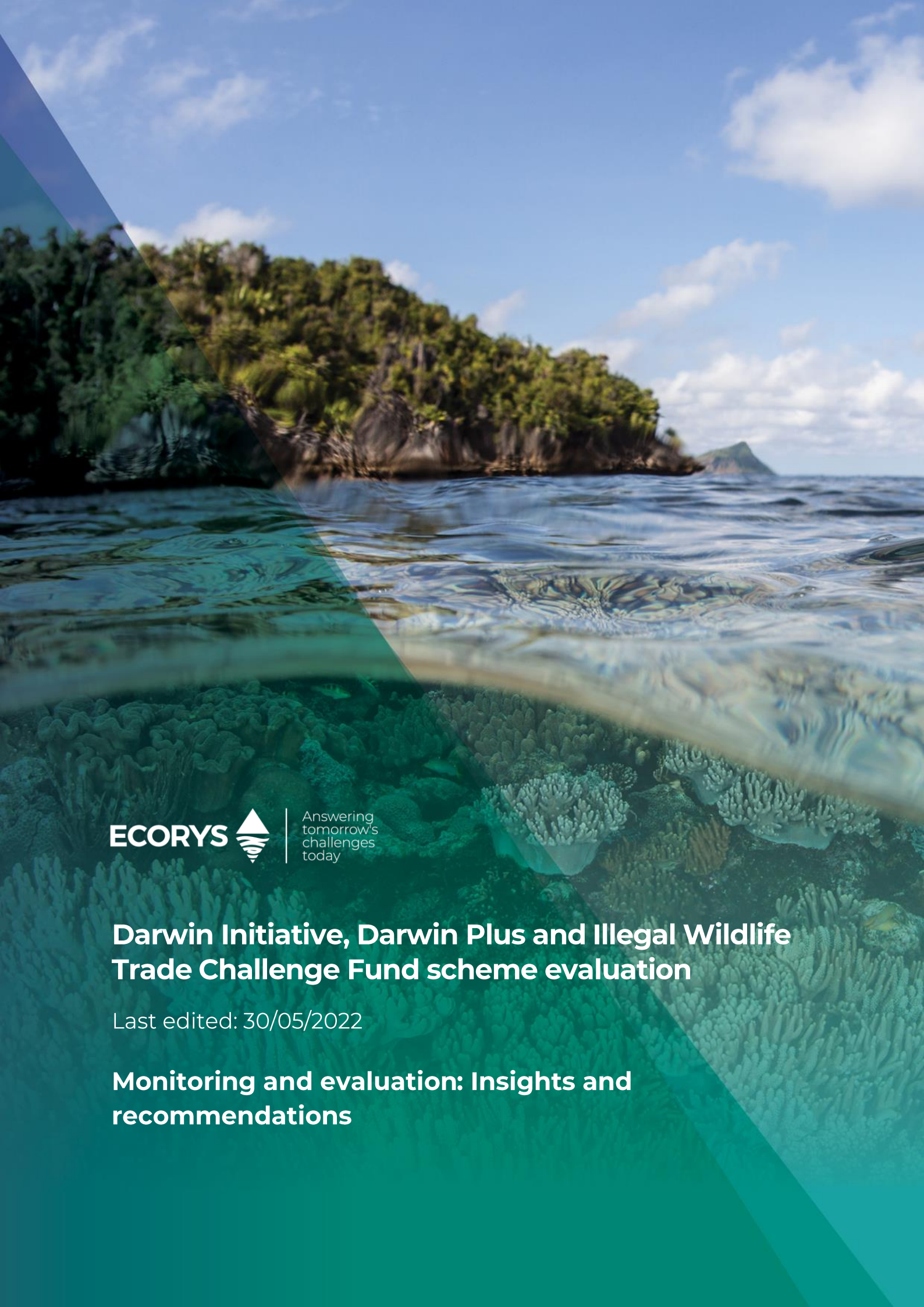

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Darwin Initiative, Darwin Plus and Illegal Wildlife Trade Challenge Fund scheme evaluation

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Monitoring and evaluation: Insights and recommendations

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This report

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1. Introduction

In September 2020, the Department for Environment, Food and Rural Affairs (Defra), commissioned Ecorys to undertake an evaluation of the Darwin Initiative, Darwin Plus and Illegal Wildlife Trade Challenge Fund (IWTCF) funds. As part of the evaluation, an objective is to make suggestions for establishing effective monitoring and evaluation systems. This report contains insights and recommendations to aid Defra's future development of monitoring, evaluation and learning (MEL) for the three funds, and progresses as follows.

Contents

Chapter 2 covers 'Indicators'. A review of the current monitoring information system identified areas for data collection to strengthen Defra's understanding of project profiles, including the disaggregation of data, and to provide more detailed reports on performance (Section 2.1). We also include the identification of common project-level outcome indicators, considerations for aggregating outcome indicators to portfolio key performance indicators, and a review of funds' "Standard Measures" (Outputs) (Section 2.2). To inform this, we reviewed our Tier 2 sample projects' logframe outcome indicators, as well as projects' logframe indicators from recent rounds across all three funds.[1] Altogether, we reviewed 34 Darwin Initiative projects, 15 Darwin Plus projects, and 18 IWTCF projects and collated a total of 303 outcome indicators.[2] We also reviewed a set of current and proposed indicators for ODA spend programmes provided to the evaluation team by Defra, to help identify potential portfolio KPIs. Looking at 'Standard Measures' reviewed the extent to which measures are viable, whether there are any which can be further standardised, and projects' capabilities to measure these.

Chapter 3 covers 'Cross-cutting dimensions for MEL'. We conducted a brief review of the literature, including documents highlighted by the Defra team, to generate insights and recommendations on measuring transformational change across the funds, as well as the monitoring of sustainability, equity and value for money. On transformational change (Section 3.1), we identify areas where projects can facilitate transformational change, and propose a set of criteria and potential scoring system adapted from the International Climate Finance KPI15 methodology. On sustainability (Section 3.2), we propose a set of criteria as a potential scoring system to monitor projects' likelihood of sustainability. On equity (Section 3.3), we propose recommendations for MEL arising from our gender, equity and social inclusion (GESI) analysis on how to mainstream equity considerations into monitoring systems. On value for money – VfM (Section 3.4), we outline an approach to help Defra develop a framework to monitor VfM and provide clear judgements and evidence to support future business cases.

Chapter 4 covers 'Monitoring, evaluation and learning processes'. The evaluation team reviewed previous and current guidance notes for applicants to the funds, and the funds' overarching strategies, to map the evolution of the funds' processes for MEL. In doing so, the team identified some areas of strength but also some areas for improvement (Section 4.1). We also conducted a light-touch rapid review of the Darwin Initiative, Darwin Plus and IWTCF websites, as well as various information notes, to understand the strengths and areas for development around how Defra can make its outputs available to others, and to share projects' successes and learnings (Section 4.2). We conclude by reviewing and providing recommendations on the timeline for monitoring and evaluation (Section 4.3)

How to use this report

We recommend Defra use the contents of this report as prompts to initiate discussions with relevant stakeholders in the three funds. In particular, insights and recommendations provided on monitoring information, the lists of common project-level outcome indicators and potential portfolio-level KPIs, and importantly the approach to

[1] The Tier 2 projects are sampled from six countries: Bolivia, Indonesia, Kenya, Nepal, Vietnam (IWTCF Demand reduction) and the British Virgin Islands (Darwin Plus). Recent rounds include Darwin Initiative Round 27, Darwin Plus Round 9, and IWTCF Round 7

[2] This includes 170 Darwin Initiative indicators, 54 Darwin Plus indicators, and 79 IWTCF indicators (inclusive of demand reduction projects).

measuring transformational potential and change should be discussed with the Fund Manager, DEC, DPAG and IWTAG. For example, this will help streamline how scheme experts may assess and select projects with transformational impact on the basis of scaling capacity, replication and systems-level changes, as well as to test and refine which indicators align best with the scope and reach of funded projects with respect to reach scheme.

2. Monitoring Indicators

In this section, we summarise our findings and suggestions for common project and portfolio-level monitoring indicators.

Key insights and recommendations

- Current information can be strengthened through consistent and systematic collection of specific project data, including on biomes, threats, species, organisation classification, project approaches/ tools used, alignment with multilateral environmental agreements, project linkages, and application sift scores.

2.1. Project descriptive data

There is a comprehensive monitoring system for the three funds currently in place. We provided recommendations in our final report on improving these monitoring information systems. These included: (i) improving database systems for collecting and reporting on monitoring information; (ii) ensuring that systems support tailored briefing notes on past and present projects; and (iii) ensuring that there is adequate resource in place to implement monitoring information demands.[3]

Here, we focus on providing specific recommendations for improving disaggregated project data. The data available across funds is currently inconsistent (and in a largely difficult-to-access database format). Table 1 identifies a number of areas to help strengthen Defra's understanding of project profiles across the 3 schemes.

Table 1: Project data recommendations

Project data	Problem	Proposed solution
Biomes	Current monitoring data collects project information on the biomes they are based in.[4] However, the biome data has inconsistencies, and can benefit from further clarity – for example, there are repetitions, such as 'Forest biodiversity' followed by three other forest biome variables, or a 'Marine and Coastal' variable followed by separate 'Marine' and 'Coastal' variables. This may be due to the nature of the Access database's dashboard layout.	Biome data should be streamlined further to support summaries of which biomes projects are operating in, and help to disaggregate other data such as performance by biome. We recommend the use of a biome variable constituted by a consistent list of clearly defined biome types.[5] Our evaluation also found that a 'biome' may not always apply to particular projects (e.g., IWT demand reduction projects), or that projects may operate in multiple biomes when operating in

[3] See Final Report Section 9: Recommendations, particularly for Monitoring and Evaluation.

[4] Current biome data includes: Dry and sub-humid lands biodiversity; Tropical grassland and savanna; Rangeland; Temperate grassland; Mediterranean; Desert; Forest (plus further variables on Boreal, Temperate, and Tropical); Inland waters biodiversity; Island biodiversity; Marine; Coastal; coastal biodiversity; Mountain; Polar and Wetlands

[5] We recognise that there are many classification systems of biomes. We suggest the list of terrestrial and marine ecoregions, currently in use by UNEP-WCMC and WWF, of which terrestrial ecoregions stems from the work of Olson et al. (2021). A summary of ecoregions can be found in WWF's Ecoregions list (Link).

		transboundary settings. Therefore, the list should also include options to capture these considerations.
Species	At present, data on species targeted or protected is available only for the IWTCF projects. However, it should be noted that not all projects may target specific species, but rather work on biodiversity more broadly.	Systematic data collection on the number, names, and conservation status of targeted species by project should be collected across all funds. This will allow identification potential gaps in which species of conservation importance are not being addressed by the funds. Free-text entry data of specific species targeted by applicable funded projects would be the most efficient starting point, as using set lists such as the IUCN Red List of Threatened Species for example may not be comprehensive and only captures species with assessments conducted. However, it is possible for species data collected by the funds to be later cross-referenced with other species databases to understand the threat status of the species' populations (i.e., endangered, critically endangered, etc.). Additional identifiers could also be added to disaggregate the data by animal or plant species.
Classification of organisations involved	At present, data is collected on contracting organisation and international and UK partners; however little data captures what type of organisations these are, such as whether they are a government authority, non-government organisation, trust and foundation, private sector, community association, amongst others. In addition, there is no data on whether the organisation is a host country organisation or not.	We recommend that monitoring information include classification data for organisations including whether they are from the host country. For example, for Darwin Plus, this would help identify partners who are UK Overseas Territory (UKOT) Government Departments, and in IWTCF and Darwin Initiative projects, it would help identify NGOs from, or with an established base in, the host country.
Broad approaches	Current monitoring information collates data on the broad approaches[6]	We recommend that the lists of broad approaches be streamlined for current and future programmes. For the

[6] Broad approaches tags include: Co-management; Community management; Economics, trade and incentive measures; Ecosystem approach; Ecosystem management and conservation; Ecosystems capacity to deliver goods and services and support livelihoods; Equity and benefit sharing; Ex situ conservation; Gender issues; In situ conservation; Institutional development; Livelihoods; National strategies and cross sectoral integration; Policy; Poverty reduction; Species management and conservation; Sustainable use and consumption

	and specific tools[7] that Darwin Initiative and Darwin Plus projects use. However, this data does not include relevant information for IWTCF projects, largely due to the different nature of activities involved. This information can be beneficial when paired with performance data, such as final report review scores.	IWTCF, this could include systematic collection of data on the broad approach of projects (i.e., law enforcement, legal frameworks, sustainable livelihoods and demand reduction), and utilise cross-cutting tags from the Darwin Initiative, such as on poverty reduction, gender issues, and research and capacity building, amongst others. Tailored tags could also be developed for each project's broad approach; for example, under law enforcement - there could be particular tags for protected area management to prevent poaching, or transnational law enforcement.
Project links	Our evaluation observed that there are important links between projects in terms of utilising and building upon the design, management, outputs and outcomes (including capacity built) of previous projects, or potentially on projects from the same round. However, we found that the existing monitoring data on the links between funded projects is not only inconsistent, but also outdated in the database.[8]	We recommend that Defra collect clearer and more consistent data on project links. This data should be accompanied by reasonable categorical data on the 'nature of the link'. Categories to consider could include methodological links (e.g., using an approach developed by a previous project), extensions (e.g., building upon the work of an earlier phase) or whether it is the same lead organisation and/or project team. It could also include links between different funding awards.
Alignment with multilateral environmental agreements	Monitoring data currently collects information on projects' alignment to MEAs, which includes the Convention on Biological Diversity (CBD) articles and targets and Aichi Biodiversity Targets, but also overarchingly other conventions such as CITES, CMS, the Ramsar Convention on Wetlands, and the UNFCCC. However, during our	We recommend that closer attention is given to the collection of data around projects' alignment with relevant MEAs. Furthermore, the LTS database should be updated to reflect projects' alignment to relevant SDGs, and looking forward, to the Post-2020 Biodiversity Framework's Goals and Targets once finalised[9] and other

[7] Specific tools tags include: Assessment, monitoring and indicators; Certification; Communication, education and public awareness (CEPA); Global strategy for plant conservation; Global Taxonomy Initiative; Governance; Impact assessment; National Biodiversity Strategy and Action Plans; Participatory Approaches; Payment for ecosystem services; Policy and legislation; Protected areas; Rehabilitation of degraded areas; Research; Taxonomy; Tenure; Tourism; Traditional knowledge; Training; Valuation of biodiversity and ecosystems

[8] For example, the most recent Darwin Main project recorded is DAR20006 (2013-2017). There is also limited data for Darwin Plus (linked to its precursor Overseas Territories Challenge Fund), and no data for IWTCF.

[9] Convention on Biological Diversity (2021). First draft of the Post-2020 Global Biodiversity Framework. Link.

	evaluation, we found inconsistencies in the database of projects' contributions to different MEAs. In addition, there was no systematic monitoring of which Sustainable Development Goals (SDGs) projects contributed to.	conventions that may arise in future, especially around climate change.
Application sift scores	Our evaluation relied upon the use of application scores as an indication of potential impact, including how application scores compare to final report review scores as an achievement against expectations. However, application sift scores were manually extracted from individual sift tables, rather than systematically included within monitoring databases.	We recommend that this data is uploaded and collated as monitoring information. Importantly, we also recommend that application sift scores are broken down into different types of scores for each scheme – for example technical merit, biodiversity impact and poverty reduction gradings under Darwin Initiative criteria, to provide additional information on funded projects' potential impacts in particular areas.
Report review scores	We identified challenges in the scoring system currently used by the funds to assess achievement against logframe expectations. This includes the annual report review score, and final report review score (see criteria in Annex 1), for which we found annual report review scores not being predictive of project success. However, the statistical procedure[10] used to assess this relationship could have been limited due to the relatively small number of 'ranks' in the scores – both the annual report review and final report review scores have 5-6 ranks.[11]	We recommend that a system similar to that employed in the application sift scores[12] could help to create a 'continuous' scoring variable (i.e., a percentage calculation), which could support a more conducive approach to future statistical analysis. However, the evaluation recognises that the current annual and final report review scoring system is difficult to deviate from as it reflects the standard Foreign, Commonwealth and Development Office (FCDO) approach to scoring ODA projects.
Threats	No challenges identified.	Monitoring at the portfolio-level should continue to collect data on which threats to biodiversity projects address, particularly for the Darwin Initiative and Darwin Plus funds which address more threats to biodiversity

[10] This used both a Spearman's Rank correlation test and Kendall's Tau correlation test, which are used for ordinal data such as the report review scores.
[11] In numerical form (e.g., when transforming final report review scores letters into numbers), the range is for scores is 0-5, where 5 represents the highest possible score. In this case, the scale used in annual report review scores is inverted.
[12] For example, for the Darwin Initiative, this includes scores on Technical Merit, Biodiversity Impact, and Welfare and Poverty Reduction. When added together, and divided by the total possible score that can be achieved, a percentage score can be formed. This creates a continuous variable for statistical analysis.

		compared to IWTCF.[13] Furthermore, this data can provide additional insights when paired with performance data, such as final report review scores, to provide a greater understanding of projects' achievements in tackling different threats to biodiversity.

2.2. Output, Outcome, and Impact indicators

Key insights and recommendations

- Common outcome indicators can be classified as: (i) Biodiversity Protection, which includes indicators on the state, threats to, protection and sustainable use of biodiversity; (ii) Poverty Reduction, including monetary and non-monetary measures; (iii) Climate; and (iv) the Illegal Wildlife Trade, specifically around enforcement and demand reduction. This classification can support Defra in future identification of common indicators and portfolio KPIs.
- Projects may face a variety of challenges in measuring indicators, such as time-lags in observing changes on the state of biodiversity, poverty reduction, and demand reduction behaviours. There are also considerations related to the methods and expertise required. However, mandating the use of baselines, ensuring appropriate indicators are in place, and supporting monitoring capacity are critical starting points.
- We have identified 38 possible portfolio-level key performance indicators (KPIs), alongside 6 KPIs for general fund performance, to provide options for Defra to aggregate outcome data. Data on threats and measures to protect biodiversity are likely to be more common than the state of biodiversity. Indicators should at least capture the number of projects showing demonstrable improvements.
- We also suggest that Defra works with the Fund Manager and expert groups to develop and monitor specific project indicators on climate change and demand reduction in IWT, and identify what works in their measurement.

2.2.1. Current challenges

Our evaluation also observed weaknesses in current monitoring and evaluation systems to measure, verify, and report on progress against outputs and outcomes. These include ineffective systems for measuring progress (with relatively vague logframes); weak or unclear indicators or targets that were not SMART; and a lack of measurement of these indicators across the results chain. Projects also often include ambitious indicators and targets created at application stage, such as on influencing national policy or poverty reduction; many reviewers questioned whether they could be achieved within project timeframes. In addition, projects' means of verification are often unclear on how exactly they will be used to as sources of evidence to measure outputs and outcomes in some instances (e.g., use of 'NGO reports'). This produces difficulties in credibly measuring and evaluating project achievements.

[13] At present, categorical data on threats include general environmental degradation, land use and habitat change, climate change, invasive species, pollution, and over-exploitation.

However, this is not to suggest that projects are not able to measure change, nor should strive for such ambitions given the new priority on achieving transformational change. We also found evidence of the positive effects of rigorous MEL systems, appropriate targets and indicators, clear baselines, and clear and transparent reporting which have supported measurement and achievement of outcomes. Going forward, we advise that Defra focuses on two main areas for improvement:

- Ensuring the appropriateness of indicators and targets, plus capacity to monitor. Projects successful in MEL use tailored indicators and targets that are appropriate to the local and/or national context and identify how they will collect data against these indicators. The fund manager, alongside the Darwin Expert Committee (DEC), Darwin Plus Advisory Group (DPAG), and IWT Advisory Group (IWTAG) should provide greater support for and scrutiny of log-frames, to help ensure that indicators are both clear and measurable. This should include whether projects have the capacity to monitor outcome indicators, and whether targets/expectations can be achieved by project completion (two considerations highlighted as integral in the literature[14]). Our team suggest a set of attributes that help to identify and construct appropriate indicators, however attributes' appropriateness will differ on the nature of what is being measured.
- Use of baselines. To sufficiently measure outcome indicators and contributions to impact, each of the schemes should mandate the use of baselines. Projects should then be encouraged to continue monitoring their indicators to gauge the impact of their interventions, against the baseline.[15] Further detail on baselines is provided in section 4.1.

2.2.2. Output indicators

Standard Measures have been introduced for both the Darwin Initiative and IWTCF, which help to collate quantitative data on the activities and outputs of projects. Darwin Plus utilises the Darwin Initiative Standard Measures framework.[16] We have identified several areas for improvement to help increase their relevance and utility.

Darwin Initiative Standard Measures

With respect to the Darwin Initiative, we find that 'Standard Measures' may be outdated and UK-centric, and may not account for the special needs of host countries. The Darwin Initiative evolved a lot since its inception in 1992; however, the 'Standard Measures' framework does not sufficiently reflect the inclusion of poverty reduction and gender equality objectives in the fund, nor the changing needs of host countries. Given the lack of adaptation, we advise that Defra regularly review its Standard Measures to ensure these remain relevant over time, especially as the Post-2020 Global Biodiversity Framework emerges.

Darwin Initiative Standard Measures focus on activity- and output-level indicators centred on training, research, and dissemination outputs, as well as physical and financial measures related to activities and outputs. In future, we advise that the Darwin Initiative utilises relevant outputs from the IWTCF Standard Measures to achieve a better balance with the overtly academic nature of the current measures. These academic measures, such as number of people achieving PhD, Masters or other qualifications, appear more geared towards the training offered through the Darwin Fellowship scheme rather than the less formal training offered to many in-country project partners and beneficiaries, such as training local 'biodiversity monitors' or improving communities' farming techniques.

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[14] Stephenson (2019). The holy grail of biodiversity conservation management: Monitoring impact in projects and project portfolios. Link.
[15] Harris et al. (2021). Biodiversity Indicators Review – International Climate Finance Evidence Project. Joint Nature Conservation Committee. Link.
[16] Lists of the existing Standard Measures for Darwin Initiative and IWTCF currently implemented can be found in Annex 4.

The IWTCF Standard Measures for sustainable livelihoods and economic development[17] are also relevant to many Darwin Initiative projects and should therefore be incorporated, and this will also help begin aggregating outputs across the two funds. Related to this, we also recommend that Defra record the different types of stakeholders trained, such as government officials, NGO personnel, or local community members, to help encompass the broad range of capacity building activities, and disaggregate project contributions.

Looking to multilateral environmental agreements, such as the CBD and Post-2020 Global Biodiversity Framework,[18] as well as insights from the IPBES Global Assessment report,[19] may assist Defra in identifying possible outputs, in conjunction with our evaluation which identifies which activities/outputs are most observed for each fund.

IWTCF Standard Measures

The IWTCF Standard Measures represent a more up-to-date output framework reflecting recent changes in the funds, and we advise the Darwin Initiative draw upon this in further developing its own Standard Measures. IWTCF Standard Measures are usefully split by the typology of projects funded, including sustainable livelihoods, law enforcement and legal frameworks, and behaviour change (in addition to cross-cutting measures which draw on Darwin Initiative Standard Measures). These are sufficiently diverse and capture a good range of the outputs that IWTCF projects can report against.

One area for consideration for IWTCF Standard Measures is that a number of indicators presented overlap with the outcome indicators we identify in Section 2.2, such as the number of households experiencing an increase in income, and the average percentage increase of income; as well as the number of individuals charged and successfully prosecuted. The embedding of certain outcome indicators as Standard Measures may, on the other hand, support the collection of standardised outcome-level data – although could be labelled as such.

General observations

For both sets of Standard Measures, a minor point is that the language often uses a future tense, i.e., "to be" completed, established, enhanced, and so on. Therefore, by the final report stage, Standard Measures reported may reflect a willingness to implement an action rather than clearly show actual achievements at the output level. This is at odds with some general guidance provided, such as in Darwin Initiative's research guidance, where "research methods will only be reported when they have been completed."

We have also identified a new standard output that may be of use, which is whether funded "projects have successfully submitted data to open data repositories". This would allow the monitoring of outputs relevant to Defra's open data policy and intention to facilitate data sharing (see Section 4.3).

2.2.3. Outcome indicators

Projects funded under the Darwin Initiative, Darwin Plus and IWTCF use many different outcome indicators to monitor and manage progress. We have identified four broad categories of outcome indicators, some of which can be further broken down into specific sub-categories (Figure 1). We then provide an overview of common indicators for each category and measurement feasibility. Annex 2 provides the full list of identified indicators, within each category, for each scheme. Each identified indicator is complemented by a 'level of confidence' on the ease of measurement, based upon the team's expert views on feasibility.

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[17] 2011 is when ODA funding was introduced.
[18] Convention on Biological Diversity (2021). First draft of the Post-2020 Global Biodiversity Framework. Link.
[19] IPBES (2019). Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany. Link

In-line with our categories of indicators, Defra could the ask project applicants to identify the categories that their indicators fit into. Guidance could ask projects to identify and list logframe indicators measuring the: (i) state of biodiversity, (ii) threats to biodiversity, (iii) protection of biodiversity, (iv) sustainable use of biodiversity, (v) poverty reduction and livelihoods, (vi) climate, (vii) and enforcement and demand-reduction specific indicators. The categories for guidance can be adapted to reflect the areas most aligned with each scheme.

We note caution in interpreting the confidence level attributed to indicators and how this translates to 'useability' (see Annex 2). For example, the indicators reviewed are not representative of *all* possible outcomes, and the exercise was based on a qualitative, subjective review of past and current project logframes. Therefore, we highly recommend that this review be used as one resource for Defra to explore amongst others on indicator development. Reviewing indicators used by other similar global funds could help refine indicators further, and consultations with the expert committees and advisory groups will provide further expert input into the feasibility of measuring and verifying these results.

Figure 1: Categories of common outcome indicators

State of biodiversity

We note the general challenge that all funded projects may face in measuring impacts on the state of biodiversity, particularly at the species-level. Certain aspects of biodiversity may change only very slowly, and this can be difficult to measure within the lifespan of a 3-year project. Furthermore, sole attribution to project activities may be challenging if there are a number of other agencies' interventions or external events in the target area. Although our evaluation found several claims of species-level outcomes, the strength of evidence relevant to improved species status were observed to be weak. There may also be differences in methods, data collection processes and the expertise required to measure biodiversity impacts across each scheme, as well as additional costs of equipment, training and implementation to measure such changes. As a result of this, it should not be expected that funded projects will be able to measure the state of biodiversity.

However, Darwin Initiative, Darwin Plus and IWTCF projects often work at specific sites and relatively small scales in terrestrial, coastal and marine environments, which is conducive to measuring the state of biodiversity.

- From our review, we have identified several common indicators relevant to the state of biodiversity from the Darwin Initiative and Darwin Plus, which measure species-level and habitat-level changes, and improvements in understanding the state of biodiversity.

- IWTCF projects also focus on species-level changes, although these mostly measure threats to biodiversity, such as reduced poaching and illegal killing of target species.

Table 2: Examples of common 'state of biodiversity' indicators

State of biodiversity	Confidence level (high, moderate, low)
Increased or stabilising (trend) in numbers/population-size of rare or threatened species[20]	Moderate
Extent of rare or threatened habitat/habitat in which rare of threatened species resides	Moderate
Increased integrity/condition of rare or threatened habitat/landscape	Moderate
Improved understanding of marine biodiversity/ecology of target habitats and/or species	High

Reporting on increasing populations of rare or threatened species (including endemic species as well as other species of significance such as flagship, keystone and/or indicator species) can serve as important proxies for other aspects of the state of biodiversity, where their abundance could signal habitat quality or populations of other species. Darwin Initiative projects can measure these species-level changes through regular field-level population or biodiversity monitoring surveys of key species, likely utilising a range of sampling strategies. Some Darwin Initiative projects also measure whether there are improvements in the conservation status of rare or threatened species, or the breeding success of key species which is indicative of population health. A focus on a small number of species, as expressed in the JNCC Biodiversity Indicator Review[21], can help ensure feasibility of monitoring species in the field. Darwin Initiative projects may also be able to measure species richness (i.e. the presence of species), including plant or animal biodiversity, as well as local agrobiodiversity.

The remainder of common Darwin Initiative outcome indicators measuring the state of biodiversity are habitat-level, often measuring the extent of hectares of rare or threatened habitats, or the target habitat in which rare or threatened species reside, as well as the changes in the rate of decline of habitats. Other common measures include the integrity or condition of habitats or landscapes, including the area of habitat restored; the level of habitat connectivity or fragmentation; and changes in the extent of (native) tree cover. Habitat-level changes are often easier to measure, with some Darwin Initiative projects demonstrating the ability to use satellite data to measure the extent of change in hectares or tree cover,[22] or field-level data to support measurement of habitat integrity, condition, and connectivity.[23] Another indicator of importance, although less common, includes measuring the stock size of genetic resources, such as of seed collections at nurseries, seed centres and national collections.[24]

Darwin Plus projects often measure project contributions to improved identification and understanding of marine biodiversity, including the ecology of target habitats and/or species. For example, a project in South Georgia

[20] "Threatened" species includes critically endangered, endangered and vulnerable species.
[21] Harris et al. (2021). Biodiversity Indicators Review – International Climate Finance Evidence Project. Joint Nature Conservation Committee. Link.
[22] For example, "DAR20021: Forest Futures: livelihoods and sustainable forest management in Bolivian Amazon" and "DAR23033: Marrying community land rights with stakeholder aspirations in Indonesian Borneo".
[23] For example, "DAR21014: Reconnecting poverty-alleviation to biodiversity conservation in Kenya's Eastern Arc Mountains" and "DAR25001: Preventing Borneo's peatland fires to protect health, livelihoods and biodiversity"
[24] An example is from a more recent Darwin Initiative project, DAR28007: Building smart seed systems for biodiversity, livelihoods and resilience restoration.

intends to establish the associations between vegetation type and occurrence of invertebrates.[25] In addition, Darwin Plus projects may also measure habitat changes, including the maintenance of habitats, cover of natural vegetation, and extent of habitat diversification, although these appear to be terrestrial or near-shore habitats, rather than changes in other marine environments, such as coral reefs.

We found one IWTCF project within the sample reviewed measuring the status of species population.[26] Literature on IWT however suggests that projects could measure population numbers of target species, including "flagship species" of key interest and ecological importance, using methods such as camera traps, aerial surveys, and wildlife counts, which we expect would hold true for other IWTCF projects not reviewed, or those implemented in the future.[27]Our analysis did find that IWTCF projects on sustainable livelihoods or law enforcement are more amenable to measuring species-level changes compared to those focused on legal frameworks or demand reduction. This is due to the longer causal chain between policy development or reduced consumer demand in consumer countries to improved status of species in harvest countries. However, challenges in measuring the state of biodiversity remain, especially given difficulties in establishing specific and direct causal links. As a result, we recommend that IWTCF projects, particularly legal framework and demand reduction projects, reduce their ambitions to impact the "state of biodiversity" within the project timeframe, recognising that such contributions may be indirect and immeasurable. Instead, projects should focus on identifying and monitoring other 'closer' indicators in their pathways to change, as this will provide greater logical assurance that 'contribution' to improvements in biodiversity has been made.

Threats to biodiversity

Indicators on threats to biodiversity are applicable across Darwin Initiative, Darwin Plus, and IWTCF projects, and aim to measure how effective funded projects have been in understanding and reducing relevant threats to biodiversity. Exactly what projects measure varies given the different types of threats each scheme aims to address. In some instances, these indicators can again serve as a proxy for the state of biodiversity.

These indicators are often easier to monitor and reflect changes more rapidly than species-level or habitat-level indicators on the state of biodiversity, although they can also sometimes be strongly associated with the state of biodiversity.[28] As examples, it may be easier to measure the presence of people and livestock within a protected area, illegal activities, or invasive species threats. However, reviewing the strength of evidence, our evaluation found that projects with outcomes relevant to reducing threats to biodiversity mostly demonstrated weak or no evidence of achievements, which suggests that challenges remain in measuring change.

Table 3: Examples of common 'threats to biodiversity' indicators

Threats to biodiversity	Confidence level (high, moderate, low)
Rate of habitat clearance or disturbance	Moderate
Number of incidents of illegal activities (e.g. illegal logging, hunting, killing e.g. IWT species, etc.).	High
Reduced disturbances to target species in UKOTs	Moderate

[25] DPLUS144: Protecting South Georgia's terrestrial communities from climate change-invasion synergies.
[26] IWT049: Reducing IWT in Sumatra across two globally important tiger landscapes. However, evidence observed on species stability at the time of the evaluation was anecdotal due to the project not yet collating biodiversity monitoring results.
[27] Wilson-Holt and Roe (2021). Community-based approaches to tackling illegal wildlife trade – what works and how is it measured? Link.
[28] Harris et al. (2021). Biodiversity Indicators Review – International Climate Finance Evidence Project. Joint Nature Conservation Committee. Link.

Darwin Initiative projects measure a wide range of different threats, including habitat degradation and disturbance (e.g., incursions by farming, or fires); illegal activities such as illegal logging, hunting, or poaching; the incidence of zoonotic or epizootic disease; and the extent of invasive species in target habitats. The density of threatened trees and animals are also used by some projects as an indication of reduced threats.

Darwin Plus projects' indicators around threats to biodiversity often focus on assessing, modelling, and monitoring various threats, including invasive plant species, climate change, and disturbances to target species. There is also an indicator on the implementation of disease treatment strategies, such as for stony coral tissue loss disease.[29]

To date, IWTCF projects often focused on the illegal killing or reduction in poaching of target (and other) species, as well as the unsanctioned harvesting of wildlife or timber. Our evaluation found this was often measured using law enforcement patrol reports and other fieldwork outputs. The exact methodologies or approaches used are often vague in project logframes, although we suggest the reliability, quality and ability to detect change confidently may be closely linked to organisations' prior capacity to measure change, and/or the extent of successful law enforcement activity and field-level monitoring. Some IWTCF projects have also used indicators focusing on the number of incidents of human-wildlife conflicts, as a threat to both species and humans.

Protection of biodiversity

Darwin Initiative, Darwin Plus and IWTCF projects all demonstrate common indicators related to the protection of biodiversity, reflecting the variety of protection measures afforded to biodiversity (and illegal wildlife trade species). Indicators on the protection of biodiversity are easier to measure, but may be less accurate in terms of how the protection measure affects biodiversity. For changes to credibly contribute to biodiversity conservation, indicators must be able to show whether plans, policies, and protected areas are well-implemented, and whether the knowledge and practices of local communities or authorities to protect biodiversity have improved. However, our evaluation did find strong evidence that the Darwin Initiative, Darwin Plus and IWTCF funds have a significant impact in the implementation of effective conservation support mechanisms and facilitated longer-term conservation efforts.

Table 4: Examples of common 'protection of biodiversity' indicators

Threats to biodiversity	Confidence level (high, moderate, low)
Change in size of protected area (PA) or 'other effective area-based conservation measures' (OECM)	Moderate
Conservation management strategies/action plans (for specific habitats or species) agreed and implemented - with involvement of local/indigenous communities (and other stakeholders) in decision making processes[30]	High
Increased collaboration between UKOTs in marine biodiversity conservation	High

Darwin Initiative projects also include indicators focused on the improved knowledge and capacity of conservation authorities to protect biodiversity, including the use of new or improved conservation tools. Secondly, there are variety of indicators at the community-level focused on the protection of biodiversity. A common indicator is improvements in the knowledge and capacity of local people or communities to protect biodiversity (including

[29] A newer Darwin Plus project, DPLUS147: Collaborative approach to managing coral disease in UK Overseas Territories
[30] This an indicator observed for the Darwin Initiative. The IWTCF shares a similar indicator relevant to protection: "Target area with established community-led/religious enforcement of rules and regulations against the illegal wildlife trade" (Annex 2).

the use of new or improved conservation tools). These also include the number of community associations formed or strengthened to support biodiversity conservation, and the extent to which local communities are involved in the governance and/or sustainable management of natural resources. Other indicators focus on the compliance of local communities with management regulations, as well as the participation of local people in wildlife conservation - including in leadership roles in conservation decision-making. Whilst these are strong indications of the protection of biodiversity, they are also strong proxies for the sustainable use of biodiversity at the community-level. Finally, less common indicators include the ability of projects to scale-up project work based on collaborations with key stakeholders, as well as on the financial leveraged for biodiversity conservation, contributing to increased protection of biodiversity.

A higher proportion of Darwin Plus indicators are focused on the protection of biodiversity compared to other indicator categories. These include the successful survey and mapping of marine protected area habitat; the increased capacity of UKOT stakeholders to collect and use data to inform marine management (including geospatial information); the successful approval and/or implementation of a new or improved marine protected area management plan; and the adoption of new or improved marine management tools. Other common indicators focused on the protection of biodiversity include increased availability of scientific information to inform fisheries management, and upgrades to navigational charting.

For IWTCF projects, common indicators on the protection of biodiversity focus on the improved capacity of enforcement agencies to directly address IWT issues in target areas, and the extent of target habitat under stronger protection - including the establishment of community-led enforcement of rules and regulations against the illegal wildlife trade. Other common indicators include measures of the improved and coordinated response from both government authorities and local communities (including through the improved knowledge, attitudes, and empowerment of local communities to collaboratively address IWT enforcement). Although less common, there are also indicators on legal frameworks for target species protection introduced or strengthened, reflecting policy-level changes for the protection of biodiversity. Furthermore, whilst not observed in our sample, there are also useful Information Technology tools and approaches available, such as SMART management information systems, geospatial tools, and even Apps to help monitor and track poaching events, forest fires etc.

Sustainable use of biodiversity

There are fewer common indicators on the sustainable use of biodiversity, and they are only present for Darwin Initiative and Darwin Plus projects. However, as noted above, common indicators on the protection of biodiversity focused on the community-level can serve as useful proxies for the sustainable use of biodiversity, such as whether sustainable management practices are in place, although scientifically measuring the sustainable use of various ecological components may be challenging.

Table 5: Examples of common 'sustainable use' indicators

Threats to biodiversity	Confidence level (high, moderate, low)
Number of people with increased knowledge, attitudes and practices in biodiversity conservation	High
Improved use / generation of community or traditional knowledge on biodiversity or ecosystems (e.g. use of indigenous agroforestry systems).	Moderate

Under the Darwin Initiative, such indicators are complemented by common indicators on whether local people have a clearer understanding of biodiversity threats, empowerment, and capacity to sustainably use biodiversity, as well as the use of community or traditional knowledge on biodiversity or ecosystems. Other indicators point towards the role of markets, including whether markets for sustainably farmed and harvested products are

established, and the number of enterprise contracts reflecting socio-environmental values - although there are few common market-level indicators overall.

Similarly, common indicators for Darwin Plus projects revolve around the number of people with improved knowledge, attitudes, and practices in marine or coastal conservation. Despite the limited focus of Darwin Plus projects on poverty or livelihoods, another common indicator in projects is tied to 'sustainable livelihoods', which relates to the number of ecotourism visitors or increased ecotourism opportunities.

Poverty reduction and livelihoods

In line with the requirements of ODA-funded programmes, Darwin Initiative and IWTCF projects have indicators relevant to poverty reduction and livelihoods (with the Darwin Initiative demonstrating the greatest diversity in indicators). Darwin Plus does not have any outcome indicators in this category.

We found that projects demonstrated equally strong and weak evidence on poverty reduction (although stronger overall than their measurement of biodiversity). It can be similarly challenging to measure the long-term (and relatively uncertain) nature of outcomes/impacts on poverty reduction, as well as some livelihood benefits, within the short timeframe of funded projects. In some cases, this was due to a number of projects with insufficient baselines or pre-post assessments to evidence change, but for others it was due to implementation challenges (for example in setting up local capacity building and livelihood structures). Several projects in the Darwin Initiative also used output indicators to then infer the *likelihood* of changes in income or wellbeing. In addition, we observed that the links between IWT and poverty reduction tended to be more indirect, which may pose difficulties in measuring change for IWTCF projects on law enforcement, legal frameworks and demand reduction, for example.

Table 6: Examples of common 'poverty reduction and livelihoods' indicators

Threats to biodiversity	Confidence level (high, moderate, low)
Number of households/people with increased income	High
Number of households/people reporting improved (non-monetary) wellbeing[31]	High
Number of households/people benefitting from improved livelihoods	Moderate
Number of people harmed or killed in human-wildlife conflicts in target landscapes	Moderate

Across both funds, there are common *monetary* indicators employed, including the number of households or people with increased income, as well as average increases in income, in some instances disaggregated by gender. There are also common indicators on the increase in revenue of sustainable livelihood enterprises. There are also non-monetary indicators focused on measuring different aspects of wellbeing, which at a more refined level can include common indicators around increased confidence or empowerment. The Darwin Initiative is the only scheme with examples of indicators to measure improvements in diet/food security, healthcare, and education.

There are also common indicators that measure livelihood changes, including the number of new alternative livelihoods implemented, and the number of households or people with diversified livelihoods or identifying/ developing opportunities for supplementary or additional livelihood activities. These include sustainable

[31] Findings from DAR28002 outline three different dimensions of wellbeing that can be considered: subjective (e.g. personal feeling), relational (e.g. relations with government and other communities), and material (e.g. livestock health and value).

livelihoods in agriculture, aquaculture, and ecotourism. The Darwin Initiative also demonstrates more nuanced indicators around livelihoods - including the number of livestock or farming plots with increased productivity or enhanced condition; the extent of loss or gains of livestock, fish catch, or agricultural produce; as well as increases in unit price for harvested outputs. Important, yet less observed indicators include measuring whether households or people have improved economic independence or resilience as a result of monetary and non-monetary changes. IWT-specific measures including changes in the number of people harmed or killed in human-wildlife conflicts can act as a proxy for human health.

Climate change

As identified in our evaluation, most projects do not contribute directly to climate change aims or goals; therefore, the number and range of common indicators is low. Funds we observed with climate change-related outcomes are Darwin Initiative and Darwin Plus. Overall, we find that climate adaptation will be easier for projects to measure, despite low observation, due to cross-over with indicators on poverty and sustainable livelihoods (see above), as well as potential measures on the state, protection, sustainable use, and threats to biodiversity for species or ecosystem cases for adaptation. However, links to adaptation are indirect and not explicit. On the other hand, climate mitigation may be more challenging to measure due to the potential requirements on relevant data collection, methods, and technical expertise to quantitatively estimate carbon sequestration and emission levels.

Table 7: Examples of common 'climate' indicators

Threats to biodiversity	Confidence level (high, moderate, low)
Estimated carbon emissions (tC02e) absorbed	Low
Climate-related threats to biodiversity modelled	Low

For Darwin Initiative projects, common indicators focus on climate mitigation. This includes estimations of carbon emissions absorbed, as well as the avoided carbon emissions from hectares of forest loss avoided. There is also an indicator on whether sustainable management practices promote carbon sequestration. On climate change adaptation, however, indicators are less common. Darwin Plus projects rather focus on indicators related to climate change monitoring. In our review, these been categorised under different groups of indicators, particularly 'threats to biodiversity'. This is because common indicators are often based on the modelling and/or monitoring of climate impacts on marine ecosystem conditions, with no clear indicators measured on climate mitigation, such as estimated avoided emissions or reductions in emissions.

In light of these findings, and noting that climate change has also become more recently prioritised, we suggest that Defra works with the Fund Manager and the Expert Advisory groups to monitor project contributions to climate change more closely for the next few years, and help support the development of a more concrete set of climate-related outcome indicators, including feasible means of verification. This will also help update Defra's knowledge on the types of climate change outcomes/impacts that funded projects are contributing to, allowing an adaptive approach to programming, monitoring requirements, and the development of agreed portfolio-level indicators, as well as alignment with the ICF KPIs.

In addition, suggest Defra work with these stakeholders to explore projects' potential contributions to the established ICF Key Performance Indicators (KPIs). Based on the indicators categories reviewed, we suggest that the ICF KPIs that funded projects could contribute against are KPIs 1, 3 and 4 (Adaptation-focused), and 6, 8 and

17 (Mitigation-focused).[32] A variation of KPI 15 on transformational impact for the three funds is discussed in Section 3.1. Other KPIs with less probable contributions by funded projects is KPI 14 on the level of institutional knowledge of climate change issues increased as a result of the funds' support.[33]

Illegal wildlife trade: Enforcement and demand reduction

Under IWTCF, identified indicators on enforcement are wide and varied, and represent a large proportion of IWTCF common indicators. On demand reduction, common indicators of achievement vary from more output-level indicators, such as the number of communication outputs successfully reaching target audiences, or the number of social media posts with positive values related to campaigns, to more relevant outcome-level indicators focusing on behaviour change. Reviewing the strength of evidence, our evaluation identified challenges for example with projects use of surveys when attempting to measure changes in willingness or intention, including generating appropriate sample sizes.

Table 8: Examples of common 'enforcement' indicators

Enforcement	Confidence level (high, moderate, low)
Number of enforcement officials with improved capability to enforce against poaching and trafficking	High
Increased (rate of/percentage of) prosecutions, convictions, and sentences for IWT offences	Moderate
Alternative laws used to strengthen prosecution of IWT cases	Low

On enforcement, there are indicators focused on changes in the detection of the illegal wildlife trade, as well as seizures of illegally traded live animals or products. Second, there are indicators focused on prosecution, including the number of IWT investigations leading to trials for prosecutions; whether increased percentage in arrests leads to successful prosecution; and the increased rate or percentage of prosecutions, convictions, and sentences for IWT offences. Other similar indicators include changes in bail or penalty amounts for IWT offenders. Third, there are several common indicators observed around the success of innovative approaches, including the completion of wildlife forensic needs assessments and DNA forensic services in investigations. Finally, the remaining set of common indicators focus on enforcement itself, including at the authority- and community-level. On the former, this includes the capacity of officials but also institutional performance to tackle poaching and trafficking, as well as changes in 'transboundary' IWT cases, enforcement operations and information sharing. On the latter, an example is the involvement of community members in providing credible information reports to law enforcement agencies on IWT.

Table 9: Examples of common 'demand reduction' indicators

Demand reduction	Confidence level (high, moderate, low)

[32] KPI 1: Number of people supported by [Programme] to cope with the effects of climate change ; KPI 2: Number of forest dependent people with livelihoods benefits protected or improved as a result of [Programme] ; KPI 4: Number of people with improved resilience as a result of [Programme] ; KPI 6: Change in Greenhouse Gas (GHG) emissions as a result of [Programme] support ; KPI 8: Number of hectares where deforestation and degradation have been avoided through [Programme] support.

[33] ICF Key Performance Indicator (KPI) Methodology Notes, Link.

Number of people in target audience with increased awareness and understanding of poaching and the illegal wildlife trade	High
Number of people in target audience with a decreased willingness to purchase illegal wildlife products	Moderate

On demand reduction, in addition to the common indicators included in the table above, other examples include the number of people whose beliefs in the value or effectiveness of illegal wildlife products have reversed (such as its use to cure disease or ailments) as well reduced intention to poach illegal wildlife traded species. In general, the literature shows that it is difficult to measure 'actual behaviour change' in demand reduction projects (with a tendency as noted above to focus on output-level indicators[34]), whilst indicators to capture behaviour change are often inadequate or infeasible to measure.[35] To support indicator development in this area, we recommend that Defra and the IWTAG work together to develop a practical measurement methodology and agreed set of indicators on demand reduction, and then test appropriately scaled and skilled IWTCF projects to see if this works. We also recommend that IWTCF monitor the latest demand reduction projects funded, as these may test new indicators for measuring change. Or, if this is not possible, regular consultation with advisory groups could help ensure that frontier guidance is available from organisations leading this field. This could then be used to provide references to applicants in the Guidance to Applicants if viewed as appropriate.

2.2.4. Aggregating from project-level to portfolio-level indicators

The measurement of aggregated impact at the portfolio-level requires a small sub-set of indicators to be chosen from the suite of common indicators used by the projects, which are contributing to the same programme goals and objectives. It is a challenging task, especially given project indicators are often unique to project-specific objectives, and often with less explicitly measurable links to programme objectives[36].

We observe that Defra is already thinking about how to define portfolio KPIs from the current and proposed list of indicators for Defra ODA spend programmes. The list of current or proposed data and indicators for Defra ODA spending programmes would benefit from being organised more systematically, such as using a similar system provided below:

- One or more indicators from the four categories of biodiversity identified by the evaluation team should be included to ensure that the schemes can effectively manage and monitor biodiversity:
    - Current state of biodiversity (the ultimate indicator); (ii) the scale and range of threats facing biodiversity; (iii) the effectiveness and variety of protection measures afforded to biodiversity, and (iv) the sustainability of uses being made of biodiversity.
- Portfolio-level indicators should also cover other key components of current and future programming, including poverty reduction (monetary and non-monetary), livelihoods and markets; climate mitigation, adaptation and monitoring; and the illegal wildlife trade enforcement and demand reduction.
- We also suggest (and have incorporated) some KPIs related to general fund performance.

Using the current or proposed data and indicators for Defra ODA spending programmes, we have identified which specific and broad groups of potential ODA indicators Darwin Initiative, Darwin Plus and IWTCF projects can aggregate upwards to. We have supplemented this with additional insights from our review of common indicators

[34] Olmedo et al. (2017). Evaluating the design of behaviour change interventions: A case study of rhino horn in Vietnam. Link.
[35] TRAFFIC (2018). Reducing demand for illegal wildlife products: Research analysis on strategies to change illegal wildlife product consumer behaviour. Link.
[36] Stephenson (2019). The holy grail of biodiversity conservation management: Monitoring impact in projects and project portfolios. Link.

at the project-level. These indicators could represent a set of 'core' portfolio-level KPIs at the outcome/impact level (with other indicators referenced in the previous section providing additional 'optional' indicators to help capture more specific information for each scheme).[37] The full list of 33 possible indicators are presented in Annex 3. As highlighted in the previous section, the aggregation of commonly observed indicators should be treated with some caution, therefore we also recommend this exercise be complemented by further review of other global funds' indicator development and consultation with expert committees and advisory groups.

One area in which KPIs are less developed is whether projects are successfully contributing to key multilateral agreements, particularly the SDGs and CBD Post-2020 Framework. The idea of using 'scorecards' for contributions to these international agreements could be useful. A suggested process for this could be to identify, at application stage, projects' expected contributions to relevant goals and specifically targets (and indicators), and at final report review stage, score whether projects have made positive contributions against these. The scores could either be binary (for example, 0 for no contribution or 1 for demonstrable contribution), or a more comprehensive scoring system (e.g., between 0 and 4) to define varying degrees of contribution. In both approaches, the score can be aggregated across projects as a weighted mean score, considering the number of targets each expected to contribute to.

We identified several other important considerations when reviewing and developing further portfolio-level KPIs:

- Use of precise definitions for portfolio indicators. To support the aggregation of results, indicators employed should set out precise definitions of what should be included, and how results should be incorporated. For example, for an individual project's indicator to aggregate upwards, it must demonstrate positive change against its baseline.
- Using number or percentage of projects as the foundation. At the portfolio-level, we advise that, at the very least, it is easiest to measure the number or percentage of projects successfully meeting the relevant outcome/impact indicators suggested, such as the number or percentage of projects successfully implementing new or improved management plans, or the number or percentage of projects reducing or removing threats. This may be useful where establishing KPIs using 'net changes' or measuring 'extent in hectares' may not be feasible.

[37] Harris et al. (2021). Biodiversity Indicators Review – International Climate Finance Evidence Project. Joint Nature Conservation Committee. Link.

3. Cross-cutting dimensions for MEL

In this section, we provide insights and recommendations on cross-cutting areas for MEL, including measuring transformational change, sustainability, equity and VFM.

3.1. Transformational change

Key insights and recommendations

- We outline a potential approach to assessing transformational change, including at application stage, during implementation, and at project completion. This follows a similar methodology to ICF KPI 15.
- We identified seven dimensions of transformational change, including behaviour change; multi-stakeholder governance; strengthened capacity of stakeholders and/or institutions; adoption and use of knowledge projects; support for policy change; sustainable livelihoods; and finance leveraged.
- To support applicant organisations in understanding transformational change, we recommend that the quality and depth of training materials and guidance is expanded.
- Monitoring the likelihood of sustainability is a complementary way to gauge projects' transformational potential and change; we also include a set of criteria to score project sustainability.

The need for significant and rapid action to address the challenge of the continued loss of biodiversity was highlighted in the 2019 IPBES Global Assessment, which makes clear that transformational change is required across economic, social, political and technological areas.[38] This echoes similar calls from the IPCC, whose Special Report on 1.5 Degrees concluded that transformational change would be required to meet this goal, including the role of biodiversity conservation and ecosystem restoration.[39] Furthermore, recognising that funded projects will have greater impact if they can be transformational, the UK's International Climate Finance (ICF) programme has formulated a specific indicator (KPI 15): 'Extent to which ICF intervention is likely to lead to transformational change' - for example by scaling up successful activities and facilitating institutional and policy changes.

In light of the growing importance of transformational change, Defra is placing a greater focus on transformational change, broadly defining this in the Darwin Initiative as strengthening capabilities and capacities to scale biodiversity conservation impact, including applying approaches to landscape/seascape level; replicating approaches across geographies; and contributing to systems-level changes, such as legislative changes. While the latest strategic case for the IWTCF does not demonstrate a clear definition of transformational change, it is however identified as an intended impact of the fund, as well as similar themes on scalability, replicability, and systemic change.

[38] IPBES (2019). Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany. Link.
[39] IPCC (2018). Special Report: Global Warming of 1.5°C – Summary for policymakers. Link.

Transformational change is not solely dependent on project size. An evaluation of GEF projects found that even relatively small projects with a limited duration could achieve transformational change by targeting important barriers and working with key stakeholders. This is an important point given the level of funding for projects under the Darwin Initiative, Darwin Plus and IWTCF funds. However, there is a general dearth of literature on the monitoring and evaluation of transformational change, with little information overall on how to measure this within projects and portfolios.[40]

Based on our evaluation of the three funds, the current review of outcome/impact indicators, and a brief review of relevant literature, we provide several suggestions for better monitoring and evaluating transformational change. Following the ICF KPI 15 methodology, [41] these include how to: (i) measure transformational change, including criteria to identify the potential for scaling, replicating, or producing systems-level changes which impact on biodiversity; and how to (ii) assess projects with transformational potential at application stage, and during implementation.

Potential indicators and approach to monitoring transformational change

Our analysis of project outcome indicators revealed several proxy measures that may provide an indication of transformational potential. Whilst achieving biodiversity outcomes is indicative of impact, for this to be transformational it needs to be supported by structures and mechanisms that can scale, replicate, and achieve systems-level changes. We describe potential indicators for transformational change below:

1. Positive contributions to sustainable livelihoods and poverty reduction, and positive shifts in behaviour towards biodiversity conservation by stakeholders (mutually reinforcing). Demonstrable improvements in reducing multidimensional poverty, and the role of sustainable livelihoods in maintaining this, are key since the resultant increases in wellbeing can support conservation efforts including the sustainable management and use of biodiversity. Linked to these changes is the important role of positive shifts in behaviour resulting from improved knowledge, awareness and in particular changes in practices around biodiversity, conservation, and the value afforded to these. This includes different stakeholders, such as government, local people or communities, and other actors such as the private sector. Together, this supports political will and local ownership, alongside the aforementioned incentives or buy-in to biodiversity conservation, thus contributing to transformational change.

2. Multi-stakeholder governance of natural resources (including within and beyond host countries). Transformational change is facilitated by integrative, inclusive and informed governance, as highlighted in the IPBES (2019) Global Assessment[42], since this promotes greater equity and inclusion of key stakeholders.[43] Our evaluation highlighted the importance of multi-level engagement and coordination in protection and

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[40] Brooks et al. (2014). Monitoring the impacts of biodiversity projects under the International Climate Initiative (IKI): Recognizing and communicating IKI's contribution to the Strategic Plan for Biodiversity 2011-2020, Link. See bibliography for JNCC (2021), Stephenson (2019), Stepping and Meijer (2018). .

[41] Climate Change Compass (2018). Extent to which ICF intervention is likely to lead to Transformational Change: KPI15 Methodology Note. Link.

[42] IPBES (2019). Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany. Link.

[43] Inclusive governance approaches help to reflect a plurality of values and ensure equity through including stakeholder engagement and the inclusion of indigenous peoples and local communities. This fosters a multifunctional, multi-use and multi-stakeholder approach, often community-based, that promotes the sustainable management and equitable sharing of benefits arising from the use of biodiversity, as well as the promotion of rights-based approaches to biodiversity conservation. Informed governance approaches entail novel strategies for knowledge production and co-production that improve understanding and monitoring of biodiversity, promote enforcement of existing laws and policies, and are inclusive of diverse values and knowledge systems, such as indigenous and local knowledge. Finally, integrative governance approaches which ensure policy coherence and effectiveness is also a facilitator of transformational change, as this supports the mainstreaming of biodiversity within and across different sectors, including agriculture, forestry, fisheries and tourism; and encourages integrated planning and management with development (IPBES, 2019).

management plans for both terrestrial and marine conservation across the Darwin Initiative, Darwin Plus and IWTCF. This creates the foundations for the sustainable management and use of natural resources, particularly at the community-level, including enablers of biodiversity conservation such as community buy-in, political will and local ownership, and incentives to conserve biodiversity. For Darwin Plus, understanding impacts on integrated ocean governance beyond national jurisdictions is key for transformational change. The extent to which there are effective and strong collaborations with other UK Overseas Territories and countries within the same region can underpin greater scale and replicability for biodiversity conservation (including potential scale-up to produce biome-level impacts). The same is also true for IWTCF projects, where multi-agency, multi-stakeholder and transnational cooperation mechanisms are effective in disrupting IWT criminal networks and deterring IWT activity. However, it is important to identify which stakeholders are key in governance to ensure transformational changes.

3. Successful capacity-building of key stakeholders. Transformational change is also dependent on whether projects have successfully built the required capacity amongst key stakeholders to deliver biodiversity conservation (as identified in our evaluation as key outcomes of the schemes). This is also a key area for transformational change under the CBD Post-2020 framework.[44] This includes the individual-level - building the capacity of local people to scale-up their own contributions to the sustainable management and use of biodiversity - as well as at the institutional-level - to enable scaling, replication and systems-level changes, such as enabling government authorities' capabilities to better monitor and mandate biodiversity conservation. The most significant area for transformational change here is at the systemic-level, which is closely related to effective governance - considering the successful accumulation of capacity at multiple levels and multiple stakeholders to inform decisions and implement best practices on the sustainable management and use of biodiversity.

4. Successful adoption of new or improved conservation tools/knowledge products by key stakeholders (including beyond the project). This is closely related to the capacity built amongst key stakeholders. Our evaluation found that the outputs of baseline information, datasets on biodiversity, ecological and socioeconomic information, and learning products, such as best practice guidelines and technical reports, can support the formulation and enhancement of policy and subsequent conservation cooperation and action, including within and beyond the host country. Darwin Plus projects often use advanced survey tools to help in the management and protection of biodiversity at the ecosystem level, including geospatial tools, which improve understanding of ecosystems and how threats can be managed.

5. Policy change towards sustainable use of nature (including the implementation of new or improved environmental policies, laws and regulations). Whilst it is difficult to fully demonstrate impact on policy change, there is evidence to suggest that projects can demonstrate positive contributions to the development, adoption and implementation of key policies, laws and regulations to enhance biodiversity conservation. This is a key indicator of scalability and is identified by the IPBES (2019) Global Assessment report as a key pathway for transformational change.[45]

6. Level of finance leveraged for conservation. As identified in the IPBES Global Assessment report, improving and expanding the levels of financial support is a key pathway through which biodiversity conservation can be scaled up.[46] The amount of finance leveraged is therefore a key indicator of projects' ability to scale or replicate their activities after project completion (and an indicator of financial sustainability). It should be

[44] UNEP-WCMC (2021). Biodiversity-related capacity-building: Informing the preparation of a long-term strategic framework for capacity-building beyond 2020. Link.
[45] IPBES (2019). Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany. Link.
[46] IPBES (2019). Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany. Link.

recognised, however, that this is only one of many conditions necessary to catalyse transformational change and is therefore not an end in itself.

To facilitate coherence with other measures of transformational change like KPI15 under ICF, these insights can be incorporated into a set of criteria in which a weighted mean score of projects' progress towards transformation can be calculated. The ICF KPI15 uses as an assessment score range from 0 (transformational change judged unlikely) to 4 (clear evidence of change – transformational change judged very likely).[47] Importantly, this acknowledges that not all these points are of equal importance or relevance in every case. Table 9 shows how these considerations could be formulated into assessment criteria.

Table 10: Dimensions of transformational change

Dimension of transformational change	Description
Behaviour change	To what extent have projects successfully shifted the behaviour, including attitudes, knowledge and practices, of key stakeholders (e.g., local communities) towards biodiversity conservation?
Multi-stakeholder governance	To what extent have projects successfully promoted and implemented integrative, inclusive and/or informed multi-stakeholder governance of natural resources, including within and beyond host countries?
Built capacity of stakeholders and/or institutions	To what extent have projects successfully built capacity to monitor, manage and sustainably use biodiversity, including at the individual, institutional and systemic-level (i.e., multiple stakeholders, multiple levels)?
Adoption of knowledge products	To what extent have projects' conservation tools or knowledge products been successfully adopted by key stakeholders, particularly in the design / implementation of policies, programmes, and projects, including beyond the project's scope?
Support to policy change for sustainable use	To what extent have projects supported policy change towards sustainable management and use of nature, including the implementation of new or improved policies, laws and regulations?
Sustainable livelihoods	To what extent have projects successfully implemented sustainable livelihoods, and multidimensional poverty reduction.
Finance leveraged	To what extent have projects leveraged finance, and the likelihood this will sustain outcomes and impact?

A further set of overarching criteria, adapted from GEF's measurement of transformational change, can be used to frame a project's, or more appropriately a scheme's overall contribution to transformational change, including gauging the potential/realisation of scalability, replicability and systems-level changes (Table 10 overleaf).[48]

[47] The scores range as follows. 0: Transformational Change judged unlikely ; 1: No evidence yet available – too early to assess, but Transformational Change expected ; 2: Some early evidence suggests Transformational Change judged likely ; 3: Tentative evidence of change – Transformational Change judged likely ; and 4: Clear evidence of change – Transformational Change judged very likely

[48] GEF (2019). Innovations in Evaluating the Impacts of Environmental Interventions: Approaches and Findings from Independent Evaluation at the Global Environment Facility. Link.

Table 11: Criteria, or accompanying criteria, for transformational change

Criteria for transformational change	Description
Scalability	The project is expected to cause or support a full-scale impact at the local, national, or regional level.
Replicability	The project is expected to lead to (piloted) approaches, knowledge products, or actions being replicated by others in the same country, or beyond.
Depth of change	The project is likely to cause or support a fundamental change in a system or market with positive impacts on biodiversity conservation.

We suggest that Defra combines these processes to produce a project and portfolio-level KPI, similar to ICF, on transformational impact, ranging from 0-4. This will not only help with summarising transformational change but will also enable comparisons across projects, alongside more refined information on country, region, biome, species-type, etc.[49]

Assessing transformational potential at application and implementation stages

The generation of a transformational impact score would provide a useful system to measure internal performance of the funds, in addition to the criteria currently used by ODA programming ranging from A+ to C on achievement against logframe expectations.

Using or adapting the set of criteria at the application stage could enable the funds to determine in advance projects' potential for supporting transformational change, complemented by project applicants describing what transformational change, based on Defra's definition, will look like, when it is expected to occur, and how it will be measured.

In addition to judging this at application stage, it will also be possible to assess progress towards expected transformational change at each annual report review stage, based upon the adapted transformational change criteria.

Learning for transformational change

Small NGOs from host countries already face challenges in the application process. Therefore, we also recommend that the quality and depth of training materials and guidance is expanded for project applicants. Training sessions dedicated to monitoring and evaluation, or as part of a series of training, could be implemented, including supporting the explanation and methodology used for transformational change.

A particular mechanism to facilitate continuous understanding of how to monitor and evaluate transformational change can take place within communities of practice, helping Defra as well as projects learn, embed, and monitor elements of transformational change (supporting Defra's own goal to monitor this internally). This also reflects

[49] Climate Change Compass (2018). Extent to which ICF intervention is likely to lead to Transformational Change: KPI15 Methodology Note. Link.

the nature of transformational change, which is to be adaptive and encourage thinking, learning and even programme design around which transformations projects may be able to credibly contribute to over time.[50]

A forthcoming scoping report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), although still a few years away, will assess the determinants and processes of transformational change, potential obstacles, and options for action, as well as how progress can be tracked, to achieve the 2050 Vision for Biodiversity.[51] Defra should track updates to this scoping report to support its understanding of transformational change over the next few years, in addition to learning from projects' innovations and outcomes.

3.2. Assessing sustainability

Monitoring sustainability is a further important consideration, particularly as it can inform projects' transformational impact potential – that is, the potential to scale-up, replicate, and contribute to systems-level changes. Aligning with Defra's definition of transformational change, the Global Environment Facility (GEF) Independent Evaluation Office's defines sustainability as "*[t]he continuation/likely continuation of positive effects from the intervention after it has come to an end, and its potential for scale-up and/or replication*."[52] Given that sustainability is a long-term process, monitoring should capture the likelihood that outcomes will be realised and/or maintained to ensure impact.

We advise that a similar framework to that used by GEF is employed to assess the likelihood of funded projects' sustainability, on an optional basis.[53] The framework would provide a useful set of criteria for the DEC, DPAG and IWTAG when considering projects' likely sustainability at the application stage, and result in marked improvements to the current system used by report reviewers when assessing sustainability (which in the most recent final report review template is assessed using "*What achievements are likely to endure and why*?").[54] Further detail on this framework is provided in Annex 5.

3.3. Equity

Key insights and recommendations

- Transformational change requires consideration of inclusiveness, justice and equity.
- We recommend standardising the monitoring and evaluation of gender, equity, and social inclusion (GESI), beginning with gender, across all funded projects, particularly with regards to disaggregated data. Further areas could include monitoring age and indigenous peoples, however there are a number of challenges to be considered in disaggregating to these desired levels.
- We recommend the use of the GESI framework developed by the evaluation to guide both projects and scheme management in mainstreaming GESI into monitoring and evaluation.

Transformational change in biodiversity conservation requires consideration of inclusiveness, justice and equity, including the importance of indigenous and local knowledge; and aspects of gender, age and socioeconomic

[50] Climate Change Compass (2018). Extent to which ICF intervention is likely to lead to Transformational Change: KPI15 Methodology Note. Link.
[51] IPBES (2021). Forthcoming Scoping report on assessing the underlying causes of biodiversity loss and the determinants of transformative change (thematic assessment) to achieve the 2050 Vision for Biodiversity. Link.
[52] GEF (2019). Further work on the sustainability of GEF projects and programmes. Link.
[53] GEF (2019). Further work on the sustainability of GEF projects and programmes. Link.
[54] See Darwin Initiative (Link) and IWTCF (Link) Final Report Review Template 2021

status.[55] The July 2021 ICAI review on UK aid for halting deforestation and preventing irreversible biodiversity loss shows that these threats have a direct impact on the lives and livelihoods of local communities, including indigenous groups, and can result in greater inequality and marginalisation. The ICAI review calls for systematic disaggregation of data on poor and marginalised groups, including women and indigenous peoples.[56] The government's response to the review accepts its recommendation to reflect the needs and voices of marginalised groups, indigenous people, women and girls, and that analysis of social impact plays a fundamental role. It finds that the Darwin Initiative has project selection criteria on social impacts, including gender.[57]

On the basis of the ICAI review, as well as our final evaluation report findings, Defra can benefit from standardising the monitoring of gender, equity and social inclusion (GESI), especially beginning with gender, across all funded projects. This includes measurable, inclusion-sensitive indicators to monitor activities and outputs, as well as projects' outcome and impact targets. Data disaggregated by gender, for example, can then be standardised at the output, and possibly outcome-level across funded projects to report on gender, equity and inclusion. We also advise monitoring the gender disaggregation of project teams, such as the gender ratio, to ensure an appropriate gender balance in project design and implementation.

As a forward-looking recommendation, programme monitoring would also benefit from monitoring the inclusion of youth (or age), and indigenous peoples – for example, the number of youth involved in sustainable management practices or enforcement, or the number indigenous peoples' livelihoods protected. At present, this information is contained within individual project annual and final report narratives, rather than systematically collected as monitoring information. However, the viability of disaggregating to these desired levels may pose a number of challenges. The collection of this information may be socially and/or politically sensitive in certain contexts, which may discourage disaggregation. For example, data collection exercises may have the potential to create or reinforce discrimination, bias, or stereotypes against certain population groups. Disaggregation may also likely require funded projects to use more intensive, alternate sampling and data collection methods and processes. The rights to privacy, confidentiality and data protection requires consideration of appropriate legal and institutional standards, such as information obtained with free, prior and informed consent, and hence for projects to have strong ethical frameworks in place. Therefore, these factors may lead to additional barriers for data collection and/or increased cost of data collection. It may also require additional administrative processes within Defra to update equity-related protocols and help ensure that funded projects' data collection practices follow these.

There is wider potential to explore "human rights-based approaches to data", which may provide Defra with further guidance on expanding its monitoring of equity across projects.[58] Other HMG departments, such as FCDO and HO, may be able to offer guidance and best practice support to Defra for its monitoring of groups.

To support project and scheme management in mainstreaming gender, equity and social inclusion, we advise Defra to include elements of the GESI framework developed for this evaluation in its guidance on monitoring and evaluation (see Annex 6). The framework identifies best practice and considerations to help identify areas for improvement of project portfolios. To note, our evaluation found that consideration of GESI in monitoring and evaluation was most relevant to Darwin Initiative and IWTCF projects, given the greater focus on sustainable livelihoods, poverty reduction, and the integration of local communities in developing countries. Nonetheless, adaptations to the framework tailored to UKOT contexts may also be useful for Darwin Plus projects.

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[55] IPBES (2021). Forthcoming Scoping report on assessing the underlying causes of biodiversity loss and the determinants of transformative change (thematic assessment) to achieve the 2050 Vision for Biodiversity. Link.
[56] ICAI Report: International Climate Finance: UK Aid for halting deforestation and preventing irreversible biodiversity loss, Link.
[57] Government response to ICAI recommendations on international climate finance: UK aid for halting deforestation and preventing irreversible biodiversity loss, Link.
[58] UN OHCHR (2018). A human right-based approach to data: Leaving no one behind in the 2030 agenda for sustainable development. Link.; UN OHCHR (2012). Human rights indicators: A guide to measurement and implementation. Link.

3.4. Value for money

Key insights and recommendations

- We recommend Defra build upon standard frameworks for Assessing Value for Money (VfM). This will support monitoring of VfM across the three funds and provide clear judgements and evidence of VfM to support future business cases.
- To measure cost-effectiveness, we recommend using cost-effectiveness analysis (CEA).

We recommend that Defra builds upon standard guidance for assessing Value for Money (VfM), which should be used to monitor VfM of the three funds and provide clear judgements and evidence on value for money to support future business cases.[59] Below, we outline the suggested approach for constructing a value for money framework, including the use of participatory processes to develop relevant criteria and standards.

The approach follows DFID's 4 Es, including economy, efficiency, effectiveness, and equity, focusing on how well resources are being used, and whether the use of resources is justified. Our evaluation followed a similar framework, and involved defining VfM criteria - specifying what economy, efficiency, effectiveness, cost-effectiveness and equity look like - and setting VfM standards to distinguish the level of performance against each criteria - excellent, good, adequate or poor. It is most effective to use a mix of monetary, quantitative and qualitative information (although we note that Defra's internal monitoring systems will be able report on VfM criteria using monetary and quantitative metrics). The full value for money framework template is provided in Annex 7, with summarised detail on areas for consideration below.

Table 12: VfM considerations

VfM dimension	Potential areas for criteria
Economy: Are funds, and the portfolio, minimising cost of resources used or required?	This can consider several criteria including: • Rigorous and transparent selection processes • Systems and/or processes to monitor and manage project and scheme budgets. • Extent of downward pressures on cost-drivers, including for projects and the administration • Delivery of projects within expected timeframe and budget
Efficiency: Are funds, and the portfolio, efficiently using funding to deliver target outputs?	Target outputs are slightly more elusive given the challenge fund nature of the funds, although key areas of criteria to consider include: • Level of flexibility of fund allocation to respond to emerging needs. • Systems and/or processes in place to support and ensure delivery of outputs. • Projects' level of achievement in outputs, including within their timeframe and budget, such as annual report review scores.
Effectiveness: Are funds, and the portfolio, achieving their	Areas to consider include: • Achievement of target outcomes, as per the theory of change.

[59] For example: King and OPM (2018). OPM's approach to assessing Value for Money. Link.

outcomes and providing the most effective use of resources?	• Risk identification and management procedures
Equity: Is there a mainstreaming of equity and inclusion, and/or an equitable distribution of results?	Areas for consideration include: • Disaggregation of results reported by gender, socioeconomic status, etc. • Diversity and representation of expert committees and advisory groups, as well as project teams. • Recognition, consideration and action on potential trade-offs related to gender, equity and inclusion (e.g., in guidance).

Cost-effectiveness looks at the whole of the results chain, from inputs to outcomes and impact. To measure the cost-effectiveness of the funds, as well as the portfolio, we suggest exploring cost-effectiveness analysis (CEA). This provides a way to examine both monetary programme costs and outcome indicators together, and specifically how much it costs to gain a unit of a particular outcome, including against other similar programmes. It requires projects to have primary outcome measures that are comparable across projects, funds, and potentially the portfolio. The product of the cost-effectiveness analysis is a cost-effectiveness ratio, framed as the average cost per outcome indicator e.g., the average cost per net positive hectares of target habitat; as well as an incremental cost-effectiveness ratio that compares the additional costs and consequences of the funds compared to the next best alternative (which here could be classed as other similar programmes).

Overall, this approach to assessing value for money should be integrated with existing and future monitoring and evaluation activities, ensuring that prompt, regular and meaningful management information on costs (including unit costs), efficiency, quality and performance are available. Measures on the likelihood of sustainability can also complement Defra's measurement of value for money. The use of economic methods such as CEA requires access to adequate data, specialist skills and sufficient resources. This is where external evaluations, of major projects or portfolios, are useful for complementing value for money assessments.

4. Monitoring, evaluation and learning processes

In this section, we provide suggestions for overall monitoring, evaluation and learning processes, including guidance to applicants, communication, data sharing and timelines.

Key insights and recommendations

- There have been positive improvements to the guidance to applicants for both the Darwin Initiative and IWTCF projects, but we recommend including firmer guidance to applicants on providing baseline data against which progress can be measured
- We recommend that all future guidance for scheme applicants should state that a minimum of 5% of the overall project budget should be allocated to MEL activities
- We advise that Defra encourages the integration of dissemination activities into project design and implementation to help stimulate sharing learning. Such encouragement should be set out in application guidance, whilst for larger projects (e.g. over £300,000) it should be mandatory to support scaling or replication.
- We recommend leveraging other Defra programmes, and utilising communities of practice, as important platforms for projects to share and promote best practices and lessons learned.
- We recommend Defra do not host its data repository, but rather identify synergies with existing ones. In addition, we recommend Defra more comprehensively assess projects' awareness of data repositories at the application stage to identify data sharing opportunities at the project-level.

4.1. Guidance to applicants

We traced the evolution of application guidance for each fund from 2003 onwards (of which the full overview informing this section can be found in Annex 8). We find that the guidance to applicants has significantly improved, particularly from 2016 onwards. For the Darwin Initiative and Darwin Plus documents, we see clear improvements in the documents produced for Round 28 of the fund in 2021. It differs from guidance in previous rounds in that MEL is now dealt with specifically in a separate document[60]. The new MEL guidance document provides more detailed guidance to project applicants on how to carry out MEL in their projects, which we view as a positive step to developing more robust and systematic MEL systems at the scheme-level. The guidance clearly presents detailed information on how to use logframes, including examples, and for the first time refers specifically to:

- The need for results at the project level to be aggregated upwards and enable the Darwin Initiative to monitor and report results at the programme level;
- Use of indicators capable of being added together; and
- Expectations for all projects to report indicators disaggregated by gender.

[60] Darwin Initiative Monitoring, Evaluation and Learning Guidance (2021), Link.

Use of baseline data

Since 2014, we also observe an overall improvement in the guidance around the explanation of baseline data, including examples of baselines in the new guidance document. However, across all guidance, we still observe insufficient mention of the need for projects to collect baseline information, where possible, against which progress can be measured. There is no explanation why it is important to include baseline information, and what types of information sources could be used to provide such data.[61]

We note that in its planned Biodiverse Landscapes Fund (BLF), Defra will commission an Independent Evaluator to gather baseline data on each of the six landscapes where projects will take place. The progress towards and success of projects in reaching stated outcomes will be measured against this baseline data. Some of the suggested sources of baseline data for the BLF include:

- WDPA world database on protected area and Key Biodiversity Areas[62]
- Global Forest Watch data portal and/or use of geospatial technology[63]
- UNODC WISE Database
- Local records, gazettements and maps

We believe that a similar emphasis on baseline data should be included in the schemes, and that (whilst operating at a much smaller scale than the BLF), some of the above data sources could also be useful to funded Darwin Initiative projects. Projects can report against the baseline throughout the project lifetime to demonstrate change. We recommend including firmer guidance to applicants about the need to provide baseline data where possible against which progress can be measured.

Level of project funding devoted to MEL

Since 2014, application guidance and information notes have referred to the 'recommendation' and 'expectation' that projects allocate up to 5% of the project budget to MEL activities throughout the life of the project, and beyond.[64] In 2021, this figure was expected to range between 5% and 10% of total budget cost.[65] We recommend that all future guidance for scheme applicants should state that a minimum of 5% and up to 10% of the overall project budget must be allocated to MEL activities. Projects wishing for an exemption from this requirement should be required to explain why this is the case. We believe that stipulating a minimum percentage of funding will help to ensure that MEL is the given the time and consideration that it deserves.

4.2. Communication processes for learning

Our evaluation highlighted the need for more advertising, regional targeting and communication of activities to share information and lessons learned.

We conducted a light-touch rapid review of the Darwin Initiative, Darwin Plus and IWTCF websites. The websites share a common format and appearance and include an easy-to-use search function with filters for country, (lead) institution, project leaders, biomes and ecosystems and timeframes. However, in terms of promoting the funds' achievements to the wider public, only the Darwin Initiative website contains a clear heading on the homepage

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[61] Darwin Initiative Monitoring, Evaluation and Learning Guidance (2021), Link.
[62] See the following link.
[63] Space agencies around the world are increasingly offering free of charge the data from Earth Observation (EO) satellite sensors which can be used to monitor efficiently remotely sensed parameters. Combined with in-situ observations by project staff and beneficiaries and appropriate modelling, this will offer improved insights into the ecological processes and the disturbances that influence biodiversity. See Link.
[64] In 2014, the information note on Monitoring and evaluation and the Darwin Initiative (Link) used "recommended" and in 2016 Round 22 guidance for the Darwin Initiative (accessed via LTS-NIRAS International) used "expected".
[65] Financial guidance: Darwin Initiative, Darwin Plus & Illegal Wildlife Trade (IWT) Challenge Fund 2021-2022, Link.

for 'News', while the other scheme websites do not. The 'news' page on the Darwin website is also not updated regularly, with gaps of 2-3 months being common between newly posted stories. The news stories are primarily to do with procedural aspects of the scheme, for example, publication of a new Call for Applications or a new guidance note, and do not highlight the funds' projects and their achievements. This type of content in included in the Darwin Initiative and Darwin Plus quarterly newsletters and IWTCF bi-annual newsletter. These are all well-formatted magazine-style PDF documents which contain engaging project summaries and visual images from current projects. However, these newsletters are only visible upon clicking the 'Resources' heading on the homepage. We therefore recommend improving the visibility of the funds' newsletters on their respective websites.

We identified other ways in which Defra can promote greater sharing of information on project guidance and successes with in-country partners (including smaller NGOs) and future funders.

- Encouraging bottom-up dissemination. From our evaluation, we identified that one of the main activities/outputs of Darwin Initiative, Darwin Plus and IWTCF projects is awareness-raising and the dissemination of project outputs. This takes place at local, national, regional and international levels through a variety of mediums, including information notes, policy briefs, workshops and conferences involving relevant stakeholders. It is evident that projects often, by default, are sharing the learnings from implementation with a wider set of audiences. Therefore, we advise that Defra encourage the integration of dissemination activities in project design and implementation to stimulate a bottom-up approach to sharing learning. This may also allow Defra to observe, through annual and final reporting, evidence of the successes of dissemination, including whether other stakeholders have supported the scaling or replication of funded project interventions, or adopted any of the learning or best practices generated. We advise that such encouragement should be set out in application guidance for Main Projects, although for bigger projects over £500,000 it should be a mandatory requirement to ensure greater potential for scaling or replication.

- Communities of Practice. Communities of Practice can offer an important platform for projects to demonstrate, share and promote the application of best practices and lessons learned from their experience. Not only does this raise the profile of projects, but it also supports the further development and implementation of transformational change amongst future projects. Further detail relating to this recommendation is found in the main evaluation report.

- Leveraging other Defra programming. To promote regional targeting of the funds and increase advertising to host country institutions (as well as to share lessons learned), Defra can cooperate with the upcoming BLF to advertise the Darwin Initiative and IWTCF to prospective applicants in these regions given the synergies and overlap between these funds in Defra's portfolio

4.3. Data sharing

The Darwin Initiative, Darwin Plus, and IWTCF regularly generate evidence on the state, protection and sustainable use of biodiversity, level of threats to biodiversity, poverty and wellbeing, and illegal wildlife trade measures. This includes datasets, peer-reviewed journal articles and technical reports that will be of interest to other countries and stakeholders, and our evaluation found that such knowledge products have been an important outcome for each fund. As a result of these likely significant benefits, Defra has an open access policy and encourages data sharing, with an intention to make all outputs available online and free to use, unless there are sensitivities involved. This includes derived and raw data from funded projects on species, land cover and land-use available to be made accessible through appropriate national, regional, and global databases. This not only supports the

UK's commitment to "push for a global transparency revolution in the availability and use of data",[66] but also supports Article 17 of the CBD which explicitly encourages its members to facilitate the exchange of information from all publicly available sources of information, including technical, scientific, and socioeconomic information; and specifically considering the special needs of developing countries.[67]

Over time, there has been a significant increase in the number of open data platforms encouraging contributions and facilitating the collation, publication, and accessibility of raw biodiversity data. We have identified a number of open data repositories relevant to the funds to which Defra could potentially contribute project-derived data, information and lessons learnt. These encompass species inventory, broader biodiversity, geospatial and habitat data, wildlife trafficking and enforcement, legal frameworks, and demand reduction. The full lists can be found in Annex 9, and are grouped into terrestrial, marine, IWT and socioeconomic open data repositories.

We do not recommend that Defra hosts its own open database for data acquired, and instead advise Defra to identify synergies with other national, regional, and global open data platforms to support their efforts. We recommend that Defra review the options in Annex 9 as a starting point to identify which raw data that it holds can add value and contribute to other databases. The main reason for this recommendation is because while Defra holds a wealth of biodiversity-related information, the domain for shared biodiversity data is large, diverse and increasingly complex. For example, an IPBES (2016) report found that existing datasets, as well as the generation of new datasets and database infrastructures amongst biodiversity research communities, were characterised with low comparability and compatibility, and duplication of effort.[68] It should also be understood that while organisations may be happy to receive data, in many cases they may not be willing to share data of a confidential or sensitive nature. Therefore, Defra should investigate the extent of these databases' alignment with the open data access policy, and more specific details on the scope for data sharing.

Another route for efficient and successful data sharing at multiple levels is for projects to put a strong emphasis on the utility and reusability of primary data collected for secondary scientific purposes.[69] We have observed that Defra already encourages applicants to consider how project outputs can be shared with others, although we find that more comprehensive assessment of applicants' awareness of open data repositories to or from which their projects may either contribute and/or benefit from could support greater data sharing. Applicants' awareness of these repositories helps to signal an important design feature of a project's MEL component, notably its capabilities to engage in data sharing activities. Our review noted that project applicants are likely to be aware of the data repositories most relevant to their work, including at the international, national or site-levels. For example, these include regional databases by multi-agency bodies, and national databases by host country government departments which may host their own independent databases. In addition, many NGOs, including applicants, may also host their own independent databases, therefore project outputs may contribute directly to these.

Therefore, we recommend that assessment of project applications could include whether applicants demonstrate adequate awareness of open data repositories, and where applicants may not demonstrate this, provide advice or guidance for corrective actions to allow proposals to progress with suitable data sharing capacity. Our review found that it is reasonable to expect that the funds' expert committees or advisory groups will, or should, be aware of the data repositories listed in Annex 9, as well as others that may not be included, and therefore will be

[66] Darwin Initiative Guidance Note for Applicants: Round 28 2021-2022. Link.
[67] CBD Article 17, Link.
[68] IPBES (2016). Technical report of the methodological assessment of scenarios and models of biodiversity and ecosystem services. Link.
[69] König et al. (2019). Biodiversity data integration—the significance of data resolution and domain. Link.

well-placed to assess this. In addition, we advise more generally that Defra consult with the funds' expert committees or advisory groups, as well as other HMG policy advisors, to complement our assessment on data sharing further, such as to comment on the practicalities for biodiversity or socioeconomic information sharing, and the identification of more specific national or regional open data sources.

These recommendations are also suitable for socioeconomic data, especially as there remains a need for "bottom up and crowd data pooling initiatives" for this type of data. The use of household surveys can serve as potentially rich sources of subnational socioeconomic data.[70] Therefore, encouraging project leaders to share socioeconomic and survey data with relevant local or national institutions could also support greater public understanding of socioeconomic conditions in the context of conservation.

4.4. Timeline for monitoring, evaluation and learning

Key insights and recommendations

- The current structure for monitoring and reporting is suitable for the collection of technical and financial information, although the average 3-year timeline of projects may pose challenges in the collection of certain outcome and impact indicators, such as on biodiversity and poverty reduction.
- We recommend funding ex-post evaluations 2-3 years after project completion for a proportion of projects. This includes the potential for comprehensive regional evaluations.
- We recommend that Defra plan to commission another portfolio evaluation on the three funds every 5-7 years.

The current timeline for Main Project's monitoring and reporting shows that projects are required to produce monitoring reports twice annually – Half-Year and Annual Reports – as well as a report at project completion – the Final report. The evaluation team finds the structure for monitoring and reporting suitable for the collection of technical and financial information for each scheme.

However, we also find that some stakeholders consider the average 3-year timeline of projects to be insufficient to demonstrate and measure impacts on biodiversity and poverty, and that projects require up to 5 years to allow for this. To enhance the evaluation of longer-term impacts, transformational change, and sustainability, we recommend that Defra introduce regular ex-post project evaluations every 2-3 years, potential regional-level evaluations, and portfolio-level evaluations every 5-7 years.

Ex-post project evaluation

We recommend funding ex-post evaluations 2-3 years after project completion for a proportion of projects (e.g., on a biannual basis), potentially using a similar sample stratification strategy employed for our evaluation. The evaluations could be incorporated as a requirement for the Fund Manager to oversee, or as discreet exercises for Defra to commission. It would use scoring systems in rating outcomes and impacts similar to those used in scoring applications – this report makes a number of suggestions in this area, such as suggestions for final report review scores, and criteria structures for measuring transformational impact and the likelihood of sustainability. Ex-post evaluations would also use compatible monitoring methods to those utilised by projects at start-up in establishing baselines. We recommend that ex-post evaluations be conducted by independent experts or

[70] Azzarri et al. (2016). Subnational socio-economic dataset availability. Nature Climate Change, 6(2), 115–116. Link.

organisations. Another possibility for measuring sustainability and impact is to utilise a Community of Practice platform to encourage the exchange of learning on past, present and future funded projects, enabling qualitative assessments of impact, sustainability and lessons learnt at a comparatively low cost; however this would be a less robust and comprehensive approach.

Regional level evaluation

There have been attempts at such regional reviews and reports in the past, for example, an LTS-led monitoring visit to China in 2017[71], an Indian Ocean Cluster Information note in 2016[72], and evaluations of closed Darwin Initiative projects in Madagascar (2009)[73], Morocco and Egypt (2009)[74] Brazil (2008)[75], India and Nepal (2007)[76], amongst others. However, these reviews have largely been based on visits to a small number of projects, typically between 2-5, and while the reports sought to highlight 'lessons learned' that could be useful to all funded projects within the Darwin Initiative, they did not seek to provide insights into how projects were achieving outcomes or impact collectively at the national or regional levels, or what national or regional level societal, political or environmental factors were affecting project performance. Furthermore, these insights are especially important to consider for the Darwin Plus and IWTCF funds, where regional-level reviews or evaluations are scarce. Our evaluation highlights the importance of regional-level evaluations of funded projects in UKOTs under Darwin Plus given the regional significance of biodiversity conservation and the need to understand regional-level impacts. IWTCF regional evaluations could focus on particular species within certain regions, or particular themes such as law enforcement or demand reduction. For example, activities to combat poaching of African Elephants span across Eastern and Southern Africa, such as Kenya, Tanzania, Zambia, Malawi and Zimbabwe; which the IWTCF commonly operate. Therefore, we recommend that regional-level evaluations be considered as an option for obtaining evidence of impact, sustainability, best practice, and lessons learned.

Portfolio-level evaluation

The Ecorys-led evaluation, commissioned by Defra, provides a useful model for conducting further portfolio level evaluations (which will be augmented by improved MEL over the coming years). We recommend that a similar mixed-methods, theory-based evaluation approach be adopted, and that this be implemented every 4-5 years, conducted by an independent party working with local biodiversity experts wherever possible. Key features for future evaluations based on our experience include:

- Literature review to help revise or update scheme-level, and potentially portfolio-level, theories of change. Theories of change are expected to be updated based on emerging evidence from the following features of evaluation.
- Interviews with strategic stakeholders to inform scheme-wide analysis, particularly process-related questions. For examples, interviews can identify funds' strengths and weaknesses, enablers and barriers, coherence and added value, and lessons learnt.
- Design of Project Assessment Frameworks (PAFs) with a two-tier sample system to support extensive review of projects across funds. Tier 1 represents a larger sample of projects selected for lighter-touch review using secondary data, including applications, annual and final reports and report reviews. The Tier 2 level represents a subset of Tier 1 projects for in-depth review, combining secondary data and in-country qualitative data collection to enable assessment of transformational impact and sustainability. Sampling should be determined by a stratification process which selects projects based on monitoring

[71] Monitoring visit to IWT funded projects working in China (2017), Link.
[72] Indian Ocean Cluster Information Note (2016): Lessons from Madagascar and the Comoros, Link.
[73] Evaluation of Closed Darwin Initiative Projects in Madagascar (2009), Link.
[74] Evaluation of Closed Projects in Morocco (2009), Link.
[75] Evaluation of Closed Projects in Brazil (2007), Link.
[76] Evaluation of Closed Projects in India and Nepal (2007), Link.

data points, such as time-period, region, grant size, and biome. Future developments to monitoring data will enhance this process.

Learning events

We recommend Defra hold global learning webinars every 4-5 years to share findings from evaluations and previous years' work. In addition to the Darwin Initiative, IWTCF and Darwin Plus funds, this could also showcase the Biodiverse Landscapes Fund and other relevant Defra programmes, and involve guest speakers, to promote synergies in evidence and learning.

Annex 1: Criteria used for annual and final report review scores

Annual report review score

Score	Darwin Description	Achievement of Outputs/Outcome
1	Likely to be **completely** achieved	The Outputs/Outcome are well on the way to completion (or completed).
2	Likely to be **largely** achieved	There is good progress towards Outcome completion and most Outputs have been achieved, particularly the most important.
3	Likely to be **partly** achieved	Only partial achievement of the Outcome is likely and/or achievement of some Outputs.
4	Only likely to be achieved **to a very limited extent**	Outcome unlikely to be achieved but a few Outputs likely to be achieved.
5	**Unlikely** to be achieved	No progress on Outputs or Outcome.
X	**Too early** to judge	It is impossible to say whether there has been any progress towards the final achievement of Outputs or Outcome. This score should not be used unless at least one of the following criteria are met: Project is postponed because of conflict; external constraints; recruitment delays.

Final report review score

Score	Outcome description
A++	Outcome substantially exceeded
A+	Outcome moderately exceeded
A	Outcome met expectation
B	Outcome moderately did not meet expectation
C	Outcome substantially did not meet expectation

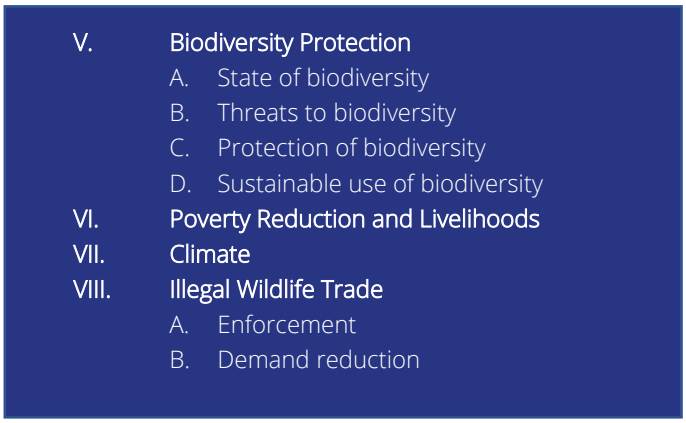
Annex 2: Funds' common outcome indicators

Projects funded by the Darwin Initiative, Darwin Plus and IWTCF use many different outcome indicators to monitor and manage progress, which also indicates that there are lots of different ways to indicate success. We have identified common outcome indicators within four broad categories, some of which can be broken down into more specific sub-categories (see below). These indicators are not representative of all possible outcomes, therefore information on other possible indicators should be identified. Our review on the confidence attributed to indicators (see below) also points to the need for further exploring indicator development. Therefore, we recommend that Defra explore other global funds' indicators and indicator development strategies, which will help to ensure synergies and alignment, and consult with expert committees and advisory groups to provide additional support on identifying and validating the robustness of indicators and respective methodologies. For example, USAID's toolkit for measuring efforts to combat wildlife crime is a useful resource for IWTCF projects which may provide additional indicators similar to those determined from our analysis.[77]

Biodiversity protection sub-categories complement the pressure-state-response model for indicator development – a commonly accepted framework for identifying and structuring indicators, including with projects and portfolios.[78] Measures of reduced pressure and strengthened state or response collectively reflect impacts. We have observed this model of indicator development being incorporated by Defra from its latest thinking on current and proposed portfolio-level key performance indicators for ODA spend. The four sub-categories of biodiversity protection reflect the model to:

- Measure the extent of a known pressure or threat on biodiversity, such as deforestation or illegal activities;
- Measure the state of one or more aspects of biodiversity, such as species-level changes like species richness or abundance, or habitat-level changes such as extent of habitat; and
- Measure the response to the challenges of biodiversity conservation by different stakeholders, such as the protection and sustainable use of biodiversity.[79]

Figure A: Categories of common outcome indicators



[77] USAID (2017). Measuring efforts to combat wildlife crime: A toolkit for improving action and accountability. Link.
[78] Stephenson (2019). The holy grail of biodiversity conservation management: Monitoring impact in projects and project portfolios. Link.
[79] Harris et al. (2021). Biodiversity Indicators Review – International Climate Finance Evidence Project. Joint Nature Conservation Committee. Link.

Most indicators in the reviewed Darwin Initiative projects are grouped within the first three sub-categories of biodiversity protection on the state, threats to, and protection of biodiversity (59%). A significant proportion of indicators (25%) featured under the Poverty Reduction and Livelihoods category, although this is due a wider range of indicators measuring different components of poverty reduction and livelihoods. A smaller proportion of indicators (11%) relate to the sub-category 'Sustainable Use of Biodiversity', with the fewest indicators observed for Climate (4%). We identified that Darwin Initiative projects mainly monitored outcomes related to community-based, or multi-stakeholder, terrestrial conservation, although some projects had coastal-related outcomes too.

Similarly for Darwin Plus, most indicators are grouped within the first three biodiversity sub-categories, with a much larger proportion of indicators emphasising the management and protection of the marine or coastal environment (43%). A smaller proportion of indicators are focused on the sustainable use of biodiversity sub-category, and no indicators are observed in the Poverty Reduction and Livelihoods category. Indicators focused on the Climate category are often based on the modelling and/or monitoring of climate impacts on marine ecosystem conditions, which under our review is categorised under 'threats to biodiversity'. There are no indicators on climate mitigation – for example, estimating avoided emissions or reductions in emissions.

For the IWTCF, we observe a large proportion of indicators dedicated to the Enforcement sub-category (47%). The next largest proportions of indicators centres on the sub-category Protection of biodiversity (including illegally traded species) (18%), and the minimisation of Threats to Biodiversity (from illegal activity) (12%). A smaller proportion of indicators are in the category of Poverty Reduction and Livelihood (10%), as well as the sub-category of Demand reduction outcomes (12%). Very few indicators relate to the sub-category on the State of Biodiversity, such as the stability of species populations (2%), however for IWTCF projects, we found that indicators for the sub-category of Threats to Biodiversity are often species-specific such as on reducing the illegal killing of target species. Therefore, these 'threat to biodiversity' indicators provide a relatively sound proxy for contributions to improved species' abundance and conservation status. Our findings on the IWTCF shares similarities with Wilson-Holt and Roe's (2021) analysis.[80]

Table 13: Summary of indicator categories by scheme

Category of indicator[81]	Darwin Initiative	Darwin Plus	IWTCF
I. A. State of biodiversity	21%	22%	2%
I. B. Threats to biodiversity	20%	26%	12%
I. C. Protection of biodiversity	18%	43%	18%
I. D. Sustainable use of biodiversity	11%	9%	0%
II. Poverty reduction and livelihoods	25%	0%	10%

[80] Wilson-Holt and Roe (2021). Community-based approaches to tackling illegal wildlife trade – what works and how is it measured? Link.

[81] Percentages may not add up to 100% due to rounding.

III. Climate	4%	0%[82]	0%
IV. A. Illegal wildlife trade: Enforcement[83]	0%	0%	47%
IV. B. Illegal wildlife trade: Demand reduction	0%	0%	12%
Total number of indicators	70	23	51

We present the list of common indicators for each scheme overleaf. To assist Defra, we have provided information on the 'level of confidence' attributed to measuring each indicator. Our assessment of the 'level of confidence' reflects "high", "moderate" and "low" confidence. This is based on the frequency of observation in our review, ease of measurement based on our strength of evidence assessment, review of 'means of verification', and the wider evaluation. This is complemented by the team's expert views and experience. However, we also suggest caution in interpreting the confidence level attributed to indicators and how this translates to 'useability'. It is based on a sample of projects both past and present (i.e. still to be implemented, tried and tested for some projects), and based on a subjective review. Furthermore, they are likely not representative of all possible indicators; therefore information on other possible indicators should be identified. Our review also found that methods used to measure indicators are often generalised and do not explain the specific steps taken, which influenced our ability to attribute confidence to certain indicators.

Table 14: Level of confidence criteria for outcome indicators

Level of confidence	Darwin Initiative
High	The indicator is frequently observed, and evidence shows high ability to be measured or verified.
Moderate	The indicator is less frequently observed, and evidence shows that it has suitable methods of measurement, although there may be specific challenges.
Low	The indicator is not as frequently observed, and evidence shows that projects may struggle in measurement or verification.

[82] Data on climate is often based on the modelling and/or monitoring of climate impacts on marine ecosystem conditions, which is categorised under 'threats'. From our review, there are no indicators on climate mitigation i.e., estimating avoided emissions or reductions in emissions.

[83] Whilst the Darwin Initiative does not have explicit 'enforcement' indicators, some projects do respond to the illegal wildlife trade, such as combatting the illegal killing of target species – this is under 'threats' to biodiversity.

Darwin Initiative

Indicator category	Common Darwin Initiative Indicators	Unit of measure (where available)	Confidence level (high, moderate, low)
State of biodiversity	Increased or stabilising (trend) in numbers/population-size (i.e. abundance) of rare or threatened species, including endemic species.[84]	Observed average percentage change (%)	Moderate
	Increased or stabilising (trend) in numbers/population-size (i.e. abundance) of flagship, keystone, and/or indicator species.	Observed average percentage change (%), Population density (proportion)	Low
	Number of rare of threatened species reaching and/or exceeding the minimum viable population size.	Number (#)	Low
	Breeding success of threatened species.	NA	Low
	Improved conservation status of rare or threatened species.	Unit requires definition of measure. Often constituted by success of other measures (e.g., species population status)	Moderate
	Improved biodiversity monitoring/analyses of threatened species (e.g. population and habitat viability analyses)	NA	Moderate
	Increased plant and/or animal diversity (i.e. species richness).	Number (#), or average percentage increase (%)	Low

[84] "Threatened" species includes critically endangered, endangered and vulnerable species.

	Increased local agrobiodiversity	Number (#), or average percentage increase (%)	Low
	Increased extent of rare or threatened habitat / habitat in which rare of threatened species resides.	Hectares (ha)	Moderate
	Increased extent of (native) tree cover	Hectares (ha)	Moderate
	Increased habitat connectivity (e.g. forestry connectivity) OR decreased habitat fragmentation (e.g. reduced habitat disturbance)	Maps of planting activity (distance between habitats)	Low
	Increased integrity / condition of rare or threatened habitat/landscape[85]	Unit requires definition of measure. Often constituted by success of other measures (e.g., reduced habitat fragmentation, tree cover, etc.)	Moderate
	Stock size of genetic resources	NA	Low
Threats to biodiversity	Reduced rate of habitat clearance by local communities (e.g. forest clearance)	Hectares (ha)	Moderate
	Reduced habitat disturbance (e.g. reduction in canopy cover disturbance, or reduced incursion into primary forest by farming)	Number of incidents (#) and hectares (ha)	Moderate
	Reduced area of target habitat burned by fires (e.g. peatland)	Hectares (ha)	Moderate
	Number of knowledge bases to monitor invasive species established	Number (#)	Low
	Extent of invasive-species dominated habitat restored.	Hectares (ha)	Low
	Reduced density/number of snares or traps.	Number (#), or observed average percentage change (%)	Low

[85] This applies to both habitat degradation and restoration.

	Reduced incidents of illegal activities (e.g. illegal logging, hunting).	Number (#)	High
	Removal of destructive fishing practices	Binary variable. Requires definition.	Low
	Reduced incidence of zoonotic disease amongst wildlife	NA	Low
	Reduced incidence of epizootic disease amongst wildlife	NA	Low
	Incidents of human-wildlife conflict	Number (#), or observed average percentage change (%)	Low
	Decreased signs of poaching (e.g. gunshots, illegal fires/burns, poacher camps, cartridges, etc.)	Number (#), or observed average percentage change (%)	Low
Protection of biodiversity	Change in size of protected area (PA) or 'other effective area-based conservation measures' (OECM)	Hectares (ha)	Low
	(Participatory) Conservation management strategies/plans agreed and/or implemented, with involvement of local/indigenous communities (and other stakeholders e.g. private, NGOs, etc.).	Binary variable. Requires definition.	High
	Implementation of (national) action plans for the protection of target species/habitats.	Binary variable. Requires definition.	High
	Improved knowledge and/or capacity of conservation-related authorities to protect biodiversity	Binary variable. Requires definition.	High
	Successful use of new/improved conservation tools by conservation-related authorities	Binary variable. Requires definition.	High
	Successful use of new/improved conservation tools by local communities.	Binary variable. Requires definition.	High
	Number of community associations formed or strengthened to support biodiversity conservation.	Number (#)	Moderate
	Improved knowledge and/or capacity amongst local communities in the governance or sustainable management of natural resources (e.g. increased capacity to deliver inquiries to conservation authorities).	Binary variable. Requires definition.	High

	Improved compliance by local communities with management regulations	Binary variable. Requires definition.	High
	Number of local people participating in wildlife conservation (e.g. participation in actions to address poaching)	Number (#)	High
	Number of local people/community members in leadership roles in conservation decision-making.	Number (#)	Moderate
	Mechanisms to scale-up project work established[86]	Binary variable. Requires definition.	Low
	Finance leveraged for improved biodiversity	Monetary value (£)	Low
Sustainable use of biodiversity	Number of households/local people with increased knowledge, attitudes and practices in biodiversity conservation (e.g. increased knowledge on sustainable farming techniques and conservation stewardship[87], or forest-dependent farmers restoring traditional crops and domesticating indigenous vegetables[88]).[89]	Number (#)	High
	Number of local people with a clearer understanding of threats to biodiversity (e.g. invasive species, climate change, etc.)	Number (#)	Moderate
	Number of local people / stakeholders empowered or with improved skills and capacity to sustainably use biodiversity	Number (#)	High
	Improved use / generation of community or traditional knowledge on biodiversity or ecosystems (e.g. use of indigenous agroforestry systems).	Binary variable. Requires definition.	Moderate
	Markets for sustainably farmed and harvested products established.	Number (#)	Low
	Number of enterprises / farmers complying with certification requirements / accredited with certification	Number (#)	Low
	Number of households/people with increased (annual) income (disaggregated by gender)	Number (#)	High

[86] DAR28003: Resurrection Island: enterprise, conservation and development around the Aral Sea
[87] DAR28009: Enabling youths to lead lemur conservation in eastern Madagascar
[88] DAR28017: Establishing a Biocultural Heritage Territory to protect Kenya's Kaya forests
[89] This common indicator is also a key indicator of sustainable livelihoods.

Poverty reduction and livelihoods	Increased (percentage of) (annual) household/people's income, disaggregated by gender	Observed average percentage change (%)	High
	Increased revenue of sustainable livelihood enterprises.	Monetary value (£)	Moderate
	Number of households/people reporting improved (non-monetary) wellbeing[90]	Number (#)	High
	Number of households/people reporting increased confidence/empowerment (e.g. access and control over resources or ability to make change, including in daily life or in decision-making/planning processes)	Number (#)	Moderate
	Number of households/people reporting significant improvements in their diet	Number (#)	Low
	Number of households/people reporting improvements in their health.	Number (#)	Low
	Number of households/people with access to healthcare and education.	Number (#)	Low
	Number of new sustainable livelihoods implemented.	Number (#)	High
	Number of households/people with diversified livelihoods (i.e. more than one livelihood activity)	Number (#)	Moderate
	Number of households/people with improved economic independence and/or resilience (e.g. households managing their savings, savings increased, income from diversified sources, etc.)	Number (#). Requires definition.	Moderate
	Number of households/people identifying and/or developing opportunities for supplementary/additional livelihoods.	Number (#)	Low
	Number of livestock / farming plots with increased productivity (or % increase in average productivity) for producers.	Number (#), observed average percentage change in productivity (%)	Low
	Number of households with improved condition in livestock / farming plots (e.g. reduced livestock predation)	Number (#). Requires definition.	Low

[90] Findings from DAR28002 outline three different dimensions of wellbeing that can be considered: subjective (e.g. personal feeling), relational (e.g. relations with government and other communities), and material (e.g. livestock health and value). Although, this measure will likely capture non-monetary wellbeing, given other measures on income.

	Increased unit price for harvested outputs.	Observed average percentage change in monetary value (%, £)	Low
	Number of households reporting significant reductions in loss of livestock or produce.	Number (#)	Moderate
	Number of households reporting increases in fish catch.	Number (#)	Low
	Increase in positive attitudes amongst relevant stakeholders on indigenous culture, institutions and practices.	Number (#). Requires definition.	Low
Climate mitigation	Sustainable management practices promoting carbon sequestration established (e.g. use of biochar on crops).	Binary variable or Number (#). Requires definition.	Low
	Estimated carbon emissions absorbed (e.g. in agroforestry plots).	Estimated carbon equivalent (tCo2e)	Low
	Estimated avoided carbon emissions from avoided hectares of forest loss.	Estimated carbon equivalent (tCo2e)	Low
Climate adaptation	*Climate adaptation is not an explicit outcome indicator observed. However, we are confident that it can be measured more indirectly. This can encompass both species and human adaptation to climate change. Therefore, indicators of adaptation can be linked with measures from poverty reduction and livelihoods, such as livelihood diversification, or economic independence/resilience. It can also be linked with biodiversity measures such as reductions in fragmentation to allow temperate species to migrate to higher altitudes, as well as habitat restoration measures such as reforesting mangroves as a form of storm protection.*	NA	Moderate

Darwin Plus

Indicator category	Common Darwin Plus Indicators	Unit of measure (where available)	Confidence level (high, moderate, low)

State of Biodiversity	Improved maintenance of threatened species and habitats[91].	Binary variable. Requires definition.	Moderate
	Improved (baseline) understanding on marine biodiversity / ecology of target habitats and/or species (e.g., list of detected shark species presented to decision-makers, or established associations between vegetation type and occurrence of invertebrates[92]).	Binary variable. Requires definition.	High
	Increased cover of natural vegetation	Hectares (ha)	Low
	Improvements in habitat diversification (e.g., Reduction in extent of reed- bed at Zakaki Marsh, as reed-beds lead to habitat simplification[93])	Binary variable. Requires definition.	Moderate
	Biodiversity survey methods for species identification disseminated (e.g., eDNA for the detection of deep-sea fishes[94])	Binary variable. Requires definition.	Low
Threats to Biodiversity	Reduction in cover of invasive plant species	Hectares (ha)	Low
	Presence and abundance of invasive, non-native species assessed	Binary variable. Requires definition.	Low
	Successful implementation of surveillance protocols for Invasive Non-Native Species (INNS)	Binary variable. Requires definition.	Low
	Climate-related threats to biodiversity modelled (e.g. 'winning' and 'losing' plant species under future climate scenarios identified[95], or impact of climate change on fisheries and ecosystem better understood, providing a baseline to inform future research/work[96])	Binary variable. Requires definition.	Low
	Reduced disturbances to target species in UKOTs (e.g. Reduced disturbance for birds and marine turtles at Akrotiri wetlands & beaches[97])	Binary variable. Requires definition.	Moderate

[91] DPLUS030: Building systems and capacity to monitor and conserve BVI's flora
[92] DPLUS144: Protecting South Georgia's terrestrial communities from climate change-invasion synergies
[93] DPLUS141: Habitat restoration and wise use for Akrotiri and Cape Pyla
[94] DPLUS145: Assessing the mobile fish biodiversity of Bermuda's deep seas
[95] DPLUS144: Protecting South Georgia's terrestrial communities from climate change-invasion synergies
[96] DPLUS148: Climate change resilience in Falkland Islands fisheries and marine ecosystems
[97] DPLUS141: Habitat restoration and wise use for Akrotiri and Cape Pyla

	Successful implementation of disease treatment strategy interventions (e.g., Stony coral tissue loss disease treatment interventions successfully implemented[98])	Binary variable. Requires definition.	Low
Protection of Biodiversity	Increased collaboration between UKOTs in marine biodiversity conservation (e.g., collaboration has been effective between partners).	Binary variable. Requires definition.	High
	Number of UKOT stakeholders with improved capacity to collect and use data to inform marine management.	Number (#). Requires definition.	High
	Successful approval or implementation of a new or improved MPA management plan, including for sustainable use of natural resources (e.g. within fisheries, such as krill fisheries, deep-water fisheries, etc.)	Binary variable. Requires definition.	High
	Species or habitat action plan approved by UKOT stakeholders.	Binary variable. Requires definition.	Moderate
	UKOT adopts new or improved marine management tools (e.g., identification of the Ecosystem Sensitivity & Climate Vulnerability as a key tool supporting marine spatial planning[99])	Binary variable. Requires definition.	High
	Climate change adaptation and ecosystem approach strategies submitted to UKOT decision-makers (e.g. climate change, variability and ecosystem approach to fisheries management approaches submitted to government directorates[100])	Binary variable. Requires definition.	Low
	Successful survey and mapping of Marine Protected Area habitat and seafloor substrate	Binary variable. Requires definition.	Low
	Geospatial information on marine biodiversity produced and used by Marine Protected Area managers	Binary variable. Requires definition.	Moderate
	Increased scientific information available for fisheries management (e.g., for krill fishery management[101])	Binary variable. Requires definition.	Moderate

[98] DPLUS147: Collaborative approach to managing coral disease in UK Overseas Territories
[99] DPLUS150: Ecosystem sensitivity and climate vulnerability for MSP in the BVI
[100] DPLUS148: Climate change resilience in Falkland Islands fisheries and marine ecosystems
[101] DPLUS145: Assessing the mobile fish biodiversity of Bermuda's deep seas

	Successful upgrades to navigational charting (e.g., based on assessments of the depth of marine protected area[102])	Binary variable. Requires definition.	Low
Sustainable Use of Biodiversity / Sustainable livelihoods	Number of people with improved knowledge, attitudes and practices in marine or coastal conservation (e.g., increased community awareness on the importance of coastal habitats[103]).	Number (#)	Moderate
	Number of ecotourism visitors / increased ecotourism opportunities (e.g., increased visitors to wildlife watching facilities and increased interest in eco-tourism[104]).	Number (#)	Low
Climate	*Data on climate is often based on the modelling and/or monitoring of climate impacts on marine ecosystem conditions. From our review, there are no indicators on climate mitigation i.e., estimating avoided emissions or reductions in emissions.*	*NA*	*NA*

Illegal Wildlife Trade Challenge Fund

Indicator category	Common IWTCF Indicators	Unit of measure	Confidence level (high, moderate, low)
State of biodiversity	Stability of target species populations recorded	Observed population density (proportion)	Low
Threats to biodiversity	Decrease in proportion of illegally killed target species (e.g., decrease in proportion of illegally killed elephants[105])	Population numbers (#), mortality rates (%) based on carcass counts (#)	Low

[102] DPLUS142: Bathymetry, and seafloor habitats within Ascension Island's nearshore waters
[103] DPLUS073: Improving small island resilience and self-sufficiency in habitat monitoring and management
[104] DPLUS141: Habitat restoration and wise use for Akrotiri and Cape Pyla
[105] IWT028: Building judicial capacity to counter wildlife crime in Kenya

	Reduction in records of illegal killing of target species (e.g., no records of illegal rhino or tiger killings[106])	Number of incidents/records (#)	Moderate
	Reduction in poaching of target (and other) species[107]	Number of incidents/records (#), Observed average percentage change (%)	Moderate
	Illegal wildlife trade in target region stopped[108]	Binary variable. Requires definition.	Low
	Decrease in unsanctioned harvesting of wildlife / timber in target site.	Number of incidents/records (#), Observed average percentage change (%)	Low
	Reduction in the number of incidents with serious impact on target species and human livestock from human-wildlife conflicts[109]	Number of incidents/records (#), Observed average percentage change (%)	Moderate
Protection of biodiversity (to be complemented by 'Enforcement')	Number of law enforcement officers, prosecutors sensitised and trained.	Number (#)	High
	Improved capacity of law enforcement agencies to directly address IWT issues in target areas and enforce existing legislation (e.g., increased on-the-ground capacity to directly address human-wildlife conflict and IWT issues in key hotspots[110])	Binary variable. Requires definition.	High
	Extent of target habitat (PA/OECM, # of ha) under stronger protection (e.g., >50,000ha of priority tiger conservation landscape are under stronger protection[111])	Hectares (ha)	Low

[106] IWT041: Strengthening Community Anti-poaching and Ecotourism in the Western Terai Complex
[107] IWT048: Tackling the illegal wildlife trade in Muslim Communities in Sumatra and IWT049: Reducing IWT in Sumatra across two globally important tiger landscapes
[108] IWT103 – this is still under implementation, therefore this is an interesting project to monitor.
[109] IWT049: Reducing IWT in Sumatra across two globally important tiger landscapes
[110] IWT093: Protecting megafauna through on-the-ground, legislative and enforcement strengthening in Aceh
[111] IWT049: Reducing IWT in Sumatra across two globally important tiger landscapes

	Target area with established community-led / religious enforcement of rules and regulations against the illegal wildlife trade.	Binary variable. Requires definition.	Moderate
	Improved and coordinated response from government authorities on combatting the trafficking of illegally traded species (e.g., on jaguar wildlife trafficking[112])	Binary variable. Requires definition.	Low
	Number of local communities / people with increased knowledge, attitude and practice (and empowerment) to combat the illegal wildlife trade (e.g., in enforcement[113], or to introduce effective and sustainable human-wildlife conflict mitigation[114])	Number (#).	Moderate
	Legal framework for (target) species protection and/or sustainable action introduced and/or strengthened.	Binary variable. Requires definition.	Moderate
Poverty reduction and livelihoods	Number of households/people with increased income resulting from sustainable livelihoods.	Number (#).	Moderate
	Number of households/people reporting improved wellbeing.	Number (#).	Moderate
	Number of households/people benefitting from improved livelihoods (e.g., ecotourism, beekeeping, eco-agriculture, etc.[115])	Number (#).	Moderate
	Number of poachers in local communities which stop participation in the illegal wildlife trade	Number (#).	Low
	Reduction in the number of people harmed or killed in human-wildlife conflicts in target landscapes (e.g., in human-tiger conflicts[116])	Number (#).	Moderate
Enforcement	Increased detection of the illegal wildlife trade	Number of incidents/records (#),	Moderate

[112] IWT068: A price on their heads: Addressing jaguar trafficking in Bolivia
[113] IWT049: Reducing IWT in Sumatra across two globally important tiger landscapes
[114] IWT093: Protecting megafauna through on-the-ground, legislative and enforcement strengthening in Aceh
[115] IWT041: Strengthening Community Anti-poaching and Ecotourism in the Western Terai Complex and IWT103: Reducing Poverty and Illegal Trade utilizing Bolivia's Charismatic Red-fronted Macaw
[116] IWT027: Strengthening institutional frameworks to combat wildlife trafficking in Indonesia

		Observed average percentage change (%)	
	Increased seizures of illegally traded live animals or products.	Number of incidents/records (#), Observed average percentage change (%)	Moderate
	Wildlife forensic needs assessment completed AND IWT investigations utilise DNA forensic services[117]	Binary variable. Requires definition.	Low
	Increased IWT investigations leading to trials for prosecution.	Number of incidents/records (#), Observed average percentage decrease (%)	Moderate
	Alternative laws used to strengthen prosecution of IWT cases[118].	Binary variable. Requires definition.	Low
	Increased arrests leading to successful prosecutions.	Number (#), Observed average percentage change (%)	Low
	Increased prosecutions, convictions, and sentences for IWT offences. Similarly – Increased (rate of) prosecutions and convictions of (major) criminals involved in the trafficking of target species or criminal networks involved in the illegal wildlife trade.	Number (#), Observed average percentage change (%)	Moderate
	Decreased 'case dismissals' (due to inconclusive investigations, failure of prosecution, etc.).	Number (#)	Low

[117] IWT013: African Wildlife Forensics Network – capacity and coordination for law enforcement
[118] IWT069: Strengthening intelligence-led enforcement to combat IWT between Indonesia and Malaysia

	Reduced timeframe for prosecution of IWT cases.	Observed average percentage change (%)	Low
	Increased bail amount / penalties to IWT offenders.	Monetary value (local currency, £)	Low
	Net change in IWT cases with financial investigation and asset recovery action.	Number (#)	Low
	Number of enforcement officials with improved capacity to enforce poaching and trafficking of illegal wildlife trade species.	Number (#). Requires definition.	High
	Increased (percentage of) credible information reports on illegal wildlife trade from local community members.	Number of reports (#)	Low
	Increased community confidence or trust in law enforcement in protection from poaching activities.	Binary variable. Requires definition. Could use Number (#).	Low
	Increased case record of IWT incidence on serious and transnational cases (i.e. strengthened identification of serious/transnational IWT cases)	Number of incidents/records (#), Observed average percentage change (%)	Low
	Increased transboundary information sharing and/or enforcement actions.	Number of transboundary actions (#)	Moderate
Demand reduction	Number of communication outputs successfully reaching target audiences (i.e. number of people in target audience who saw communication outputs)	Number (#)	High
	Number of social media posts with positive values related to campaign messages.	Number (#)	Low
	Number of people in target audience with increased awareness or knowledge of poaching and the illegal wildlife trade	Number (#)	Moderate
	Number of people in target audience whose beliefs on the use of illegal wildlife products have positively changed (i.e. reduced belief that illegal products can cure disease or ailments).	Number (#)	Low

	Number of people in target audience with a decreased willingness to purchase illegal wildlife products	Number (#)	Moderate
	Number of people in target audience with reduced intention to poach illegal wildlife traded species.	Number (#)	Low

Annex 3: Possible portfolio KPIs[119]

Indicator group	Indicator sub-group	Possible key performance indicators at the portfolio-level	Unit of measure[120]
Biodiversity protection	State of biodiversity: Species-level	Number of species targeted for conservation	#
		Number of species protected[121]	#
		Net change in population size of species in target habitat listed as endangered	#
	State of biodiversity: Habitat-level	Net change in extent of target habitat	# of ha
		Net change in ecosystem/habitat integrity (hectares with improved condition)	# of ha
		Net change in extent of protected areas and other effective area-based conservation measures' (OECM) (hectares)	# of ha
	State of biodiversity: Knowledge	Number of projects which have improved knowledge and understanding of biodiversity (including of species and/or habitat)	#
	Threats to biodiversity	Number of TOC drivers (change in land- and sea-use, direct exploitation of organisms and illegal killing of species, climate change, pollution, invasion of alien species) of biodiversity loss the portfolio of projects have reduced or removed. Disaggregate by the number of projects evidently reducing or removing each threat.	#
		Net change in the number of illegal activities (including burning, logging, mining, hunting, other land clearance, overfishing, poaching, retaliatory killing from human-wildlife conflict)	#
	Protection of biodiversity (including IWT enforcement and legal frameworks)	Net change in hectares of degraded area under restoration / reforestation in target habitat	# of ha
		Number of stakeholders with improved capacity to sustainably monitor, manage and/or use biodiversity (including enforcement on poaching and trafficking of illegal wildlife trade species)	#
		Number of laws, regulations, policies and/or reforms enacted to address biodiversity conservation / % and number of projects showing evidence that improved or new laws, policies, and agreements are being implemented	#

[119] The indicators listed should at the very least capture the number or percentage of projects demonstrating evidenced contributions. Where indicators use other measures, such as net change, hectares, number of people/households, etc.; the number of projects contributing to these measures must also be recorded.
[120] Number (#), Percentage change (%), Hectares (# of ha), Tonnes of carbon dioxide equivalent (tCo2e), Monetary value (£)
[121] However, there is a need to ensure that there is no double counting of species.

		Number of local, national, regional (i.e., transnational) or international policy dialogues successfully established, with community voices and rights represented	#
		Number of new or improved management plans successfully implemented, with community voices and rights represented, and/or community-led enforcement of rules and regulations.	#
		Number of countries / key stakeholders using project knowledge products (including data and technologies) in the design / implementation of policies, programs and projects OR sustainable management of natural resources	#
	Sustainable use of biodiversity	Number of households / local people / stakeholders with increased value afforded to biodiversity conservation (i.e. knowledge and attitudes), including behaviour towards reducing demand for illegal wildlife traded products[122]	#
		Net change in hectares of target habitat receiving sustainable management practices (disaggregated by terrestrial and marine habitats).	# of ha
Poverty reduction	Monetary	Number of households / people with improved income	#
		Percentage increase in average income of households / people	%
	Non-monetary	Number of households / people reporting improved wellbeing / quality of life	#
		Number of people with increased participation in local communities / local management organisations	#
		Number of households / people with improved health	#
		Number of households / people with improved food security	#
		Number of households / people with greater economic independence and/or resilience	#
Livelihoods		Number of sustainable livelihoods protected (i.e., indigenous livelihoods) or created (i.e., new / additional livelihoods)	#
		Number of households / people with livelihood benefits improved	#
Markets		Number of (new) functioning markets for sustainable products	#
		Number of products receiving sustainability certification/labelling	#

[122] Demand reduction projects often target and measure change for thousands (and in some cases millions) of people, however indicators focus on expectations or willingness to change, rather than actual behaviour change. Therefore, the addition of demand reduction projects' contributions here should be treated with a level of caution.

Climate	Mitigation	Net (estimated) change in greenhouse gas emissions (tCO2e) / avoided emissions	tCo2e
		Hectares of key carbon habitat protected (e.g. peatland, tropical forests, mangroves, salt marshes, seagrasses, etc.).	# of ha
	Adaptation	Number of households / people / communities better able to cope with the effects of climate change (i.e., adaptive capacity)[123]	#
	Monitoring	Number of projects successfully modelling and/or monitoring climate change impacts on target species and ecosystems (and people).	#
Enforcement		Number of projects successfully increasing (or % increase) the probability of prosecution or conviction	#
General	Fund performance	Proportion of grants awarded to applications received	%
		Number of grants awarded	#
		Number of grants awarded to applicants based in eligible countries	#
		Volume of grants awarded	£
		Volume of matched funding mobilised (disaggregated by application, implementation or post-project; and disaggregated by public or private)	£
		Number of change requests received by active projects.	#

[123] There are many solutions, but some key aspects are related to poverty and sustainable livelihoods, such as livelihood diversification, switching to drought- or pest-resistant crops, or evidence of economic resilience. It may also include the extent of awareness of climate change threats and capacity to act.

Annex 4: Existing standard output measures

The lists provided below represent the existing standard output frameworks implemented by the (i) Darwin Initiative, and (ii) Illegal Wildlife Trade Challenge Fund. Section 2.2.2 provides recommendations for further development based on the below.

Darwin Initiative

TRAINING MEASURES

General points

- The nationality and gender of each student/trainee should be reported.
- The theme of the training, and language and theme of training materials, should be reported.
- Double counting must be avoided
- Workshops can only be claimed as providing training if the duration of the workshop is at least 3 days and if participants are gathered principally to work on, or in association with, the project. Otherwise workshop activities come under standard measure 14.
- A training week is defined as one that involves at least 30 hours of tuition/training per week. Below 30 hours, training weeks should be calculated on a pro-rata basis.

Code Number	Description (* indicates that the nationality of trainees should be stated)	Definitions and reporting requirements
1A 1B	Number of people to submit thesis for PhD qualification * Number of people to attain PhD qualification *	These measures are included in the table as funding for early projects included PhD training. They are unlikely to feature in new Darwin projects, given the more recent guidance issued by this Department.
2	Number of people to attain Masters qualification (MSc, MPhil etc.) *	
3	Number of people to attain other qualifications (i.e. Not standard measures 1 or 2 above) *	"Other qualifications" may include diplomas, NVQs or other qualifications awarded through accredited courses.
4A	Number of undergraduate students to receive training *	This category covers short periods of work experience/training for post and undergraduates.

4B 4C 4D	Number of training weeks to be provided Number of postgraduate students to receive training * Number of training weeks to be provided	
5	Number of people to receive at least one year of training (which does not fall into categories 1-4 above) *	Training of over one year which does not fall in measures 1-4 above. For example, fieldwork and analysis in the host country where extensive training and guidance is given to host partners.
6A 6B	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above) * Number of training weeks to be provided	Training of under one year which does not fall in measures 1-4 above. The quantity and nature of the training must be included.
7	Number of (i.e., different types - not volume - of material produced) training materials to be produced for use by host country	Training materials may take many forms but may include videos, information leaflets or posters providing advice or guidance on specific topics, or guides, tool kits, and manuals which are to be translated by project staff for wider use in host countries. Training materials are those to be developed directly by the project. They will not include materials donated to the project, those items to be included at Standard Measures 20 or lecture notes to be distributed to course participants.

RESEARCH MEASURES

General points

- Research measures will only be reported when they have been completed e.g., only final reports are reported as standard measures. Most research measures will therefore occur at/towards the end of the project.
- Please provide the language of any publication
- Any types of research measures not mentioned below should be listed without a code number.

Code Number	Description	Definitions and reporting requirements
9	Number of species/habitat management plans (or action plans) to be produced for Governments, public authorities, or other implementing agencies in the host country	The type of document will be final reports produced for scientific/public authorities in the host country(ies) to manage specific habitats/species. They will include specific practical recommendations/action points/ targets.
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording	Only final versions are to be included.
11A 11B	Number of papers to be published in peer reviewed journals Number of papers to be submitted to peer reviewed journals	
12A 12B	Number of computer based databases to be **established** and handed over to the host country Number of computer based databases to be **enhanced** and handed over to the host country	Computer databases to be included where the material is capable of being interrogated in a variety of different ways. It is the number of different types of databases that should be entered, rather than information collected in the same way for say four different geographical areas.
13A 13B	Number of species reference collections to be **established** and handed over to the host country(ies) Number of species reference collections to be **enhanced** and handed over to the host country(ies)	The number of collections should be entered rather than the number of entries in the collection.

DISSEMINATION MEASURES		

Code Number	Description	Definitions and reporting requirements
14A	Number of conferences/seminars/ workshops to be **organised** to present/disseminate findings	There should be a clear distinction between those events to be organised by the project for the project and those which are to be organised by others but used by project members. They should be distinct from training events and attendance by others outside the project is planned. Theme of event should be reported.
14B	Number of conferences/seminars/ workshops **attended** at which findings from Darwin project work will be presented/ disseminated.	

PHYSICAL MEASURES		
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)	Physical assets may include buildings, vehicles, computers and computer hardware, scientific equipment and reference material.
21	Number of permanent educational/training/research facilities, structures, or organisations to be established and then continued after Darwin funding has ceased	Structures (e.g., committees), facilities or organisations should only be included where their establishment will come as a direct result of the Darwin project. They may include facilities such as research laboratories or outreach facilities or formalised societies or organisations co-ordinating and administering aspects of training or research. Informal groups should be entered under Measures 17.
22	Number of permanent field plots and sites to be established during the project and continued after Darwin funding has ceased	Field plots and sites are those to be established for the purposes of field research under the Darwin project.

FINANCIAL MEASURES		
Code Number	**Description**	**Definitions and reporting requirements**

23	Value of resources raised from other sources (i.e., in addition to Darwin funding) for project work	Funding from all other sources are to be included including contributions in kind which should be quantified.

IWTCF

SUSTAINABLE LIVELIHOODS

AND ECONOMIC DEVELOPMENT MEASURES

General points

- The nationality and gender of each student/trainee should be reported.
- The theme of the training, and language and theme of training materials, should be reported.
- Double counting must be avoided
- Workshops can only be claimed as providing training if the duration of the workshop is at least 3 days and if participants are gathered principally to work on, or in association with, the project.
- A training week is defined as one that involves at least 30 hours of tuition/training per week. Below 30 hours, training weeks should be calculated on a pro-rata basis.

Code Number	Description	Definitions and reporting requirements
1A	Number of individuals who received training in sustainable livelihood skills	Give details on the style of training offered – this could include traditional formal training, coaching, mentoring, placements, exchange visits etc.
1B	Number of households who received training in sustainable livelihood skills	Sustainable livelihood skills should be clearly outlined and information provided on the type alternative livelihood (for example beekeeping).
1C	Number of individuals benefitting from training (i.e. broader HH of individual directly trained)	If the project is collecting beneficiary information on households, please provide the total number of households
1D	Number of training weeks provided	
2A	Number of cooperatives established	The type of cooperative should be outlined as well as disaggregating women-only
2B	% cooperatives established that are functioning at project end (at least a year after establishment)	
3A	Number of credit and savings groups established	
3B	Number of loans provided to MSMEs	All sizes of enterprise should be captured (i.e. micro, small, and medium enterprises, MSMEs)
3C	Total value (£) of loans provided	The value of the loans should be provided in GBP

4A 4B	Number of sustainable livelihoods enterprises established Number of existing enterprises receiving capacity building support	The type of sustainable livelihood enterprise established should be noted Type of support provided should be listed - e.g. funds, resources, guidance etc.
5A 5B	Number of households that have experienced an increase in household income as a result of involvement Average percentage increase per household against baseline	
6A 6B	Number of people to receive other forms of education/training Number of training weeks provided	Training which does not fall in the above measures (1A – 1C). This might include other people trained following a direct 'training of trainers'. The quantity and nature of the training must be included. Count of training weeks under 6B must not double count 1D.
7	Number of (i.e., different types - not volume - of material produced) training materials to be produced for use by host country	Training materials may take many forms but may include videos, information leaflets or posters providing advice or guidance on specific topics, or guides, tool kits, and manuals which are to be translated by project staff for wider use in host countries. Training materials are those to be developed directly by the project. They do not include materials donated to the project.

LAW ENFORCEMENT AND LEGAL FRAMEWORK MEASURES

General points

- Please provide the language of any publication
- The **nationality**, **gender** and (where appropriate) **agency** and **level of service** of each student/trainee should be reported.
- A training week is defined as one that involves at least 30 hours of tuition/training per week. Below 30 hours, training weeks should be calculated on a pro-rata basis.
- A day is defined as a minimum of 6 hours operational or active duty in any 24 hour period
- Refresher training is a training courses for previously-trained officers, reviewing, updating or advancing skills and knowledge.

Code Number	Description	Definitions and reporting requirements
8	Number of illegal wildlife trade management plans, action plans, or strategies produced for use by Governments, public authorities, or other implementing agencies in the host country	An output would be a written document consisting of a number of strategic objectives, activities, along with and indicative timeframe and outputs/outcomes.
9	Number of field guides/manuals produced to assist work related to	Only final versions are to be included. Manuals produced in more than one language may be counted once per language.

	IWT product identification, classification and recording	
10A 10B 10C 10D 10E 10F	Number of customs officials trained Number of prosecutors/judges trained Number of police officers trained Number of trainers trained Number of individuals who attended refresher training Number of other specialist services trained (e.g. dog units, rangers, forensic services).	Give details on the style of training offered – this could include traditional formal training, coaching, mentoring, placements, exchange visits etc. Where trainers have been trained, the number of potential trainees should be indicated. Refresher training is training courses for previously-trained officers, reviewing, updating or advancing skills and knowledge. Note that officers may be the same as 10A-D+F if they were provided with initial and refresher training during the reporting period. Please flag if this is the case. Provide detail of the specialist service and unit
11A 11B	Number of criminal networks/trade routes mapped/identified Number of illegal wildlife shipments detected	Indicate the estimated or minimum size/scale of the network
12	Duration or frequency of patrols by law enforcement rangers supported through the project	Hours or days, noting that a day is a minimum of 6 hours operational or active duty in any 24 hour period.
13A 13B 13C 13D 13E 13F	Number of arrests (linked to wildlife crime) facilitated by the project Value of illegal wildlife products seized through law enforcement action facilitated by the project Number of wildlife crime cases submitted for prosecution Number of individuals charged for wildlife crime Number of individuals successfully prosecuted for wildlife crime cases, charges brought for wildlife crime offences using non-wildlife crime specific legislation – e.g. money laundering Number of actioned cases handed to/received from another agency	 There should be an indication of the level of offence charged. e.g. poaching, trafficking etc. i.e. for Customs agencies, cases handed to police for investigation
14	Value of assets seized through money laundering or proceeds of crime legislation	This does not include fines or similar punitive penalties.
15A 15B	Number of intelligence reports fed into management decisions on species protection Number of intelligence or information reports exchanged with INTERPOL or the World Customs Organization.	Outline the details on the law and regulations

15C	Number of amendments to national laws and regulations in project countries	
16A	Number of databases established in project countries	Provide details on the nature of data stored
16B	Number of databases established that are operational in project countries	
16C	Number of databases established that are used for law enforcement	
17A	Number of people who received other forms of education/training (which does not fall into the above category)	Training which does not fall in the above measures (10A-10F). The quantity and nature of the training must be included.
17B	Number of training weeks provided	

BEHAVIOUR CHANGE FOR DEMAND REDUCTION MEASURES

General points

- The focus of IWTCF projects which are working towards demand reduction should be on affecting behaviour change rather than simply increasing awareness. For that reason, the measures below seek to capture actual behaviour change or indicators of behaviour change.
- Please provide the type of IWT behaviour change materials produced and weblinks where these are available online
- Please provide the language of any publication
- Please provide access to the questions and responses from any survey on IWT behaviour
- The nationality and gender of each individual engaged.

18A	Number of individuals surveyed on relevant IWT behaviour pre-intervention (baseline)	Outline if surveys were conducted in person, online or social media
18B	Number of individuals surveyed on relevant IWT behaviour post-intervention	Behaviour change materials should be categorised by type e.g. print media, radio, television, internet, social media, or other.
18C	Number and type of IWT behaviour change materials produced / Number and type of IWT behaviour change materials distributed	Note that two numbers should be provided under 18C. The first should be a count of the different types produced, with the second number indicating distribution volume (e.g. 2 billboard posters with 50 copies each – actual audience captured under measure 18G).
18D	Number of communication channels carrying campaign message	
18E	Number of champions/key influencers speaking on behalf of the demand reduction campaign	
18F	Number of appropriate partners with direct influence on target audience that have distributed campaign message(s)	For 18E-18G, please provide details.
18G	Number of people reached with behaviour change messaging (i.e. audience)	

19	Number of individuals that have had their relevant IWT behaviour changed	Measure 19 links to measures under section 18 above (specifically 18A and 18B).
20	Number of stakeholders/key influencers that have actively discouraged the purchase/use of IWT products e.g. pledges signed	Outline the type of stakeholders: for example, tour operators, online e-commerce companies

CROSS CUTTING MEASURES

General points

- Publications will only be reported when they have been completed e.g., only final reports are reported as standard measures. Most research measures will therefore occur at/towards the end of the project.
- The nationality and gender of <u>each</u> student/trainee should be reported.
- A training week is defined as one that involves at least 30 hours of tuition/training per week. Below 30 hours, training weeks should be calculated on a pro-rata basis.

21A	Number of papers published in peer reviewed journals	Note that each peer review paper should only be counted once under measures 19A and 19B.
21B	Number of papers submitted to peer reviewed journals	Other publications can include policy briefs and other technical reports, however media publications should be captured under 26C.
21C	Number of other publications produced	
22A	Amount of match funding secured (£) for delivery of project during the period of the IWTCF grant	Values should be provided in GBP
22B	Funding leveraged (£) for work after the IWTCF grant ends	
23	Estimated value (£) of physical assets to be handed over to host country(ies)	Physical assets may include buildings, vehicles, computers and computer hardware, scientific equipment and reference material.
24A	Number of Bachelor qualifications (BSc) obtained	Provide details of the BSc/MSc
24B	Number of Masters qualifications (MSc/MPhil etc) obtained	Please outline any other formal qualifications obtained, this can include accredited courses.
24C	Number of other qualifications obtained	
25A	Number of undergraduate students who received training	This category covers short periods of work experience/training for post and undergraduates.
25B	Number of training weeks provided	
25C	Number of postgraduate students who received training	This training covers training not otherwise captured under training measures above (1, 6, 10 and 16).
25D	Number of training weeks proved provided	

26A 26B 26C	Number of conferences/seminars/ workshops **organised** to present/disseminate findings Number of conferences/seminars/ workshops **attended** at which findings from IWT project work will be presented/ disseminated Number of individual media articles featuring the project	There should be a clear distinction between those events to be organised by the project for the project and those which are to be organised by others but used by project members. They should be distinct from training events and attendance by others outside the project is planned. Theme of event should be reported. For media articles, please include these or else include the weblink.

Annex 5: Sustainability framework

The sustainability framework places focus on financial, socio-political, economic, institutional/governance and ultimately environmental sustainability (see Table 13). The approach builds upon the guidance provided by the OECD-DAC criteria and supports the reporting and assessment of the complex and context-specific factors that influence sustainability on a project-by-project basis. This approach also helps to identify the additionality of projects by providing further information on project benefits within their environmental, institutional and socio-political contexts. We have also added an 'economic' dimension to reflect the barrier of perverse incentives, as well as the role of markets affecting both livelihoods as well as the illegal wildlife trade. It uses a four-point scale to determine the likelihood of sustainability: "Unlikely"; "Moderately Unlikely"; "Moderately Likely"; and "Likely" (within the 'satisfactory range' are all projects which score moderately likely or likely).

Table 13: Likelihood of sustainability[124]

Dimension of sustainability	Description
Financial resources	What is the likelihood that financial resources will be available to continue the activities that result in the continuation of benefits after project completion (income-generating activities, and trends that may indicate that it is likely that in the future there will be adequate financial resources for sustaining project activities, outputs or outcomes)?[125] Defra can support this by systematically monitoring the volume of matched funding obtained both during and post-project, including disaggregating this by the source of funding (e.g., public, trusts and foundations, and private sector), and disaggregating by grant size.[126]
Socio-political	This includes socio-political considerations both at the national and local level. Are there any social or political risks that can undermine the longevity of project outcomes? What is the risk that the level of stakeholder ownership is insufficient to allow for project outcomes/benefits to be sustained? Do the various key stakeholders see in their interest that the project benefits continue to flow, be scaled up or even replicated? Is there sufficient public/stakeholder awareness in support of the long-term objectives of the project?
Economic	This includes at the international, national and/or local level. Are there any economic risks that may undermine the longevity of project outcomes, such as perverse economic incentives, threats to livelihood markets, or even the adaptation of illegal wildlife trade markets and criminal networks based on supply and demand changes?
Institutional framework and governance	This includes institutional and governance considerations at the national and local level. Do the legal frameworks, policies, and governance structures and processes pose any threat to the continuation of project benefits? While assessing this parameter, consider if the required systems

[124] Adapted from GEF (2019). Further work on the sustainability of GEF projects and programmes. Link.
[125] For example, for the Illegal Wildlife Trade, this could be evidence that in-country organisations are planning or implementing without Defra funding counter-wildlife trafficking actions that continue or expand upon IWTCF project activities or outputs.
[126] Categories could include less than £150,000; £150,000 to £299,999; £300,000 to £500,000; and greater than £500,000.

	for accountability and transparency, and the required technical know-how, are in place.
Environmental	This includes multiple levels, including international, regional, national or local factors that may change to the environment. Are there any environmental risks that can undermine the future flow of project environmental benefits? What is the probability of 'chance events', such as droughts or floods, inhibiting project benefits? Are there certain activities or threats in the project area that might pose a risk to the sustainability of project outcomes, such as ongoing agricultural or land-use expansion, invasive species, climate change, etc.?

This framework allows for a judgement on many of the enablers or barriers to performance identified in our evaluation, and provides a useful tool for internal assessments of project performance. Alongside final report review scores determining the level of achievement against outcomes, it can be used to produce a likelihood of sustainability score (which can also support the assessment of transformational impact potential). In addition, the methodology can support future evaluations of the funds, allowing evaluators to systematically assess the sustainability of projects and their enablers and barriers.

Annex 6: GESI Framework – Monitoring and evaluation

The following framework has been developed based on HMG and external best practice regarding GESI and the environment. It is a more concise version of the GESI framework (see final report for full version), and outlines considerations for how well a project addresses GESI during monitoring and evaluation stages, to encourage best practice and identify areas for improvement of project portfolios. It can be adapted and prioritised as required.

	Project	Sources consulted	Score	5: GESI transformative Project goes beyond GESI-mainstreaming and facilitates a 'critical examination' of GESI norms, roles, and relationships; strengthens or creates systems that support equality and inclusion.	4: GESI mainstreamed Project ensures that GESI perspectives and attention to the goal of gender equality are central to most, if not all, activities. GESI relevant components in most, if not all, activities.	3: GESI sensitive Project adopts some GESI sensitive methodologies, data collection and analysis, but the gender focus is only apparent in a limited number of project activities.	2: GESI aware Project recognises some issues related to GESI and there is occasional mention of GESI in project documents, but it is not consistently applied in design, implementation, M&E or decision-making.	1: GESI blind Project does not demonstrate awareness of GESI and it is not mentioned in any project documents. GESI does not feature in design, implementation, M&E or decision-making.
Monitoring and evaluation				**Indicators**	**Indicators**	**Indicators**	**Indicators**	**Indicators**
Data collection				GESI-disaggregated data is collected and reported at baseline, midline and end line so that impacts across groups can be tracked. Intersectional data included (e.g. gender split by poverty status, age or ethnicity).	GESI-disaggregated data is collected and reported at baseline, midline and end line so that impacts across groups can be tracked. Intersectional data is not consistently included.	GESI-disaggregated data is collected and reported, though this is not consistent across baseline, midline and end line. Passing consideration of intersectional data.	Some GESI-disaggregated data is collected and reported, but this is very inconsistent. No consideration of intersectional data.	No collection / reporting of GESI-disaggregated data. No consideration of intersectional issues.
				Marginalised groups are meaningfully consulted and well represented during M&E stages. Clear steps have been taken to ensure data collection methodologies enable groups to express their experiences and views freely and safely.	Marginalised groups have been meaningfully consulted and are well represented during some M&E stages. Some steps have been taken to ensure data collection methodologies enable groups to express their experiences and views freely and safely.	Some consultations with marginalised groups have taken place but not consistently as part of M&E. Unclear if steps have been taken to ensure data collection methodologies enable groups to express their experiences and views freely and safely.	Minor evidence of consultation of marginalised groups but not consistent across M&E stages and room for improvement. No steps taken to ensure data collection methodologies enable groups to express their experiences and views freely and safely.	No consultations have taken plae with marginalised groups at ancy M&E stage.

Results				Project effectively responds to GESI-specific needs identified during the planning stage, and additional needs, with robust supporting evidence.	Project effectively responds to GESI-specific needs identified during planning stage, with some good supporting evidence.	Project has responded to some of the GESI-specific needs identified during the planning stage, with justification for areas not achieved. Areas for improvement in terms of supporting evidence.	Unclear if project has responded to GESI-specific needs identified during the planning stage, and no explanation/ supporting evidence required.	No GESI-specific needs identified during planning, or addressed during implementation.
				Monitoring and results framework includes measurable GESI indicators appropriate for the project. This is included across all outcome areas, and not just those focused on GESI.	Monitoring and results framework includes measurable GESI indicators appropriate for the project. This is included across the majority of outcome areas.	Monitoring and results framework includes measurable GESI indicators appropriate for the project. This is only really included for outcome areas focused on GESI.	Monitoring and results framework includes some GESI indicators but these are not always appropriate to project.	Monitoring and results framework includes no GESI indicators
				Project reports on differential GESI benefits through employing both qualitative and quantitative data collection methods to contribute to triangulation of results and to capture change that is difficult to measure.	Some reporting on differential GESI benefits, using mixture of qualitative and quantities methods. Some room for improvement in terms of triangulation.	Some reporting on differential GESI benefits, but could be improved through triangulation of different methods.	Very limited/generic reporting on differential GESI benefits.	No reporting on differential GESI benefits.
Evaluation and learning				Evaluation/assessment of project has taken place, addressing achievement of GESI objectives, results and impacts on different groups, power relations, resources and opportunities.	Evaluation/assessment of project has taken place, addressing achievement of GESI objectives, but more detail could be provided in terms of impacts on different groups, power relations, resources and opportunities.	Evaluation/assessment of project has taken place, with some evidence of how the project has achieved GESI objectives. No detail provided on impacts on different groups, power relations, resources and opportunities.	Passing reference to GESI achievements but no evidence to support this and no clear evaluation/assessment has taken place.	No formal evaluation/assessment has taken place, and no evidence of project GESI achievements.
				Learning is documented and shared with wider Defra network with clear ideas for informing future gender-transformative projects (e.g. through case studies or workshops).	Learning is documented and shared with wider Defra network, with some consideration / ideas for how this can inform future GESI projects.	Learning is documented but not actively shared with Defra network. Potential for learning to inform future GESI projects, but this is not well developed.	Minor learning is documented, with some potential to inform future GESI projects but this needs a lot of work. No haring with wider Defra network.	No GESI-relevant learning has been documented or shared.

				Plans are in place for GEM scoring or HMG gender audits (for larger projects).	Consideration / discussions on GEM scoring or HMG gender audits (for larger projects).	No awareness of GEM scoring / HMG gender audits.	No awareness of GEM scoring / HMG gender audits.	No awareness of GEM scoring / HMG gender audits.
Sustainability				Activities have built the capacity of national/local actors to promote GESI beyond the project lifetime. Clear commitment from these actors.	Some evidence of increased knowledge/awareness/buy-in among national/local actors to promote GESI beyond project lifetime.	Emerging evidence of increased awareness among national/local actors to promote GESI, but no clear commitment/buy-in.	National/local actors have been engaged, but unclear if their knowledge/awareness has increased and no clear commitment or buy in.	No efforts made to include national / local actors or increase their knowledge or awareness on GESI issues.
				New entry points to advance GESI have been identified and capitalised on, and plans are in place to develop and build on these.	New entry points to advance GESI have been identified and capitalised on, and some thinking starting to take place regarding how to build on this.	New entry points to advance GESI have been identified, but unclear how this will be developed and built upon.	Vague mention of entry points, though these are not well developed and no plans are in place to build upon them.	No entry points to advance GESI identified. No plans in place to develop entry points beyond funding.

Annex 7: Value for money framework template

Assessment criteria	Standards	Metric(s)	Type of metric (Monetary, Quantitative, Qualitative)	Data sources
Economy				
Efficiency				
Effectiveness				
Cost-effectiveness				
Equity				

Annex 8: Evolution of Guidance to Applicants

In 2003, the references to monitoring and evaluation (M&E) in Round 12 of the Darwin Initiative were included in an annex to the application guidance as 'Logical Framework Analysis – preparation of a logical framework'. It was four pages long, two of which consisted of an example of a completed logframe from a fictional project. The guidance stated that applicant projects should all have the same overarching goal:

"Define the overall goal. This is the overall rationale for the project and is already defined by the Darwin Initiative objective, i.e. 'to draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources'. The top level of the logical framework should therefore not be completed by applicants."

This single overarching goal, or 'impact', may have been a useful guiding light for applicants to follow in the early years of the programme when they were developing their M&E frameworks. However, by Round 19 in 2013, this overarching goal no longer reflected the current aims of the Darwin programme, and the guidance on impact was changed. The guidance on 'impact' from then onwards was that:

"All Darwin [Initiative] projects are expected to contribute to poverty alleviation and sustainable use of biodiversity and its products."

In 2016, the guidance was rooted more firmly in how to use the logframe, and also featured an example of a completed logframe from a fictional project. It did, however, include links to external guidance on M&E from DFID, BOND, World Bank, and the HMT Magenta Book. In the same year, the Darwin Initiative published an 'Information note: Logical Frameworks'.[127] The Information Note was aimed at project applicants and provided examples of good and bad project level indicators that could be used for M&E purposes. The Information Note explained that external evaluators of funded projects would use the projects' logframes to see if Outcomes and Impact had been achieved, but the Information Note did not say anything about how project logframes could be collated to evaluate the performance of the scheme(s) as a whole.

Improvements to recent guidance for the Darwin Initiative

Following on from our analysis of previous guidance notes and Information Notes for the Darwin Initiative and Darwin Plus documents, we see clear improvements in the documents produced for Round 28 of the fund in 2021. It differs from guidance in previous rounds in that M&E is dealt with specifically in a separate document[128] whereas in previous rounds M&E was dealt with in the overall guidance document. The new M&E guidance document (12 pages long) provides more detailed guidance to project applicants on how to carry out M&E in their projects. It is still based primarily on logframes and how to complete them, but for the first time it refers specifically to:

- The need for results at the project level to be aggregated upwards and enable the Darwin Initiative to monitor and report results at the programme level;
- To use indicators capable of being added together; and
- All projects are expected to report indicators disaggregated by gender.

[127] Information Note (2016): Logical Frameworks, Link.
[128] Darwin Initiative Monitoring, Evaluation and Learning Guidance (2021), Link.

There is also a separate Information Note in 2021 on Project Reporting which explains the importance of projects submitting correctly formatted reports using the templates provided by Defra.[129] The Note contains helpful guidance for projects on what to include in Half-Year, Annual and Final Reports. It emphasises the importance of reporting against the indicators included in the project logframe as this is how the projects' progress is measured. It also contains some contextual guidance on how to report on poverty as a multi-dimensional issue, and not just a monetary one, and also highlights the importance of reporting on projects' achievements in promoting gender equality and social inclusion.

Guidance provided by the IWTCF

Since the creation of the IWTCF in 2014, the guidance for applicants has mirrored that of the Darwin initiative in terms of carrying out M&E. However, it has also been more specific in some ways, focusing on the commitments in the London Declaration and Kasane Statement, which are summarised in an Annex in the scheme guidance notes. The IWTCF has also included in its guidance notes since 2014 a list of suggested 'Standard Indicators' for applicants to use when thinking about indicators for sustainable livelihoods for communities affected by IWT, strengthening law enforcement and the legal system and reducing demand for IWT-related products.

In the 'Resources' section of the IWTCF website,[130] the 2021 Information Note on Project Reporting[131] is branded as a Darwin Information Note but there are clear references to the IWTCF and the applicability of the note's content to it. The note provides clear and useful guidance to project applicants and administrations about what project reporting is required, and how it should be completed.

The IWTCF project Final Report template 2021[11] continues to place emphasis on comparing the logframes at the beginning and end of the project. In terms of high level goals across all projects, the final reports summarise the contribution the project made to support one, or more, of the objectives below, and should also be able to demonstrate a link to the commitments set out in the London Declarations on the Illegal Wildlife Trade and/or the Kasane Statement and reaffirmed at the Hanoi Conference:

1. Developing sustainable livelihoods to benefit people directly affected by IWT
2. Strengthening law enforcement
3. Ensuring effective legal frameworks
4. Reducing demand for IWT products

In the final report form, Annex 3 presents the Standard Measures. Defra plans to "use these figures as part of our evaluation of the wider impact of the Illegal Wildlife Trade Challenge Fund programme."

Use of baseline data

In 2014, the Darwin Initiative published an information note on 'Monitoring and Evaluation and the Darwin Initiative'.[132] The purpose of the note was to explain to applicants the basics about how M&E is carried out and what purpose it serves in funded projects. In the glossary, it explains baseline data (see below), but there were very few other references to baseline data in application-related documents around this time:

Baseline (data): Data gathered prior to, or at the beginning of, project commencement. Change and project progress can then be monitored in relation to this data. Baseline data is essentially the first step in what will become the project evaluation. They provide useful benchmarks on the 'then' and 'now', to allow project progress to be evaluated.

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[129] Information Note: Project Reporting (2021), Link.
[130] IWTCF Website: Resources, Link.
[131] Information Note: Project Reporting (2021), Link.
[132] Monitoring and evaluation and the Darwin Initiative, Link.

In the separate new M&E guidance document for Round 28 of the fund in 2021, which we see as an overall improvement compared to recent years, there is still insufficient mention of the need for projects to collect baseline information where possible against which progress can be measured. The 'Example Logframe' included in the Guidance Note contains four examples of baselines (one at Outcome level, three at Output level) but there is no explanation in the body of the text for applicants to read about why it is important to include baseline information, and what types of information sources could be used to provide such data.[133]

We note that in its planned Biodiverse Landscapes Fund, Defra will commission an Independent Evaluator to gather baseline data on each of the six landscapes where projects will take place. The progress towards and success of projects in reaching stated Outcomes will be measured against this baseline data. Some of the suggested sources of baseline data for the Biodiverse Landscapes Fund include:

- WDPA world database on protected area and Key Biodiversity Areas[134]
- Global Forest Watch data portal and/or use of geospatial technology[135]
- UNODC WISE Database
- Local records, gazettements and maps

We believe that a similar emphasis on baseline data should be included in the Darwin Initiative scheme, and that the above data sources could also be useful to applicants to funded projects. At the very least, we suggest that the first assessment for the project's respective indicators is likely to be most appropriate, as the data will be readily available.[136] Projects can report against the baseline throughout the project lifetime to demonstrate change. We recommend including firmer guidance to applicants about the need to provide baseline data where possible against which progress can be measured.

Level of project funding devoted to M&E

The guidance for applicants between 2002 and 2013 did not refer to the need to allocate a specific percentage of the project budget to M&E activities. A Darwin Briefing Paper on Monitoring and Evaluation (M&E) published in 2014 stated *"It is recommended by the Darwin Initiative that up to 5% of a project budget should be spent on M&E."*[137] This recommendation became more firm in the Round 22 guidance (2016) which said that *"From Round 22, all projects are expected to allocate up to 5% of their project budget to M&E throughout the life of the project and beyond".*

By the time of Round 28 (2021), there was a separate 'Financial Guidance (2021-2022)' document which stated:

"Monitoring and Evaluation costs should be included in the budget, allocated to the appropriate budget line (e.g. Staff Costs, T&S etc.). As a guide, we would normally expect to see M&E costs of between 5 and 10% of your total budget cost."[138]

We recommend that all future guidance for scheme applicants should state that a minimum of 5% **and up to 10%** of the overall project budget must be allocated to MEL activities. Projects wishing for an exemption from this requirement should be required to explain why this is the case. We believe that stipulating a minimum percentage

[133] Darwin Initiative Monitoring, Evaluation and Learning Guidance (2021), Link.
[134] See the following link.
[135] Space agencies around the world are increasingly offering free of charge the data from Earth Observation (EO) satellite sensors which can be used to monitor efficiently remotely sensed parameters. Combined with in-situ observations by project staff and beneficiaries and appropriate modelling, this will offer improved insights into the ecological processes and the disturbances that influence biodiversity. See Link.
[136] Harris et al. (2021). Biodiversity Indicators Review – International Climate Finance Evidence Project. Joint Nature Conservation Committee. Link.
[137] Monitoring and evaluation and the Darwin Initiative, Link.
[138] Financial guidance: Darwin Initiative, Darwin Plus & Illegal Wildlife Trade (IWT) Challenge Fund 2021-2022, Link.

of funding will help to ensure that MEL is the given the time and consideration that it deserves, although we recognise that it is still not a guarantee that it will be done to a good standard.

Annex 9: Open data repositories

Below, we provide a number of different open data repositories identified by the evaluation team, including biodiversity and IWT experts. This is not an exhaustive list, but serves as a useful starting point for identifying data sharing possibilities. Not included in these lists are the regional-, national- and NGO-level databases that may. Knowledge of the databases listed, as well as those contained at these more granular levels, are likely to be known by the funds' expert committees or advisory groups, as well as by project applicants themselves.

It should be understood, however, that while organisations may be happy to receive data, in many cases they may not be willing to share data of a confidential or sensitive nature. Therefore, Defra should look into the extent of these databases' alignment with the open data access policy, and more specific details on the scope for data sharing.

Table 15: Terrestrial open data repositories

Repository	Data category	Description and comments
Specialist Groups of the IUCN Species Survival Commission[139]	Numerical and geospatial data for species	The IUCN Species Survival Commission (SSC) is a science-based network of volunteer experts working together in more than 160 Specialist Groups, Red List Authorities and Task Forces. Most groups address conservation issues related to particular groups of plants, fungi or animals while others focus on broader issues such as reintroduction of species into former habitats, climate change, wildlife health and sustainable use and trade. Almost all the taxon-focused groups try to maintain a comprehensive record of the distribution and status of their species of interest and therefore welcome any data that contribute to refining or updating that record. Of the groups, the Species Monitoring Specialist Group (SMSG) is one possible group to identify data sharing opportunities. This group aims to enhance biodiversity conservation by improving the availability and use of data on species populations, their habitats and threats. For IWT, the African Elephant Specialist Group for example hosts an open access database covering every range state, and uses that to periodically prepare and publish a comprehensive Status Report for African Elephants[140]
Biodiversity Indicators Partnership National Portal[141]	Species inventory Habitat	Hosted by the UNEP-WCMC, the BIP is designed principally to support biodiversity indicators at the national level, but it is relevant for working from the local to global scales. It is a global initiative to promote and coordinate the development and delivery of biodiversity indicators for use by the CBD and other biodiversity-related conventions. The Partnership currently brings together over 60 organisations working internationally on indicator development, some of whom are organisations funded by the Darwin Initiative, Darwin Plus and/or IWTCF. There are

[139] https://www.iucn.org/commissions/ssc-groups

[140] https://africanelephantdatabase.org/report

[141] Biodiversity Indicator Partnership website. Link.

		several BIP Partner roles and membership criteria, which Defra can review to identify how they might be able to position themselves within this existing framework.[142] The role we envision is that Defra can support project data being aggregated to a number of different indicators supplied by the BIP, such as with the Living Planet Index.[143] The BIP website also identifies a number of different indicator sources for Defra to explore more specifically.
The Global Biodiversity Information Facility (GBIF)[144]	Species inventory	Any producer of raw biodiversity data can apply to GBIF for permission to contribute data. GBIF currently supports four main classes of datasets, which increase in richness: (i) Resource metadata; (ii) Checklist data; (iii) Occurrence data; (iv) Sampling-event data. From our review, the most relevant to Darwin Initiative, Darwin Plus and IWTCF projects are 'checklist data' and 'occurrence data', with the potential to provide raw biodiversity data records of a species' point occurrence at a particular location on a specified date. In rarer instances, funded projects may be able to provide richer sampling event data, such as on species abundance at multiple times and places if more established methodologies are in place.
Digital Observatory for Protected Areas (DOPA)[145]	Biodiversity Habitat	DOPA, on behalf of the EU's Joint Research Centre, is a biodiversity information system developed that functions as a tool for assessing, monitoring and forecasting biodiversity status and trends. DOPA is designed to assess the state of and pressures on protected areas on a global scale, and to prioritise protected areas according to their biodiversity and the pressures to which they are exposed. Darwin Initiative, Darwin Plus and IWT Challenge Fund projects could potentially explore whether data sharing could be facilitated with this resource, as DOPA provides information at country-, ecoregion-, and site-level on ecosystems, climate, species, funding and pressures.
UN Biodiversity Lab[146]	Habitat / Geospatial	This is a free, online, open-source platform which provides spatial data through a free, cloud-based tool to support Parties to the UN Convention on Biological Diversity (CBD) in reporting on their achievements and to inform their conservation decision making. The platform continues to add data from a multitude of sources, including data sources hosted by UNEP-WCMC. Projects under each fund may not be able to contribute directly to this, given the size and breadth of this database and the data sources it uses sources to inform itself. However, it is a useful resource to be aware of, and potentially to look into, given the value of this geospatial resource to biodiversity conservation and decision-making.
Key Biodiversity Areas (KBA)[147]	Habitat / Geospatial	KBA helps to map the most important sites on Earth, providing information about the wildlife living there to support decision-making. Given the breadth of funded projects and the locations

[142] Biodiversity Indicators Partnership Organisational Structure and Operational Principles 2016-2020. Link.
[143] Living Planet Index description on the BIP website, Link.
[144] Global Biodiversity Information Facility (GBIF) website. Link.
[145] Digital Observatory for Protected Areas website, Link.
[146] UN Biodiversity Lab, Link. New article on 'UN Biodiversity Lab 2.0' (2021), Link.
[147] Key Biodiversity Areas (KBA) website. Link.

		in which they support both the creation and protection of key biodiversity areas, there is a possibility that Defra can support in KBA identification, and contribute data on project activities in other KBAs as appropriate. However, the data sharing mechanism is not clear, such as open data terms and conditions, therefore this option should be further enquired upon.
World Database on Protected Areas (WDPA)[148]	Habitat	The World Database on Protected Areas (WDPA), run by UNEP and IUCN, and hosted by UNEP-WCMC, is the most comprehensive global database on terrestrial and marine protected areas and other effective area-based conservation measures (OECM). Whilst we could not identify clear data sharing policies, it could be possible for Darwin Initiative, Darwin Plus and IWTCF data and reports to further inform this database, such as the expansion of protected areas and OECMs, changes in the level of protection, amongst other considerations.

Table 16: Socioeconomic open data repositories

Repository	Data category	Description and comments
Specialist Groups of the IUCN Species Survival Commission[149]	Socioeconomic	The Sustainable Use and Livelihoods (SULi) Specialist Group aims to mobilise global expertise across the science, policy and practice sectors to address the urgent challenges of overexploitation of wild species and support robust, equitable models of sustainable use that meet human needs and priorities. As such it is keen to obtain data and learn lessons from projects that involve socio-economic and cultural factors, such as those enlisting local communities in the fight against poaching, and those aiming to change consumer behaviour in ways that will reduce the demand for IWT products. This repository is relevant to the Darwin Initiative and IWT Challenge Fund.
The Consultative Group on International Agricultural Research (CGIAR) Socioeconomic Data[150]	Socioeconomic	CGIAR has a community of practice (CoP) on socioeconomic data with the aim to bring together multiple stakeholders, and aims to enhance the impact and use of socioeconomic data for partners in low and middle-income countries' development. It acknowledges that socioeconomic data at the subnational level is rarely findable, accessible, interoperable or reusable. CGIAR is also committed to Open Access and Open Data. It appears that the CoP is a work in progress, but Defra could enquire and engage with this community to scope opportunities to contribute

Table 17: Marine open data repositories

Repository	Data category	Description and comments

[148] World Database on Protected Areas. Link.
[149] IUCN Specialist Groups List, Link.
[150] CGIAR Communities of Practice: Socioeconomic Data. Link.

Ocean Biogeographic Information System (OBIS)[151]	Marine species inventory	OBIS is a global science alliance that facilitates free and open access to data and information on marine biodiversity. OBIS accepts data from any organization, consortium, project or individual who wants to contribute data. Like GBIF, it also collects data on species occurrence, although it is oriented towards marine species. Darwin Plus projects, and potentially some Darwin Initiative projects operating in coastal or island biomes, may be able to provide raw data to OBIS.
Ocean+ Data[152]	Marine and coastal data	Ocean+, hosted by UNEP-WCMC, provides a list of more than 180 known datasets, database, and data portals containing marine and coastal data and information of biodiversity importance. There is the possibility to submit metadata, which provides an opportunity for Darwin Plus, and potentially fewer Darwin Initiative projects, to submit raw data on marine biodiversity based on outputs of the projects. More information regarding contacts can be found here.[153]
ReefBase[154]	Marine and coastal data	ReefBase is the official database of the Global Coral Reef Monitoring Network (GCRMN), as well as the International Coral Reef Action Network (ICRAN). This is a useful resource for both Darwin Initiative and Darwin Plus for data sharing if possible given potential synergies. ReefBase gathers available knowledge about coral reefs into one information repository. It is intended to facilitate analyses and monitoring of coral reef health and the quality of life of reef-dependent people, and to support informed decisions about coral reef use and management.

Table 18: IWT open data repositories

Not included in these lists are the regional-, national- and NGO-level databases that may hold IWT data. Our IWT experts identified multi-agency bodies, such as Wildlife Enforcement Networks, National Environment Security Task Forces, and other similar bodies; as well as national wildlife forestry, customs, etc. whose enforcement and intelligence departments host their own databases. There are a dozen regional groupings of relevance around the world, of which more detail can be found here. It should also be noted that NGOs that apply for funding may maintain their own independent databases. A few identified include Born Free, IFAW, Space for Giants and World Conservation Society, amongst others.

Repository	Data category	Description and comments
World Wildlife Seizures (World WISE) database[155]	Wildlife seizures	UNODC Wildlife Seizures data does not appear to be as public as the other databases, as it is a CITES-oriented data source and is based on CITES parties submitting data. It is unclear whether there is a role Defra's IWTCF can play in contributing to this database, as the data on seizures collected may already be aggregated into CITES submissions.
Wildlife Justice Commission[156]	Trafficking	The Wildlife Justice Commission works to protect vulnerable species from exploitation by working globally with groups and

[151] Ocean Biogeographic Information System, information on contributing. Link.
[152] Ocean+ website, Link.
[153] UNEP-WCMC Ocean Data viewer information, Link.
[154] ReefBase aims and objectives, Link.
[155] UNODC (2020). World Wildlife Crime Report: Trafficking in Protected Species. Link.
[156] Wildlife Justice Commission, Link.

		individuals to bring evidence from the field to disrupt wildlife, fisheries, and timber crime, dismantle criminal networks, and encourage the growth of political will to combat these problems. The WJC also works to highlight areas of convergence across multiple crime types. It shares intelligence and investigative findings with governments and stakeholders.
The Wildlife Trafficking Alliance[157]	Trafficking	The Wildlife Trafficking Alliance is a coalition of corporate and non-profit organizations all working together to combat wildlife trafficking by raising public awareness, reducing consumer demand for illegal wildlife and wildlife products, and mobilizing companies in a variety of sectors to adopt best practices to stop wildlife trafficking. The Alliance works with more than 70 supporting agencies whose active engagement is essential to the success of the Alliance goals.
Wildlife and Forest Crime Analytic Toolkit[158]	Legal frameworks	The Toolkit was developed by ICCWC as a technical resource to assist government officials in wildlife and forestry administration and customs as well as other relevant agencies, to conduct a comprehensive analysis of the strengths and weaknesses of preventive and criminal justice responses and other measures related to the protection and monitoring of wildlife and forest products which are crucial to curtailing wildlife and forest crime both nationally and internationally. The Toolkit is organized into five parts: (a) legislation; (b) enforcement; (c) judiciary and prosecution; (d) drivers and prevention; and (e) data and analysis. Each part represents one of the sectors involved in the preventive and criminal justice response to wildlife and forest offences. The five parts also reflect and bring together a great variety of government agencies, civil society organizations, individuals and other stakeholders. The Toolkit is not a data repository *per se*, but its content can guide IWT practitioners on the types of data to collect in each of these five areas.
The Wildlife Trade Portal[159]	Trafficking	The Wildlife Trade Portal is an interactive tool that displays TRAFFIC's open-source wildlife seizure and incident data. The Portal allows users to search the open-source area of TRAFFIC's wildlife trade incident database and to filter the results. These results are displayed not only as a list but also in a dashboard format – showing, for example, a summary of the list in a chart or on a map. You can also click on individual records to find more in-depth information about a specific incident, such as the exact species, commodities and locations involved. In addition to accessing TRAFFIC's data, users can also upload their own relevant data to supplement the information the Portal holds. Any uploaded datasets or files will be checked by a member of staff at TRAFFIC before their inclusion in the Portal. Records are added on a regular basis. All information available on the Portal is obtained from publicly accessible or "open" sources.
United for Wildlife Taskforces[160]	Trafficking and legal frameworks	UfW has established two Taskforces, one to enlist the support of transporters to reduce the carriage of illegal cargo, and another

[157] Wildlife Trafficking Alliance, Link.
[158] UNODC Wildlife and Forest Crime Analytic Toolkit, Link.
[159] Wildlife Trade Portal, Link.
[160] United for Wildlife Taskforces, Link.

		to investigate and control the financing of IWT. Both are dedicated to sharing resources and intelligence in a bid to disrupt wildlife trafficking.
The Royal United Services Institute[161]	Political and Legal Frameworks	The Royal United Services Institute (RUSI) is the world's oldest and the UK's leading defence and security think tank. RUSI seeks to (a) promote a step-change in current efforts to address organised criminal activity that is systematically depleting irreplaceable flora and fauna, driving key species to extinction and irreversibly damaging vital ecosystems worldwide; and (b) chart the shifting dynamics of environmental crime, while identifying opportunities to bolster a global response that all too often fails to treat this activity as large-scale transnational organised crime. RUSI's focus is on enhancing the response to critical enabling activities of environmental crime, such as corruption and money laundering, whilst highlighting areas of convergence across multiple crime types.
The Environmental Investigation Agency[162]	Trafficking	The EIA's intelligence team use the same techniques as the UK law enforcement and intelligence community to analyse vast quantities of intelligence gathered by the investigators in the field, as well as corroborating findings using advanced open source research techniques. Piecing together information from a wide range of sources, the team is able to build an incredibly detailed picture of organized crime networks, trade routes, patterns, and convergence involved in wildlife and environmental crimes. The team shares this vital information with government law enforcement partners and financial institutions around the world, leading to arrests and seizures, and disrupting criminal networks and their financial resources. The intel team at EIA also work closely with partners globally to share knowledge on intelligence processes and assist in building capacity and skills in intelligence analysis. Working with these partners, and ensuring they have the resources and capability to conduct intelligence-led investigations is key in disrupting transnational organized crime groups and combatting environmental crime. Database and intelligence management is important for analysis, so EIA stores all data in a database which can be easily manipulated and queried using specialist intelligence analysis software.
The Elephant Trade Information System[163]	Trafficking and seizures of ivory	The Elephant Trade Information System (ETIS) was established in 1997 by CITES to monitor and analyse trends in the illegal trafficking of ivory in support of decision-making for elephant conservation under the Convention. ETIS has been managed by TRAFFIC since its inception and uses elephant product seizure data to compile detailed analyses that help guide international policy decisions relating to ivory trade. Seizure data can provide unique insights into ivory trade dynamics, trends, and the evolution of illegal trade over time when other sources of information are simply not available. To meet the CITES mandate, TRAFFIC has pioneered analytical methods for ETIS data that

[161] Royal United Service Institute, Environmental Crime. Link.
[162] Environmental Investigation Agency (EIA), Link.
[163] TRAFFIC Elephant Trade Information System, Link.

		allow seizure data to help track global trade trends in illegal ivory. In addition to its main Seizures Database, ETIS maintains a number of correlative databases at the national level to help explain seizure trends including proxy indices for Law Enforcement Effort; Corruption; Rates of Reporting; and Economic Variables.
The Monitoring the Illegal Killing of Elephants Programme[164]	Elephant mortality	The overall aim of the Monitoring the Illegal Killing of Elephants Programme (MIKE) is to provide information needed for elephant range States in both Africa and Asia and the Parties to CITES to make appropriate management and enforcement decisions, and to build institutional capacity within the range States for the long-term management of their elephant populations. MIKE aims to help range States improve their ability to monitor elephant populations, detect changes in levels of illegal killing, and use this information to provide more effective law enforcement and strengthen any regulatory measures required to support such enforcement. At the core of the MIKE Programme is the site-based monitoring of elephant mortality: when an elephant carcass is found, local site personnel try to establish and record the cause of death and other details.
INTERPOL Environmental Security Programme[165]	Criminal network	INTERPOL facilitates cross-border police cooperation, and assists all organizations, authorities and services whose mission is to prevent or combat international crime. This is done by providing a high-tech infrastructure of technical and operational support such as targeted training, expert investigative support, specialized databases and secure police communications channels. INTERPOL has an Environmental Security Programme which brings together member countries, international organizations, civil society organizations and the private sector. The programme operates four global enforcement teams (Fisheries, Forestry, Pollution and Wildlife) which give investigative support to international cases and targets, coordinate operations, assist member countries to share information and conduct analysis into environmental criminal networks. Team analysts study data related to environmental criminals, suspects, incidents, issues and trends so a to identify connections between different crimes in different places, with the analysis then used to drive investigations, operations and strategy, and influence international policy.
U4 Anti-Corruption Resource Centre[166]	Policy and legal frameworks	The U4 Anti-Corruption Resource Centre is a permanent centre at the Chr. Michelsen Institute (CMI) in Bergen, Norway. CMI is an independent, non-profit, multi-disciplinary research institute specialised in development studies. The Centre provides research and evidence to help international development actors get sustainable results and is funded by the UK's FCDO amongst other bilateral aid agencies. U4 runs online courses and in-country workshops on anti-corruption measures and strategies for a broad network of international anti-corruption institutions, researchers and

[164] CITES Monitoring the Illegal Killing of Elephants (MIKE), Link.
[165] Interpol Environment Security Programme, Environmental Crime. Link.
[166] U4 Anti-Corruption Resource Centre, Link.

		development practitioners. U4 TRIAL tests new ideas for reducing corruption in the field. U4 and WWF are presently working with USAID funding on ways to overcome the role of corruption in wildlife and forest crime.
EAGLE network[167]	Seizures, arrests, convictions, fines	EAGLE is an NGO active in 8 mostly francophone African countries working in support of Government enforcement agencies to investigate and prosecute the illegal trafficking of all types of wildlife and forest products, as well as publicise successful arrests and convictions of corrupt officials in particular. Relevant data from reputable entities welcomed for Cameroon, Congo, Gabon, Togo, Benin, Senegal, Ivory Coast, Burkina Faso and Uganda.
Wildlife Consumers Behavioural Change Toolkit[168]	Demand reduction	Our evaluation recognised the literature's calls for the need to evaluate the impact of attempted demand reduction interventions for IWT,[169] as well as behaviour change interventions currently based on inadequate research, behaviour change models, and indicators to record success.[170] This is also due to a scarce body of knowledge on the subject. TRAFFIC hosts the Wildlife Consumers Behaviour Change Toolkit, which consists of open-source research, guidance, documentation and reports to help academics, practitioners, researchers and campaigners to develop the best possible understanding on transformational change in demand reduction. The IWTCF plays a crucial role as a key generator of global demand reduction evidence, and therefore Defra should look to contribute its raw data and other outputs to this open platform.

[167] EAGLE Network Enforcement, Link.

[168] Wildlife Consumers Behavioural Change Toolkit information. Link.

[169] E.g., Thomas-Walters et al. (2020). Challenges in the impact evaluation of behaviour change interventions: The case of sea turtle meat and eggs in São Tomé. Link.

[170] TRAFFIC (2018). Reducing demand for illegal wildlife products: Research analysis on strategies to change illegal wildlife product consumer behaviour. Link.

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